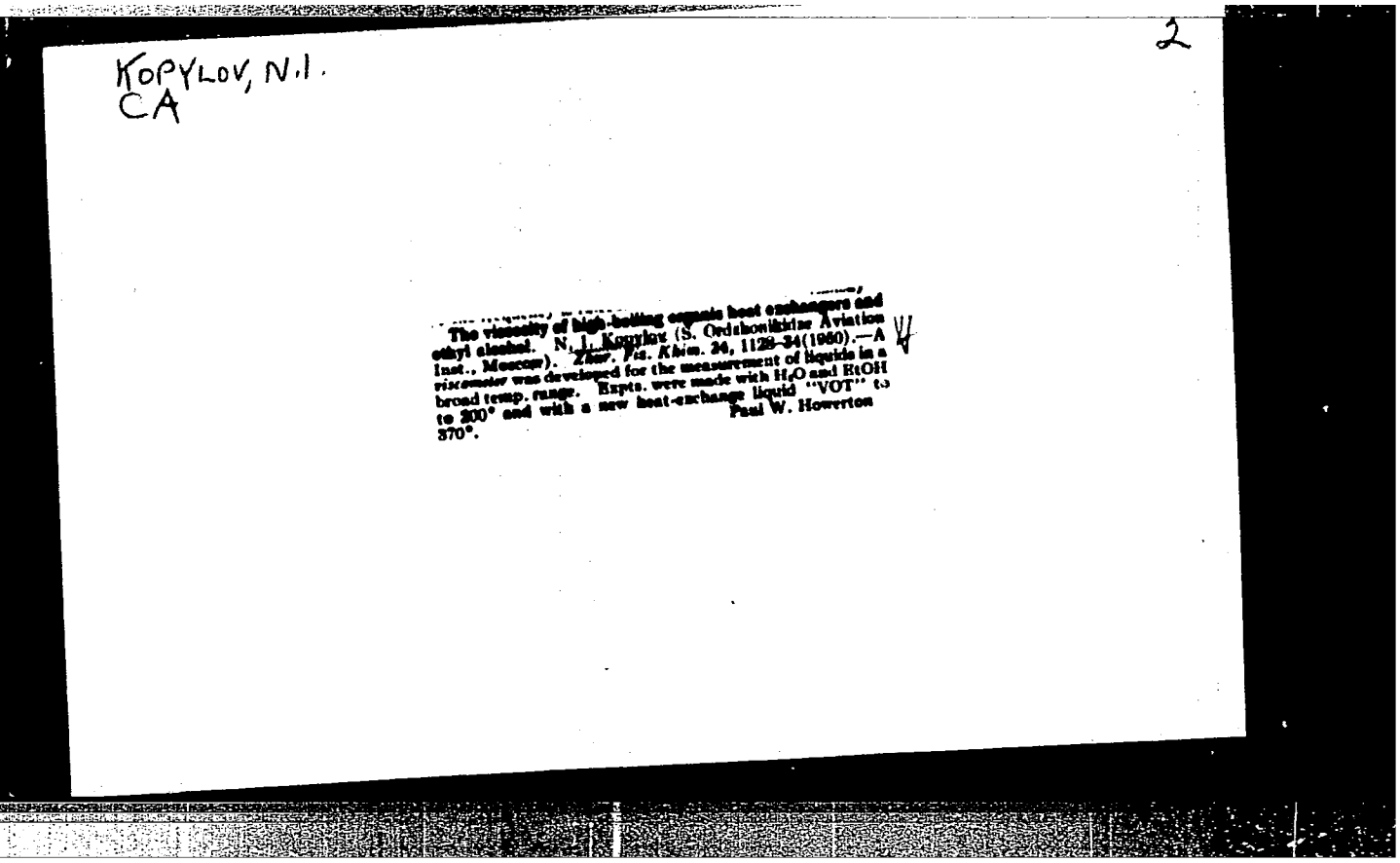
KOPYLOV, N.G.

Intensifying the operation of a concentration table. Trudy LPI no.211:20-26 '60. (MIRA 13:11)
(Ore dressing)

KOPYLOV, Nikolay Georgiyevich; GRACHEV, N.P., kand. tekhn. nauk, dots., retsenzent; GARBARUK, V.N., kand. tekhn. nauk, dots., red.; YURKEVICH, M.P., inzh., red. izd-va; BARDINA, A.A., tekhn. red.

[Theory of shaking conveyors]Teoriia kachaiushchikhsia konveierov. Moskva, Mashgiz, 1963. 126 p. (MIRA 16:4)
(Conveying machinery)



KOPYLOV, N.I.
CA

2

The viscosity of high-boiling organic heat exchangers and ethyl alcohol. N. I. Kopylov (S. Ordzhonikidze Aviation Inst., Moscow). *Zhur. Fiz. Khim.* 34, 1128–34(1960).—A *viscometer* was developed for the measurement of liquids in a broad temp. range. Expts. were made with H_2O and EtOH to 300° and with a new heat-exchange liquid "VOT" to 370°.

Paul W. Howerton

85438

S/170/60/003/011/012/016
B019/B056

24.4100

AUTHOR: Kopylov, N. I.

TITLE: Investigation of the Viscosity of Some Liquids Within a Wide Temperature Range

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 11, pp. 97-101

TEXT: The author investigated the viscosity of methyl alcohol, H-propyl alcohol, and carbon tetrachloride. The viscosity of these compounds was measured with a capillary viscosimeter between 20° and 240°C. Fig. 1 graphically shows the experimental viscosity coefficients within the temperature range mentioned. The author stresses the good agreement with data obtained by Thorpe et al. (Ref. 3) and Henning (Ref. 2). He further checks several formulas for the calculation of viscosity, after which he states that the values obtained can be well described by the following formula:

$\eta = A/(t + \alpha)^n$, where A and n are constants.

Card 1/2

Card 2/2

S/078/60/005/011/011/025
B015/B060

AUTHORS: Margulis, Ye. V., Kopylov, N. I.

TITLE: Study of the PbO - Fe_2O_3 System

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 11, pp. 2471-2476

TEXT: Data available in the literature concerning the PbO - Fe_2O_3 system, including results obtained by L. I. Paramonov (Ref. 5), P. P. Budnikov, and A. S. Berezhnoy (Ref. 6), I. P. Kirillov et al. (Ref. 7) are both contradictory and insufficient. For this reason, the system was studied by the methods of thermographic, X-ray, and direct-light microscopic analysis, and the constitution diagram was constructed. Kurnakov's ПК-52 (PK-52) pyrometer was used along with a metallographic microscope of the type МИМ-7 (MIM-7). Data of thermal analysis show (Table 1, composition of alloys and thermal effects) that two nonvariant transformations at 720° and 1140°C take place. Apparently, a transformation at 720°C corresponds to the crystallization of the eutectic of composition PbO 83.3 mole%,

Fe_2O_3 16.7 mole%. At 1140°C the crystallization of the alloys with less than 20 mole% PbO is terminated; since, however, transformation also takes place in alloys with more than 20 mole% PbO, the transformation is believed to be peritectic. X-ray examinations, as well as leaching of the ferrite phase and examination of specimens etched with 10% HNO_3 by an MBC-1 (MBS-1) microscope and chemical analyses of the separated ferrite phase showed that in the PbO - Fe_2O_3 system a compound with constant composition (Table 2) $PbO \cdot 4Fe_2O_3$ is formed, which decomposes at 1140°C to form the lead-iron oxide melt and solid iron oxide. Data from X-ray analysis (Table 3) for isolated pure lead ferrite show that this has a hexagonal crystal lattice a = 6.62 A, c = 10.19 A, and c/a = 1.54. The lead ferrite is ferromagnetic and the specific gravity is d = 6.05 g/cm³. It has a reddish transparent appearance in thin grains, and a black and opaque appearance in thick grains. It is close in composition to naturally occurring magnetoplumbite and to $PbO \cdot 5Fe_2O_3$ discovered by Cocco (Ref. 8). No other compounds could be found besides the said lead ferrite. There are

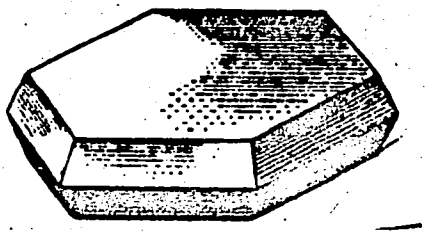
Study of the PbO - Fe_2O_3 System

S/078/60/005/011/011/025
B015/B060

5 figures, 3 tables, and 11 references: 6 Soviet, 2 German, and 2 French.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy gornometallurgicheskiy institut tsvetnykh metallov (All-Union Scientific Research Institute for Mining and Metallurgy of Nonferrous Metals)

