

I. 07860-07 CAT(1)

ACC NR: AR6017565

SOURCE CODE: UR/0196/66/000/001/A009/A009

AUTHOR: Kalinina, T. A.; Lazareva, L. I.; Parshina, T. S.

TITLE: Electric field at the axis of a conducting circular cylinder of finite length with regard to the edge effect

SOURCE: Ref. zh. Elektrotehnika i energetika, Abs. 1A72

REF SOURCE: Tr. po teorii polya, vyp. 1, 1964, 50-54

TOPIC TAGS: electric field, electric theory, electric conductor

ABSTRACT: A solution is given for the problem on finding the electric field at the axis of a conducting circular cylinder with regard to the edge effect and special cases are considered. 2 illustrations, bibliography of 4 titles. From the summary. [Translation of abstract]

SUB CODE: 09

CALL 1/1 bc

CHERNOV, V.A.; LYTKINA, V.B.; SERGIYEVSKAYA, S.I.; KROPACHEVA, A.A.;
PARSHINA, V.A.; SVENTSITSKAYA, L.Ye.

On the antitumor activity of certain derivatives of the trimer and
tetramer of phosphonitrile. *Farm. i toks.* 22 no.4:365-367 J1-Ag '59.
(MIRA 13:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S. Ordzhonikidze.

(HETEROCYCLIC COMPOUNDS pharmacol.)

(ANTINEOPLASTIC AGENTS pharmacol.)

AUTHORS: Kropacheva, A. I., Parshina, V. A. S.V/79-29-2-43 71

TITLE: Derivatives of Ethylenimine (Proizvodnyye etilenimina.
I. Ethylenimides of Phosphoric Acid (I. Etilenimidy fosforney
kisloty)

PERIODICAL: Zhurnal obshchey khimii, 1959. Vol 29, Nr 2, pp 586-591 (USSR)

ABSTRACT: The derivatives of phosphoric acid are not only used in agriculture and industry but also for medical purposes. Recently several papers have been published on the activity of some ethylenimides of phosphoric acids inhibiting malignant new growths. Two of these, the compounds (A) and (P) were used in medicine. In 1955 the authors began their work on the synthesis of the ethylenimine derivatives of phosphoric acids. They intended to have the compounds they were to obtain biologically tested in order to investigate the influence exercised by the substituents to be introduced upon malignant swellings. The first part of the present paper consisted in the synthesis of aryl-di-(ethylene)-phosphorus triamides of the general formula 4. These compounds were synthesized according to scheme 1. In accordance with this scheme the n-oxy-chloro phosphines of the arylamines (II)

Card 1/3

Derivatives of Ethylenimine I Ethylenimides
Phosphoric Acid

S V 77-29-2-4

no polymer. According to the analysis it corresponded either to ethylenimide (IV) or to a derivative of oxalene (V). The infrared spectrum recorded indicated (IV). In this way a compound with three ethylenimine cycles was obtained. Altogether 9 hitherto not described di-(ethylene)-arylamides of phosphoric acid and five N-oxy-chloro phosphates of the arylamines were synthesized. There are 2 tables and 4 references, 2 of which are Soviet.

ASSOCIATION

Vsesoyuznyy nauchno issledovatel'skiy khimiko farmatsevticheskiy institut imeni S. Ordzhonikidze (All-Union Scientific Chemical pharmaceutical Research Institute imeni S. Ordzhonikidze)

SUBMITTED

November 1, 1957

Card 3/3

075L

5 3832

S/079/60/030, 04, 07, 080
B001/B011

AUTHORS:

Petrov, K. A., Parshina, V. A.

TITLE:

Phosphatic Polyester- and Polyamide Resins

PERIODICAL:

Zhurnal obshchey khimii, 1960, Vol. 30, No. 4, pp 1341-1346

TEXT: It was the aim of the investigation under review to carry out the synthesis of organophosphorus condensation polymers of the type of polyesters and