SUBMITTED: November 19, 1959



Card 3/3

5.3700 2209 only

86174
S/096/61/000/001/012/014
E194/E184

AUTHORS: Sokolov, S.N., Candidate of Technical Sciences, Lapushkin, S.A., Candidate of Technical Sciences, and Kopylov, N.I., Candidate of Technical Sciences

TITLE: The Thermal-Physical Properties of Silicone in the Liquid Phase

PERIODICAL: Teploenergetika, 1961, 8 No. 1, pp. 79-81

TEXT: Although silicones are of considerable technological interest, very little published data exist about their thermal-physical properties. The silicone investigated in the present work was diethylpolysiloxane liquid of the following characteristics: molecular weight, 400; density 956 kg/m^3 at 20 °C; boiling point, 282 °C at 760 mm mercury; freezing point, −70 °C; dynamic viscosity at 20 °C, 9.9 x 10^{-4} kg.sec/m^2; and the corresponding kinematic viscosity, 10.1 cS. The experimental procedures used to measure specific heat density, thermal conductivity and other properties are described. The experimental data are given in Table 1. Table 2 gives smoothed data for

Card 1/2

27858

S/535/61/000/132/004/012
E030/E484

11.0100

AUTHOR: Kopylov, N.I., Candidate of Technical Sciences

TITLE: Viscosity of gasoline B-70 (B-70), kerosene T-1 and fuel T-5 in the liquid and gas phases at high temperatures

SOURCE: Moscow. Aviatsionnyy institut. Trudy. no.132.1961.45-57. Teplofizicheskiye svoystva nekotorykh aviatsionnykh topliv v zhidkom i gazoobraznom sostoyanii.

TEXT: The viscosities of the liquids and vapours were measured in conventional capillary viscometers. For liquids, pressure was maintained by a mercury column connected to the viscometer and flow was caused by a plug of mercury introduced into one of the viscometer limbs. The apparatus was calibrated with water. The viscometer was contained in an air bath, being capable of temperature control up to 300°C. Gasoline was measured from 2) to 246°C, T-1 from 20 to 300°C, and fuel T-5 from 20 to 300°C. The data agree well with the Bachinsky formula

$$\eta = \frac{A}{(t + a)^n}$$

Card 1/3

Viscosity of gasoline ...

with the following values of the constants (η in centipoise):

Constants in the Bachinsky equation

Table 6.

Liquid	A	α	n
Kerosene T-1	18.2	70	1.58
Gasoline B-70	44.0	115	1.84
Fuel T-5	104.2	50	1.9

The accuracy of the data are: gasoline, ± 1.4%; kerosene T-1, ± 2.7% and fuel T-5, ± 1.7%.
A similar apparatus was used for the vapours, where a bath of mercury and reservoir of liquid served to keep the pressure at that of the vapour in equilibrium. The viscometer was calibrated with air. Because of the low vapour pressures, data could not be obtained below 100°C. The data agreed well with the formula of Chapman and Cowling:

Card 2/3

$$\eta = aT^n$$

27858

Viscosity of gasoline ... S/535/61/000/132/004/012
E030/E484

with the following values of the constants (η in micropoise):

Constants in the Chapman and Cowling equation. Table 11.

Constants	B-70	T-1	T-5
a	4170	7800	9638
n	1.60	1.54	2.22

The data have inaccuracies of at most 2%.
There are 5 figures, 12 tables and 4 references: 3 Soviet and 1 non-Soviet. The reference to an English language publication reads as follows: Ref.4: Chapman S. Cowling T., The Mathematical Theory of Non Uniform Gases, Cambridge, 1939.

Card 3/3

E7859

S/535/61/000/132/005/012
E030/E484

11.0100

AUTHORS: Kopylov, N.I., Candidate of Technical Sciences
Sirotina, Ye.P.

TITLE: Viscosity of gasoline Б-70 (B-70), kerosene T-1 and fuel T-5 at low temperatures

SOURCE: Moscow. Aviatsionnyy institut. Trudy. no.132.1961.58-62. Teplofizicheskiye svoystva nekotorykh aviatsionnykh topliv v zhidkom i gazoobraznom sostoyanii.

TEXT: Using a conventional design of capillary viscometer by Pinkevich and Mitrofanov (Ref.2: Transactions of the Conference on Viscosity and Colloidal Solutions, Akademizdat, no.2, 1944, 252), viscosities were obtained for gasoline and T-1 from -38°C to 17°C and for T-5 from -45°C to 10°C. Smoothed data are calculated and listed at 5°C intervals. The densities of the fuels were assumed to obey the relation:

$$d_4^{20} = d_4^t + \gamma(t - 20)$$

recommended for petroleum products. The capillaries used had diameters of 0.6 and 0.8 mm. The data are accurate to between

Card 1/2

S/535/61/000/132/005/012
E030/E484

Viscosity of gasoline ...

1.5 and 5% and obey the Bachinsky relation:

$$\eta = \frac{A}{(t + \alpha)n}$$

with the following values of the constants (η in centipoise):

Data for Bachinsky equation

Table 4.

Liquid	A	α	n
Gasoline B-70	247	150	2.08
Kerosene T-1	238.8	90	2.07
Fuel T-5	3319	76	2.53

There are 2 figures, 5 tables and 2 Soviet references.

Card 2/2

MARGULIS, Ye.V.; KOPYLOV, N.I.

System PbO - $PbSO_4$. Zhur. neorg. khim. 9 no.3:763-764 Mr '64. (MIRA 17:3)

KOPYLOV, N.I., kand.tekhn.nauk

Viscosity of gasoline B-70, kerosene T-1, and fuel T-5 in liquid and gaseous phases at elevated temperatures. Trudy MAI no.132:45-57 '61. (MIRA 14:7)
(Liquid fuels) (Viscosity)

S/137/63/000/002/001/034
A006/A101

AUTHORS: Novoselov, S. S., Kopylov, N. I.

TITLE: Investigating the fusibility diagram of the Cu_2S-Na_2S system

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1963, 19, abstract 2A81 ("Sb. tr. Vses. n.-i. gornometallurg. in-t tsevtn. met.", 1962, no. 7, 56 - 61)

TEXT: Thermographical and microscopical analyses were used to investigate the Cu_2S-Na_2S system. The composition of the initial sulfide mixture varied within a 2% range. A total number of 70 melts were produced. The phase diagram obtained differs considerably from the diagram plotted by Friedrich. In the Cu_2S-Na_2S system the formation of three compounds is possible, namely $4Cu_2S \cdot Na_2S$, $2Cu_2S \cdot Na_2S$ and $Cu_2S \cdot 9Na_2S$, fusing with dissociation at 635, 550 and 507°C, respectively. Compounds no. 2 and 3 yield eutectics containing 44% Na_2S, which crystallizes at 480°C. The initial crystallization of Cu_2S occupies a composition range from 100 to 85% Cu_2S, and initial Na_2S crystallization in a range

Card 1/2

Investigating the fusibility diagram of... S/137/63/000/002/001/034
A006/A101

from 100 to 47% Na_2S. Maximum hardness during the treatment of sections was shown by specimens approaching the eutectic composition. An investigation of the Cu_2S-Na_2S system has shown that the addition of Na_2S must sharply reduce the melting point of the mattes. At a 10 - 12% content of Na_2S, the mixture of Cu_2S with Na_2S melts at $\leq 700°C$, and at a 40 - 45% content of Na_2S the temperature drops to about 500°C.

G. Frents

[Abstracter's note: Complete translation]

Card 2/2

S/152/63/000/003/004/005
B117/B186

AUTHORS: Vargaftik, N. B., Kopylov, N. I., Lapushkin, S. A., Pyatibratov, S. N., Sokolov, S. N.

TITLE: Thermophysical properties of monoisopropyl diphenyl

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy.. Neft' i gaz, no. 3, 1963, 75-78

TEXT: Results are given of detailed investigations into the thermophysical properties of monoisopropyl diphenyl in the liquid phase and the pressure of its saturated vapor. Properties of the sample investigated: molecular weight 197, $n_D^{25} = 1.5696$, density at 20°C $\rho = 0.969$ g/cm^3, boiling point 286°C (760 mm Hg). Conventional measuring methods were used. The specific heat (c_p) and the density (ρ) were measured with a calorimeter at 20-398°C and 10 atm with a maximum error of 0.3% for the density and 1.5% for the specific heat. The heat conductivity (λ) was measured with a heated wire at 30-209°C, under atmospheric pressure, with an accuracy of 1%. The viscosity (η) under the pressure of saturated monoisopropyl

Card 1/3

diphenyl vapor was measured at 20-340°C with a maximum error of 1%. The pressure of the saturated vapor (p_s) was measured at 96-309°C. The error was 0.2°C for the temperature determination and 2 mm for the pressure. To determine the thermophysical properties of monoisopropyl diphenyl, the experimental amounts were generalized for smoothed temperature values, as tabulated (Table 2). The table also gives calculated values of the heat of vaporization (r) and the Prandtl numbers required for calculating the heat exchange. There are 2 tables.

ASSOCIATION: Moskovskiy aviatsionnyy institut im. S. Ordzhonikidze
(Moscow Aviation Institute imeni S. Ordzhonikidze)

SUBMITTED: January 17, 1963

Table 2. Smoothed values for the thermophysical properties of monoisopropyl diphenyl.

S/152/63/000/003/004/005
B117/B186

Thermophysical properties of...

t, °C	ρ, g/km^3	c_p, cal/g·°C	$\lambda \cdot 10^5$, cal/cm·sec·°C	$\eta \cdot 10^6$, g/cm·sec	P_s, mm Hg	r, cal/g	Pr
20	0,969	0,412	303	14,1	—	—	19
40	0,962	0,432	297	6,29	—	—	91,5
60	0,953	0,446	289	3,47	—	—	53,4
80	0,943	0,462	283	2,22	—	—	36,2
100	0,932	0,478	276	1,57	1,5	77,0	27,0
120	0,920	0,494	272	1,17	3,5	75,8	21,3
140	0,907	0,510	266	0,890	8,5	75,0	17,1
160	0,893	0,526	261	0,690	19	74,2	13,9
180	0,878	0,542	255	0,555	39	73,3	11,8
200	0,861	0,560	247	0,456	77	72,5	10,3
220	0,845	0,578	241	0,384	142	71,6	9,22
240	0,827	0,597	236	0,320	249	70,5	8,35
260	0,809	0,616	230	0,289	418	69,2	7,74
280	0,791	0,637	225	0,254	671	67,7	7,19
300	0,773	0,658	216	0,224	1042	65,7	6,76
320	0,753	0,681	211	0,198	1570	63,5	6,39
340	0,734	0,705	205	0,175	2291	60,9	6,02
360	0,714	0,730	200	0,155	3266	57,9	5,66
380	0,694	0,758	192	0,137	4539	54,5	5,41
400	0,674	0,788	183	0,124	6194	50,9	5,34

Card 3/3

MARGULIS, Ye.V.; REMIZOV, Yu.S.; KOPYLOV, N.I.

Solid phase interaction between oxides and sulfates of zinc, cadmium, and copper. Zhur. neorg. khim. 8 no.8:1862-1868 Ag '63. (MIRA 16:8)

(Metallic oxides) (Sulfates)

KOPYLOV, N.I.; NOVOSELOV, S.S. ; YUZVAK, L.A.; KASHAYEV, A.A.

Some properties of chemical compounds in the system Cu_2S-Na_2S. Zhur. neorg. khim. 9 no.6:1403-1405 Je '63 (MIRA 17:8)

KOPYLOV, N.I.; NOVOSELOV, S.S.

System Cu_2S - FeS - Na_2S. Zhur. neorg. khim. 9 no.8:1919-1929 Ag '64. (MIRA 17:11)

KOPYLOV, N.I. (Ust'-Kamenogorsk); MARGULIS, Ye.V. (Ust'-Kamenogorsk)

Constitutional diagram of the system $PbO - SiO_2 - PbSO_4$. Izv. AN SSSR. Met. no.4:72-77 Jl-Ag '65. (MIRA 18:8)

MARGULIS, Ye.V.; KOPYLOV, N.I.; GRISHANKINA, N.S.

Formation of liquid phase during thermal decomposition of cadmium sulfate in the system $CdSO_4$ - $2CdO.CdSO_4$. Zhur.neorg.khim. 10 no.4:1002-1005 Ap '65. (MIRA 18:6)

MARGULIS, Ye.V.; BRYSKEYEVA, L.I.; MALETINA, Ye.D.; KOPYLOV, N.I.

Study of zinc hydroxosulfate precipitates. Zhur. neorg. khim. 10 no.5:1241-1249 My '65. (MIRA 18:6)

MARGULIS, Ye.V.; BEYSEKEYEVA, L.I.; MALETINA, Ye.D.; KOPYLOV, N.I.

Hydrolytic precipitation of copper hydroxysulfate. Zhur. neorg.khim. 10 no.8:1782-1791 Ag '65.

(MIRA 19:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy gornometallurgicheskiy institut tsvetnykh metallov, Ust'-Kamenogorsk.

KOPYLOV, N. M.

"Photometric Analysis of Twilight," No 2, pp 3-14.
(Meteorologiya i Gidrologiya, No 6 Nov/Dec 1947)

SO: U-3218, 3 Apr 1953

KOPYLOV, N. M.

Kopylov, N. M. - "On approximate calculations of total solar radiation," Trudy Glav. geofiz. observatorii, Issue 14, 1949, p. 63-69.

SO: U-4110, 17 July 53, (Letopis 'Zhurnal 'nykh Statey, No. 19, 1949).

KOPYLOV,P.; MIRONOV,I. (g. Kuybyshev)

Amateur radio clubs in the factory. Radio no.6:8 Je '55.
(MLRA 8:8)

1. Predsedatel' zavodskogo komiteta Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu SSSR.
(Kuibyshev--Radio clubs)

KOPYLOV, P.I., insh.

Transferring data to the tracing cloth. Izv.vys.ucheb.zav.; gor.zhur. no.7:25-28 '58. (MIRA 12:3)

1. Ural'skiy filial Vsesoyuznogo nauchno-issledovatel'skogo marksheyderskogo instituta.
(Mine maps)

KOPYLOV, P.I., inzh.

Selection of India ink and paints for sketching on plastic sheets. [Trudy] VNIMI no.45:332-342 '62. (MIRA 16:4)
(India ink) (Paint)

KOPYLOV, P.I., inzh.

Testing polymer drawing films in Ural mines. Gor. zhur. no.5:50-51 My '64. (MIRA 17:6)

1. Ural'skiy filial Vsesoyuznogo nauchno-issledovatel'skogo marksheyderskogo instituta.

KOPYLOV, P.M., student V kursa

Differential phase and differential intensification distortions and methods of their measurement. Sbor.stud.nauch.rab.LEIS no.1:5-17 '59. (MIRA 13:4)

1. Leningradskiy elektrotekhnicheskiy institut svyazi im. prof. M.A.Bonch-Bruyevicha.
(Color television)

YERGANZHIYEV, N.A.; KOPYLOV, P.M.; MOROZOV, V.A.

Control of the level of the video signal in color television stations. Elektrosviaz' 16 no.9:70-72 S '62. (MIRA 15:9)
(Color television)

mission of the pilot signal at a given level of brightness ... alternated with a standard brightness signal. Orig. art. has: 4 figures.

Card 1/1 JPRS: 40,360

UDC: 621.397.132

0431 1740

AKSENTOV, Yu.V.; KOPYLOV, P.M.

Choice of an optimum test signal form for a simultaneous color television system. Elektrosviaz' 19 no.8:24-30 Ag '65.
(MIRA 18:9)

ACC NR: AP7004336 SOURCE CODE: UR/0106/66/000/011/0005/0014

AUTHOR: Kopylov, P. M.

ORG: none

TITLE: Automatic corrector of differential distortion

SOURCE: Elektrosvyaz', no. 11, 1966, 5-14

TOPIC TAGS: color tv, tv receiver, phase correction

ABSTRACT: The differential-distortion corrector is controlled by a "pilot" signal which consists of additional packets of color-subcarrier frequency. Transmission of the pilot signal during the line fly-back period at a limited number of levels of the brightness range is suggested. The color-sync signal (see Fig. 1a,f) at the gray and white levels is first extended and then "pushed out" to required levels g by means of specially shaped pulses c,d,e. The phase and height of the chrominance signal are improved by the corrector according to the information carried by the pilot signal. The color video signal passes through the amplitude (AM) and phase (PhM) modulators (see Fig. 2) where the

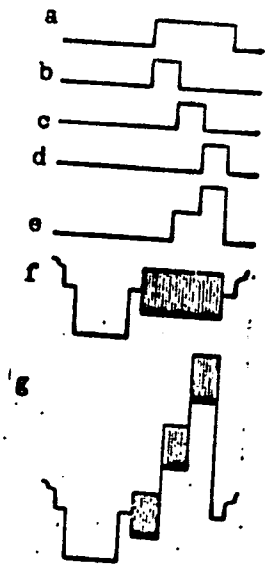


Fig. 1. Shaping the correcting pilot signal

Card 1/2

UDC: 621.397.611

ACC NR: AP7004336

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R000824520014-5

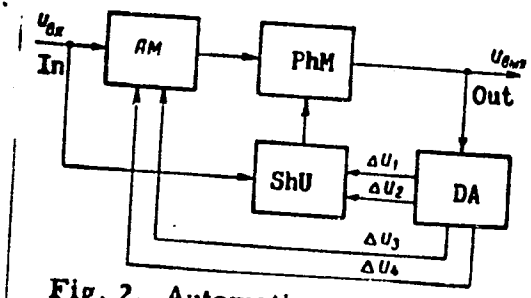


Fig. 2. Automatic corrector of differential distortion

correction of brightness-dependent distortion takes place. Distortion analyzer DA shapes error signals proportional to (1) the difference of color-sync signal ΔU_1 and pilot signal ΔU_2 and (2) the difference of color subcarrier packets at the gray level ΔU_3 and at the white-and-black level ΔU_4. A 1-f signal controlling the phase modulator is shaped by shaping unit ShU. For parabolic and linear relation between the differential distortion and brightness level, with $\Delta\varphi \leq \pm 20^\circ$, the transmission of the pilot signal at gray and white levels is sufficient; for larger $\Delta\varphi$, four levels are required. An improved phase modulator (theoretical and experimental data supplied) permits correcting the differential phase within $\Delta\varphi = \pm 45^\circ$, without introducing additional distortion because: (a) the amplitude-phase characteristic is not affected during the phase correction; (b) the phase-frequency characteristics of the modulator are adequately linear; (c) direct transmission of the control signal is excluded. Orig. art. has: 14 figures, 6 formulas, and 1 table.

SUB CODE: 09 / SUBM DATE: 15Oct65 / ORIG REF: 009

Card 2/2

KOPYLOV, R.A., redaktor

[Atlas of gunshot wounds] Atlas ognestrel'nykh ranenii. Vol.10 pt.2. [Gunshot wounds of the extremities: amputations and exarticulations, arterial aneurysm] Ognestrel'nye raneniia konechnostei: amputatsii i vychleneniia anevrizmy sosudov. [Leningrad] Medgiz. 1955. 287 p. (MLRA 8:11)

1. Russia (1923- U.S.S.R.) Glavnoye voyenno-meditsinskoye upravleniye vooruzhennykh sil.
(AMPUTATION) (ANEURYSM)

KOPYLOV, R.B.

Establishing norms for lapping flat surfaces. Mashinostroitel' no.11:43 N '61. (MIRA 14:11)

(Grinding and polishing)

KOPYLOV, S. I.

Bibliografiia proizvednii klassikov marksizma-leninizma (Bibliography of the works of the classics of Marxism-Leninism). Moskva, Goskul'tprosvetizdat, 1952, 47 p.

SO: Monthly List of Russian Accessions, Vol 6, No. 3, June 1953

[illegible], S.P. Cand. Agricult. Sci.

Dissertation: "Results of Cross-Breeding Sheep of the Chelyabinsk Oblast and Further Problems of Improving their Breeds During the Fourth Stalin Five-Year Plan." Moscow Zooveterinary Inst, 21 Nov 47.

SO: Vechernyaya Moskva, Nov, 1947 (Project #17836)

April, May. When practicing FL the sheep must be well fed. -- V. G. Bogolyubova

CARD: 1/1

KOPYLOV, S.Ye.; LISKOVETS, S.A.; STRIZHKOV, N.S.; TSYPLENKOV, V.D.

Stabilizing embankments by seeding them with grass after the laying of the track. Transp. stroi. 15 no.6:4-7 Je '65.
(MIRA 18:12)

1. Glavnyy tekhnolog upravleniya stroitel'stva "Abakanstroyput'" (for Kopylov). 2. Zamestitel' nachal'nika otdela puti TSentral'nogo instituta normativnykh issledovaniy i nauchno-tekhnicheskoy informatsii v transportnom stroitel'stve (for Liskovets). 3. Nachal'nik Abakanskoy normativno-issledovatel'skoy stantsii (for Strishkov). 4. Ispolnyayushchiy obyazannosti nachal'nika Pechorskoy normativno-issledovatel'skoy stantsii (for TSyplenkov).

KOROTCHAYEV, D.I.; KLICHKO, V.I.; KOPYLOV, S.Ye.; MASHCHENKO, P.F.; GIBSHMAN, A.Ye., doktor tekhn. nauk, prof.; ZELIKOVICH, I.I., kand.ekonom. nauk; SHRAYBER, S.B., inzh.

Organizing the direction of the construction of the Shush'-Kiya-Shaltyr' line according to a graphic work schedule. Transp. stroi. 15 no.7:3-4 Jl '65. (MIRA 18:7)

1. Nachal'nik upravleniya Abakanstroyput' (for Korotchayev). 2. Glavnyy inzh. stroitel'stva Abakanstroyput' (for Klichko). 3. Glavnyy tekhnolog stroitel'stva Abakanstroyput' (for Kopylov). 4. Nachal'nik stroitel'no-montazhnogo poyezda No.268 (for [redacted]).

KOPYLOV, S.Ye.; LISKOVETS, S.A.; STRIZHKOV, N.S.

At the construction site of the Abakan-Tayshet line. Trans. i stroi. 13 no.12:6-9 D'63 (MIRA 17:7)

1. Glavnyy tekhnolog upravleniya stroitel'stva Abakanstroyput' (for Kopylov). 2. Starpshiy inzh. Orgtransstroya (for Liskovets). 3. Nachal'nik Abakanskoy NIS (for Strizhkov).

KOPYLOV, V.

Communists of an electric machinery plant are at the forefront.
Komm.Vooruzh.Sil 2 no.19:50-52 O '61. (MIRA 14:9)

1. Direktor ordena Lenina i ordena Trudovogo Krasnogo Znameni Moskovskogo elektrozavoda imeni V.V. Kuybysheva.
(Moscow--Electric machinery industry)

L 46710-66 EWT(m)

ACC NR: AR6000469 SOURCE CODE: UR/0299/65/000/017/R036/R037

AUTHORS: Kuzin, A.; Kryukova, L.; Kopylov, V.; Kolomiytseva, I.; Struchkov, V.

TITLE: Some mechanisms of the effect of ionizing radiation on cell division

SOURCE: Ref. zh. Biologiya, Abs. 9R218

REF SOURCE: Sb. Vopr. biofiz. i mekhanizma deystviya ionizir. radiatsii. Kiyev, Zdorov'ya, 1964, 163-168

TOPIC TAGS: radiation biologic effect, radiation plant effect, cell physiology, PLANT GROWTH, MITOSIS

ABSTRACT: Tests on the exposure of separate sections of Vicia faba, with the remaining part of the plant carefully screened, indicate the formation of a number of metabolites under the influence of such exposure. The metabolites, called radio-inductors (RI), migrate to the unexposed parts and inhibit cell division in them. The inhibiting of mitosis is observed even after wetting the growths in extracts from exposed plants. The quantity of radio-inductors formed during a determined range of doses increases with the dosage. The authors suggest that the products of oxidation of phenol derivatives, in particular those of the oxidizing disintegration of tyrosine, may be the inhibitors of cell division. Theoretically, the products of the fermentative oxidation of tyrosine include dehydrophenylalanine, various quinones, and high-polymer melanines, some of which possess properties of free radicals and powerful oxidizers. The formation of the carbohydrates mentioned provides experimental

Card 1/2 UDC: 577.3

L 46780-66

ACC NR: AR6000469

corroboration for the study of products from the exposed leaves by the method of chromatography and EPR. Model tests on inhibiting mitosis after the addition of tyrosine, tyrosinase, and melanines indicate that these carbohydrates are radio-inductors. The authors suggest that the intermediate products of the oxidation of tyrosine found in a free radical state can form complexes with DNA and exclude it from the cycle of changes necessary for the beginning of mitosis. A. Aleksakhin [Translation of abstract]

SUB CODE: 06

Card 2/2

KUZIN, A.M.; KOPYLOV, V.A.

Oxidation-reduction disorders in plant tissues caused by ionizing radiations. Biofizika 5 no. 6:716-719 '60. (MIRA 13:10)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(OXIDATION-REDUCTION REACTION)
(PLANTS, EFFECT OF X RAYS ON)

KRITSKIY, G.A.; KOPYLOV, V.A.

Intermediate nucleotide metabolism in the normal and x-irradiated bone marrow. Biokhimiia 25 no.1:34-42 Ja-F '60. (MIRA 13:6)

1. Institute of Biochemistry, Academy of Sciences of the U.S.S.R., Moscow.

(NUCLEOSIDES AND NUCLEOTIDES metab.)
(BONE MARROW radiation eff.)

KOPYLOV, V.A., KUZIN, A.M., KRYUKOVA, L.M., (USSR)

"Changes on Polyphenol Oxidase Activity in the Irradiated Plant and the Nature and Properties of the Metabolites Produced."

Report presented at the 5th Int'l. Biochemistry Congress, Moscow, 10-16 Aug 1961.

KOPYLOV, V.A.

Effect of antimitotic substances from irradiated plants on the growth of mice. Radiobiologiia 1 no.3:358-360 '61. (MIRA 14:10)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(X RAYS--PHYSIOLOGICAL EFFECT) (GROWTH)

S/205/61/001/005/003/005
D299/D304

AUTHORS: A.M. Kuzin, N.B. Gorkina, V.A. Kopylov, and L.M. Kryukova

TITLE: The nature of the metabolites which form in the irradiated leaves of plants

PERIODICAL: Radiobiologiya, v. 1, no. 5, 1961, 659 - 662

TEXT: Experiments were conducted to determine whether extracts from Vicia faba leaves inhibit cell devision only in homologous tissue or whether this inhibiting action extends to the cells of other species. An attempt was made to determine whether extracts from irradiated and non-irradiated leaves affect the cell division of Escherichia coli B. The leaves were irradiated with an РУП -1 (RUP-1) apparatus in a dose of 15 kr at an intensity of 212 r/min. Some 24 hr after irradiation, extracts were made from the leaves and were added to the meat-peptone broth in which the E. coli were cultured. The results confirmed the authors' previous observations (Ref. 6: Dokl. AN SSSR, 137, 4, 970, 1961) that substances form in the irradiated leaves of plants which strongly inhibit cell multiplication. It was found that the semiproducts of the fermentative oxidation

Card 1/ 2

32746
S/205/61/001/006/006/022
D268/D305

27 1220 also 2209

AUTHORS: Kuzin, A.M., Agustini, Ch., Kopylov, V.A., and Budilova, Ye.V.

TITLE: On the effect of extracts from irradiated Vicia faba leaves on the P^{32} incorporation in isolated thymus cell nuclei

PERIODICAL: Radiobiologiya, v. 1, no. 6, 1961, 856 - 857

TEXT: In further studies on the effect of biologically active compounds accumulating in irradiated plants on nucleic acid synthesis in the cell nucleus, the action of extracts from irradiated and non-irradiated V. faba leaves on the phosphorylization processes in the isolated cell nucleus was studied, using the same irradiation and method for preparing the extracts as previously described by A.M. Kuzin et al. (Ref. 7: Tr. konf. po mekhanizmam pervichnogo deystviya ioniziruyushchey radiatsii, Kiyev (Transactions of the Conference on the Mechanisms of the Initial Action of Ionizing Radiation, Kiyev) 1961, in the press). Cell nuclei were isolated from the thymus of young rats by the Allfrey and Mirskiy method (Ref. 9:
Card 1/3

On the effect of extracts from ...

Proc. Nat. Acad. Sci., 40, 881, 1954) and were then suspended in an 0.25 M saccharose solution with 0.0018 M $CaCl_2$. After incubation at 20°C for 3 hours, the suspension was centrifuged, and the nuclei finally extracted. The resulting alkali extract was used to determine radioactivity and the quantity of DNA according to the method of Burton (Ref. 10: Biochem. J., 62, 315, 1956). Preliminary experiments showed that when the boiled nuclear suspension was incubated with $Na_2HP^{32}O_4$ radioactive P was not included in the fraction studied, indicating that the alkali hydrolyzate was completely free from inorganic radioactive P. Results showed that nuclei incubated with extract from irradiated plants were less likely to incorporate P^{32} than was the case with non-irradiated, the average difference being 40 %. Extracts from irradiated plants as compared with non-irradiated, therefore, gave greater inhibition of the phosphorylization processes. There are 1 table and 10 references: 8 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: V.G. Allfrey, Proc. Nat. Acad. Sci., 40, 881, 1954; K. Burton, Biochem. J., 62, 315, 1956.

Card 2/3

Card 3/3

41618
S/205/62/002/005/005/017
D268/D308

27.1220

AUTHORS: Kuzin, A.M., and Kopylov, V.A.

TITLE: The formation and role of quinones in the initial processes following radiation damage to animal tissue

PERIODICAL: Radiobiologiya, v. 2, no. 5, 1962, 681 - 684

TEXT: Quinoid substances were studied in white rats after a 14.3 minute exposure to x rays at 1,000 r. A quick and regular progressive increase in the quinone content was determined, although there was no direct connexion between increase and time lapse. Quinone increase noted in liver tissue in vivo after irradiation was also observed in liver tissue homogenates maintained in vitro, and with access to O_2. A rapid increase in quinones was determined in liver homogenates during the first 15 - 30 minutes of incubation. These quinones are thought to be formed by increased oxidation of phenols in irradiated tissue. The addition of DPN (diphosphopyridine nucleotide) to liver homogenates of irradiated rats caused an almost two-fold increase in the absorption of O_2, apparently as the result of

Card 1/2

27.1220

39590
S/020/62/145/002/018/018
B144/B180

AUTHORS: Kopylov, V. A., and Kuzin, A. M., Corresponding Member AS USSR

TITLE: Effect of diphosphopyridine nucleotide on the respiration of liver homogenates from γ-irradiated rats

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 145, no. 2, 1962, 438 - 439

TEXT: The suggestion has been made that quinones forming in irradiated tissues may take part in the electron transfer in tissue respiration. Since they substitute partly natural naphtoquinones, an inhibition of oxidative phosphorylation must be expected and has in fact been observed by D. W. Bekkum (Chem. Weekbl., 53, no. 19 (1957)). Excess formation of quinones may, however, increase the O_2 absorption. The test material was obtained from rats subjected to x-ray irradiation with 1000 r by homogenizing 1 g of liver for 2-3 min. at 4°C in 10 ml of phosphate-citrate buffer (pH 7.3). The O_2 absorption was measured in a Warburg apparatus for 30 min. at 37°C and was the same as in non-irradiated rats, which means that the newly formed quinones have no effect on tissue respiration. To

Card 1/2

KOPYLOV, V.A.; KUZIN, A.M.

Role of dioxyphenols in the mechanism of action of γ rays on plants.
Radiobiologiia 4 no.4:508-512 '64. (MIRA 17:11)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

L 1398-66 EWT(m)

ACCESSION NR: AP5017763 UR/0216/65/000/004/0507/0520
577.391

AUTHOR: Kuzin, A. M.; Plyshevskaya, Ye. G.; Kopylov, V. A.; Ivanitskaya, Ye. A.; Lebedeva, N. Ye.; Kolomiytseva, I. K.; Tokarskaya, S. K.; Mel'nikova, S. K. 34 33 13

TITLE: Role of the "orthophenol-orthoquinone" system in the primary mechanisms of radiation effect on the organism 19

SOURCE: AN SSSR. Izvestiya. Seriya biologicheskaya, no. 4, 1965, 507-520

TOPIC TAGS: radiation biologic effect, phenol, quinone, enzyme, desoxyribonucleic acid, tyrosine, oxidation

ABSTRACT: A hypothesis stating that the oxidation reaction of orthophenols in response to high energy irradiation is closely related to the formation of orthoquinones (semiquinones) has evolved from the experimental work of the laboratory with which the authors are associated. In the present study the immediate effects of X-irradiation on enzyme process rates were investigated in a tyrosine+tyrosinase model system under strictly controlled conditions

Card 1/3

L 1398-66
ACCESSION NR: AP5017763

(210 kv, 15 ma, no filter, 100 to 1000 r doses, 10 min incubation). Change in enzyme process rate was determined by the concentration of newly formed orthophenols and orthoquinones. With irradiation of the whole system, the concentration was 5 times higher than for controls. Irradiation of only the tyrosine solution led to a lesser concentration, and the concentration decreased still further with irradiation of only the tyrosinase. When the irradiated mixture was incubated with a suspension of mouse thymus nuclei, the tyrosine oxidation products (orthoquinones) were completely absorbed by the nuclei. Fluorescence tests with acridine-orange on thymus nuclei of mice immediately after irradiation and tests on thymus nuclei treated with tyrosine oxidation products demonstrated the similarity of irradiation effect and orthoquinone effect. The same effect was demonstrated with quinone extracts from gamma-irradiated plant tissue (potato). Treatment of carbon-labeled plant sprouts with extracts from irradiated plants depressed DNA synthesis by 50 to 60%, the same as after gamma-irradiation. Injection of purified orthoquinones, extracted from irradiated plant tissues, into young mice caused loss of weight, growth inhibition, and a sharp decrease in leukocyte level of the peripheral blood. These study data demonstrate the importance of the

Card 2/3

L 1398-66
ACCESSION NR: AP5017763

"orthophenol-orthoquinone system" in the primary mechanisms of radiation effect. Orig. art. has: 10 figures and 4 tables.

ASSOCIATION: Institut biologicheskiy fiziki AN SSSR (Institute of Biophysics AN SSSR)

SUBMITTED: 22Jan65 ENCL: 00 SUB CODE: LS

NR REF SOV: 021 OTHER: 010

Card 3/3

KUZIN, A.M.; KOPYLOV, V.A.; MELINIKOVA, S.K.

Effect of ionizing radiation on the metabolism of phenol compounds in plants. Radiobiologiia 5 no.1:35-39 '65. (MIRA 18:3)

1. Institut biologicheskoy fiz ki AN SSSR, Moskva.

L 23811-66 EWT(1)/EWT(m)/T JK

ACC NR: AP6015925 SOURCE CODE: UR/0216/65/000/004/0507/0520

AUTHOR: Kuzin, A. M.; Plyshevskaya, Ye. G.--Plyshevskaya, E. G.; Kopylov, V. A.; Ivanitskaya, Ye. A.--Ivanitzkaya, E. A.; Lebedeva, N. Ye.--Lebedeva, N. E.; Kolomiytseva, I. K.--Kolomiytzeva, I. I.; Mel'nikova, S. K.--Melnikova, S. K.; Tokarskaya, V.I.

ORG: Institute of Biophysics, AN SSSR, Moscow (Institut biologicheskoy fiziki AN SSSR)

TITLE: Function of the orthophenol-orthoquinone system in the early mechanism of action of ionizing radiation on the organism

SOURCE: AN SSSR. Izvestiya. Seriya biologicheskaya, no. 4, 1965, 507-520

TOPIC TAGS: ionizing radiation, radiation biologic effect, radiation plant effect, tyrosine, sorption, oxidation, DNA, biosynthesis, radiation sickness

ABSTRACT: The authors concluded from a variety of experiments on plants and animals that the initial processes in the irradiated organism develop in the following sequence:

(1) During irradiation the formation of active radicals causes very slight radiochemical oxidation of the phenols present in the cell, chiefly tyrosine.

(2) The resultant oxidation products activate tyrosinase, which immediately after irradiation leads to the formation of large quantities of biologically active orthoquinones.

(3) The resultant orthoquinones are actively sorbed by the cell nuclei.

Card 1/2 UDC: 577.391

L 25811-66

ACC NR: AP6015925

(4) The orthoquinones sorbed by the nuclei inhibit DNA synthesis, block the incorporation of thymidine into newly synthesized DNA, and alter their fluorescence in the presence of acridine orange.

(5) The blocking of nuclear DNA by the orthoquinones sharply inhibits cell division, giving rise to leukopenia, arrested growth, weight loss, chromosomal aberrations, and, in sufficiently high concentrations, death of the organism. Orig. art. has: 10 figures and 4 tables. [JPRS]

SUB CODE: 06, 07 / SUBM DATE: 22Jan65 / ORIG REF: 021 / OTH REF: 010

Card 2/2 CC

REPENKOVA, T.G.; KOPYLOV, V.A.

Evaporation of potassium phosphate solutions in a fluidized bed.
Khim.prom. 41 no.6:462-465 Je '65. (MIRA 18:8)

1. Voskresenskiy khimicheskiy kombinat imeni Kuybysheva.

KOPYLOV, V. D.

Woolen and worsted manufacture

Mechanical cleaning of wool of barnyard impurities. Tekst. prom. 12 no. 4, 1952

Monthly List of Russian Accessions, Library of Congress, June 1952. UNCLASSIFIED

KRYLOV, B.A., kand. tekhn. nauk; KOFYLOV, V.D., inzh.

Heat treatment of arbolite. Stroi. mat. 10 no.9:15-17 S '64
(MIRA 18:2)

PEGLOVSKIY, V.L. [Pehlovs'kyi, V.L.]; KOSTENKO, V.D.; VINNICHENKO, S.A.; KOPYLOV, V.D.

Technology of the manufacture of press-molds for plastics. Leh. prom. no.4:44-47 O-D '65. (MIRA 19:1)

KHOKHOTVA, N.N., kand.tekhn.nauk; GORODNICHEVA, S.A., inzh.; KOPYLOV, V.F., inzh.

Air conditioning in mines. Ugol' 35 no.6:41-44 Je '60. (MIRA 13:7)

1. Makeyevskiy nauchno-issledovatel'skiy institut po bezopasnosti gornykh rabot (for Khokhotva). 2. Dongiprouglemash (for Gorodnicheva). 3. Stroyupravleniye No.3 Makeyevshakhtostroy (for Kopylov).

(Coal mines and mining--Air conditioning)

KRAVETS, V.I., kand.tekhn.nauk; BALANOVSKIY, V.F., inzh.; ZINCHENKO, V.V., inzh.; KOPYLOV, V.F., inzh.; SHEVCHENKO, L.I., inzh.

Efficiency of water curtains for directed protection against the air wave impact. Ugol' Ukr. 6 no.5:38-41 My '62. (MIRA 15:11)
(Coal mines and mining--Fires and fire prevention)
(Blasting--Safety measures)

KOPYTOV, V.F., doktor tekhn. nauk; YERINOV, A. Ye., kand. tekhn. nauk;
KOVALENKO, V.V., inzh.; SOROKA, V.A., inzh.

Gas [illegible] for heating metallurgical equipment parts during hard facing. Avtom. svar. 17 no.11:94-96 N '64 (MIRA 18:1)

KOPYLOV, V.I.

Let's carry out the electrification of railroads rapidly and economically. Transp.stroi. 9 no.5:7-8 My '59. (MIRA 12:12)

1. Nachal'nik ustanovochnogo poyezda, Tomskaya doroga, Sibirskaya magistral'.
(Siberia--Railroads--Electrification)

DROZDOV, Aleksandr Dmitriyevich, doktor tekhn.nauk, prof.; NECHITAYLOV, Viktor Vladimirovich, assistent; KOPYLOV, Vladimir Ivanovich, starshiy laborant, inzh.

Nonlinear networks containing steel used for the relay protection of a.c. locomotives. Izv.vys.ucheb.zav.; elektromekh. 5 no.1: 55-61 '62. (MIRA 15:2)

1. Dekan elektromekhanicheskogo fakul'teta Novocherkasskogo politekhnicheskogo instituta (for Drozdov). 2. Kafedra elektricheskikh stantsiy, setey i sistem Novocherkasskogo politekhnicheskogo instituta (for Nechitaylov, Lopylov).

(Electric locomotives)

NECHITAYLOV, V.V.; KOPYLOV, V.I.; TSOKANOV, V.V.

Study of the protection system of the power network of the N-60 a.c. locomotive. Izv. vys. ucheb. zav.; elektromekh. 5 no.2: 205-210 '62. (MIRA 15:3)

(Electric locomotives)

TKACH, Aleksandr Grigor'yevich; KOPYLOV, V.I., inzh., retsenzent;
KOMAROV, V.S., inzh., spets. red.; FUKS, V.K., red.;
SOKOLOVA, I.A., tekhn. red.

[Concise manual for the tobacco worker] Kratkii spravochnik tabachnika. Moskva, Pishchepromizdat, 1963. 112 p.
(MIRA 16:6)
(Tobacco industry)

UVAROV, Ivan Petrovich; GORDON, Lev Vladimirovich; KOPYLOV, V.I., red.; YEPISHKINA, A.V., red.izd-va; GRECHISHCHEVA, G.L., tekhn. red.

[Wood tar; synthetic products based on wood chemical phenols] Drevesnye smoly; sinteticheskie produkty na osnove lesokhimicheskikh fenolov. Moskva, Goslesbumizdat, 1962. 84 p. (MIRA 16:5)

(Wood tar) (Phenol condensations products)

KOPYLOV, V.I.

Compressor piston rings made of polytetrafluoroethylene.
Mashinostroitel' no.3:13 Mr '64. (MIRA 17:4)

KOPYLOV, V.I.: Master Tech Sci (diss) -- "Investigation of the water runoff from brown-coal open-pit mines in the Urals". Sverdlovsk, 1958. 15 pp (Min Higher Educ USSR, Sverdlovsk Mining Inst im V. V. Vakhrushev), 100 copies (KL, No 2, 1959, 121)

Kopylov, V I

KOPYLOV, V.I., inzh.

Controlling the delivery of depth pumps for mine drainage. Shakht. stroi no.1:10-15 '58. (MIRA 11:2)
(Mine pumps) (Mine drainage)

KOPYLOV, V.I., assistent

Maximum water inflow in lignite open-cut mines. Izv.vys.ucheb. zav.; gor.zhur. no.4:120-124 '58. (MIRA 11:11)

1. Sverdlovskiy gornyy institut.
(Strip mining) (Mine water)

KOPYLOV, V.I., insh. (Sverdlovsk).

New method of measuring the dynamic water level in water drainage wells. Ugol' 33 no.2:19-20 F '58. (MIRA 11:2)
(Mine drainage) (Gauging)

KOPYLOV, V.I., assistent

Calculations of water pumping in lignite strip mines. Izv.vys. ucheb.zav.; gor.zhur. no.8:82-87 '59. (MIRA 13:5)

1. Sverdlovskiy gornyy institut imeni V.V.Vakhrusheva. Rekomendovana kafedroy gornoy mekhaniki.
(Strip mining) (Mine water)

KOPYLOV, V.I., inzh.

Lower the consumption of electric power in mine drainage. Shakht. stroi. 4 no.4:17-18 Ap '60. (MIRA 13:11)

1. Sverdlovskiy gornyy institut.
(Mine drainage) (Electricity in mining)

KOPYLOV, V.I., assistent

Calculating underground drainage of open-pit mines. Izv. vys. uchsb. zav. gor. zhur. no.8:123-126 '60. (MIRA 13:9)

1. Sverdlovskiy gornyy institut im. V.V. Vakhrusheva. Rekomendovana kafedroy gornoy mekhaniki.

(Mine drainage) (Strip mining)

KOPYLOV, V.I., kand. tekhn. nauk

Present state and prospects for the drainage of U.S.S.R. strip mines. Nauch. zap. Ukrniiproekta no.10:71-81 '63.
(MIRA 17:6)

KOPYLOV, V.I.

Unit for studying the wear resistance of piston rings of high pressure compressors. Zav.lab. 30 no.12:1507-1508 '64.

(MIRA 18:1)

1. Penzenskiy filial Nauchno-issledovatel'skogo instituta khimicheskogo mashinostroyeniya.

KOPYLOV, V.I., inzh.

Using capron in the manufacture of compressors. Khim. i neft. mashinostr. no.8:47 Ag '65. (MIRA 18:12)

KOPYLOV, V.I.

Piston rings and valve plates made of capron. Mashinostroitel' no. 1:42 Ja '66 (MIRA 19:1)

ANAN'YEV, M.G.; BEREZIN, I.P.; SHCHUPAKOV, N.N.; KOPYLOV, V.I.

Surgery performed in an operating room under increased atmospheric pressure. Eksper. khir. i anest. 9 no.3:14-18 My-Je '64.
(MIRA 18:3)

1. Nauchno-issledovatel'skiy institut eksperimental'noy khirurgicheskoy apparatury i instrumentov (dir. M.G. Anan'yev) i Vsesoyuznyy tsentral'nyy nauchno-issledovatel'skiy institut okhrany truda (dir. M.Ye. TSutskov) Vsesoyuznogo tsentral'nogo soveta professional'nykh soyuzov, Moskva.

L 52610-65 EWT(d)/EWT(m)/EWP(w)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(b)/EWP(l)
Pf-4 JD

ACCESSION NR: AP5015753 UR/0032/64/030/012/1507/1508

AUTHOR: Kopylov, V. I.

TITLE: An installation for the study of wear resistance in the piston rings of high-pressure compressors

SOURCE: Zavodskaya laboratoriya, v. 30, no. 12, 1964, 1507-1508

TOPIC TAGS: high pressure compressor, engine combustion system, wear resistant metal, industrial instrument

Abstract: Since one of the pressing problems in the manufacture of compressors is how to increase wear resistance in banks of cylinders and stuffing boxes in the final stages of high-pressure compressors, the Institute designed and produced a machine for testing mechanical seals: two complexes of cylinder rings up to 110 mm in diameter, or two stuffing boxes with rod diameter up to 100 mm, with pressure drop up to 220 kg/cm² and drop in reciprocating motion of up to 6 m/sec. The piston stroke is 205 mm. A crank-rod mechanism, mounted in a frame, is impelled by a 14 kw electric motor through a V-belt. Variation in speed is achieved by replacing the pulley. Two co-axial cylinders are joined to the frame; these

Card 1/2

L 52610-65

ACCESSION NR: AP5015753

are not necessarily cooled. To the cross-head is attached a coupling rod, onto which cylinders are fitted. Pressure from the compressor is directed into the cavity between the pistons, so that the two pressures are equivalent.

Tests thus far made on this machine have led to the recommendation of a new grade of low-alloy iron for use in the piston rings of high-pressure compressors. Actual wear as observed in the test machine is some 8 times as great as in real compressors, so that "accelerated" tests are possible. Orig. art. has 1 figure.

ASSOCIATION: Penzenskiy filial nauchno-issledovatel'skogo instituta khimicheskogo mashinostroyeniya (Penza Branch of the Scientific-Research Institute of Chemical Machine-Building)

SUBMITTED: 00 ENCL: 00 SUB CODE: PR, MM

NO REF SOV: 000 OTHER: 000 JPRS

Card 2/2

KOPYLOV, V.I., inzh.

Air cooling in circulation systems of metallurgical furnaces.
Stal' 25 no.3:284-285 Mr '65. (MIRA 18:4)

KOPYLOV, V.K., inzh.

Two-sided spring for equipment boxes. Avtom., telem. i sviaz' 6 no.3:25 Mr '62. (MIRA 15:3)

1. Kandalakshskaya distantsiya signalizatsii i svyazi Oktyabr'skoy dorogi.

(Railroads--Equipment and supplies)

L 35454-65 EED(b)-3/ENG(v)/EWT(l)/EWA(c)/T/EWA(d)/FSS-2/EWA(d) Pe-5/Pac-2 IJP(c)

ACCESSION NR: AP5007643 S/0154/64/000/006/0087/0092

AUTHOR: Kopylov, V. M. (Candidate of technical sciences)

TITLE: Calculation of contrast in the optical image of objects in aerial photographic cameras

SOURCE: IVUZ. Geodeziya i aerofotos"yemka, no. 6, 1964, 87-92

TOPIC TAGS: aerial photography, aerial photographic camera, optical image contrast, photographic image contrast, optical image

ABSTRACT: An analytical investigation is made to find the exact relationships of the effects of haze and light diffusion in the camera on the contrast of the photographic images. The known expressions for visual (differential) and relative brightnesses, and for the brightness of rays reflected from an object after passing the atmospheric layer are defined. The additional brightness from haze is taken into account. Sources of diffused light within the camera are considered, and the effect of that light to the extent that it is absorbed within the image frame is considered in reducing the contrast of the image. These factors and the brightness losses in the optics of the camera are combined in an expression for the relative contrast of the photographic image. Since the brightness of the haze and the brightness of the diffused light in the camera are difficult to measure or to calculate, they are re-

Card 1/3

L 35454-65

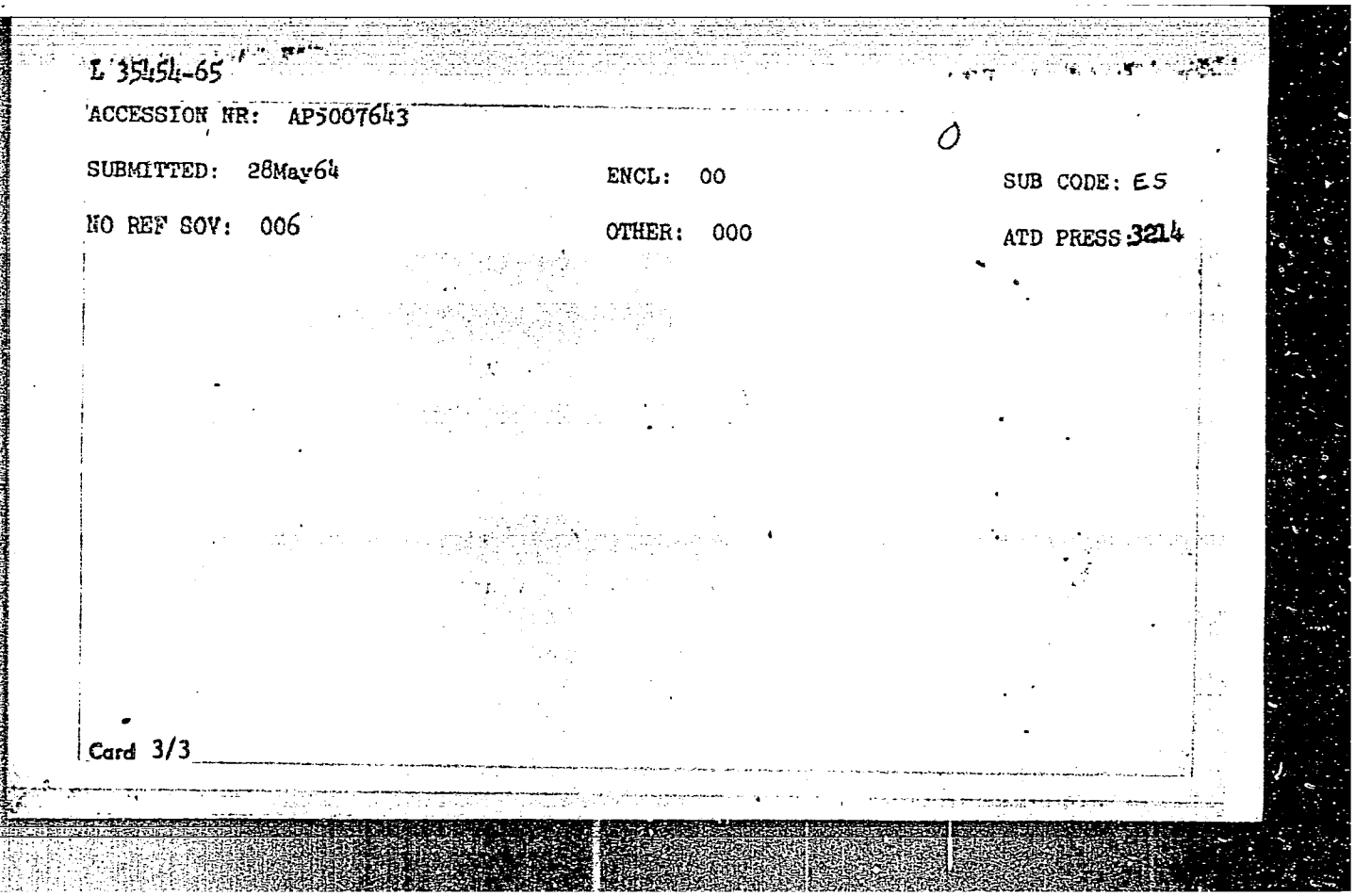
ACCESSION NR: AP5007643

2

placed by more constant magnitudes characterizing these factors. These magnitudes are the absolute haze coefficient of a landscape and the absolute diffusion coefficient. The former is a function of the brightness of an absolutely white diffuser and of the coefficient of transparency of the atmosphere. The latter is a function of the brightness of an absolutely white diffuser and of the transparency of the optical system. The expression obtained is considered exact. Both exact and approximate formulas are used for calculating the solutions for certain concrete conditions. The input data and the solutions show that the approximate version understates the effect of haze and diffusion in the camera at low values of image contrast, and that the errors of the approximate version grow with higher contrast values, leading to overstatement of these effects. The relative error is most pronounced when aerial photographing is conducted at middle altitudes. Another approach is made on the basis of an expression of visual contrast as a function of the combined effect of haze and diffusion in the camera (Istomin, G. A., Razreshayushchaya sposobnost' i deshifriruyemost' aerosnimkov. Trudy TsNIIGA i K, M., Geodetizdat, 1955, no. 107, 139-187). Orig. art. has: 26 formulas and 1 table. [FP]

ASSOCIATION: none

Card 2/3



L 35454-65

ACCESSION NR: AP5007643

SUBMITTED: 28May64 ENCL: 00 SUB CODE: ES

NO REF SOV: 006 OTHER: 000 ATD PRESS: 3214

Card 3/3

L 24138-65 EED(b)-3/EWT(1)/T/EWA(d)/FSS-2 Pac-2
ACCESSION NR: AP5003526 S/0006/64/000/012/0039/0042

AUTHOR: Kopylov, V. N.

TITLE: Computing the allowable scattering of light in aerial cameras

SOURCE: Geodeziya i kartografiya, no. 12, 1964, 39-42

TOPIC TAGS: aerial photography, atmospheric scatter

ABSTRACT: Light scattering leads to loss of contrast and hence to decrease in resolving power of a photographic image. Frequency contrast characteristics supply most information for studying this, but for determining allowable light scattering it is more convenient to use resolving power. The author expresses this in terms of contrast, which is a measure of difference between maximum and minimum brightness of an image. He obtains an expression for determining error in contrast evaluation and then shows how the value of the contrast desired (or that considered necessary) may be used to evaluate the amount of allowable light scattering. Contrast is expressed in terms of transmission and scattering characteristics of the atmosphere:

$$K = \frac{(B_{max} - B_{min}) T_A}{B_{max} T_A + \Delta B_A},$$

Card 1/2

where B_{max} and B_{min} represent the maximum and minimum brightness of objects being photographed, T_A is the transmission coefficient of the atmosphere, and ΔB_A is the brightness of atmospheric haze. From this it follows that the allowable scattering is

$$\sigma = -T_A\left[\chi + \left(1 - \frac{K_0}{K - \Delta K}\right) r_{max}\right]$$

where χ is $\Delta B_A / B_i T_A$ (B_i is the brightness of an absolutely white scatterer), K_0 is the desired contrast (0.29), ΔK is contrast change, and r_{max} is the brightness coefficient of the lightest object being photographed. Allowable scattering may be thus determined if the desired resolving power on test objects of varying contrasts, the contrast in the particular landscape, the flying height, the kind of photographic film, and the use of filters are considered. For average conditions, a contrast of 0.2 may be used. Orig. art. has: 1 table and 16 formulas.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: ES

NO REF Sov: 004 OTHER: 000

KOPYLOV, V.M.

Characteristics of light scattering in photographic systems.
Zhur. nauch. i prikl. fot. i kin. 10 no.2:112-116 Mr-Ap '65.
(MIRA 18:5)

ACCESSION NR: AP4037060 S/0079/64/034/005/1684/1685

AUTHOR: Andrianov, K. A.; Kurakov, G. A.; Kopy*lov, V. M.; Khananashvili, L. M.

TITLE: New synthesis method for methylbromosilanes and methylbromochlorosilanes

SOURCE: Zhurnal obshchey khimii, v. 34, no. 5, 1964, 1684-1685

TOPIC TAGS: methylbromosilane, methylbromochlorosilane, trimethylbromosilane, dimethylchlorobromosilane

ABSTRACT: Trimethylbromosilane and dimethylchlorobromosilane have been prepared by treatment of trimethylchlorosilane or dimethyldichlorosilane with hydrogen bromide in the presence of anhydrous $FeCl_3$ or iron filings. Either HBr gas or HBr generated by the reaction of bromine with naphthalene or tetralene can be used. Boiling points of the products are 79-80C and 93-94C, respectively. This work was done at the Moscow Institute of Fine Chemical Technology.

Card 1/2

L 16082-66 EWT(m)/EWP(j) WW/RM

ACC NR: AP6005930 SOURCE CODE: UR/0079/66/036/001/0105/0107

AUTHOR: Andrianov, K. A.; Kurskov, G. A.; Kopylov, V. M.; Kvinnashvili, L. M.

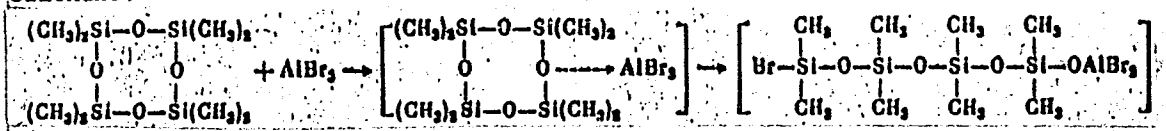
ORG: Moscow Institute of Fine Chemical Technology im. M. V. Lomonosov (Moskovskiy institut tonkoy khimicheskoy tekhnologii)

TITLE: Reaction of aluminum bromide with octamethylcyclotetrasiloxane

SOURCE: Zhurnal obshchey khimii, v. 36, no. 1, 1966, 105-107

TOPIC TAGS: organosilicon compound, aluminum compound, bromide

ABSTRACT: The reaction between octamethylcyclotetrasiloxane and aluminum bromide under various conditions and with various proportions of the reactants was studied. The authors found that the reaction proceeds in accordance with the mechanism proposed earlier for the reaction between aluminum chloride and octamethylcyclotetrasiloxane:



(I)

Card 1/3 UDC: 547.245 + 546.623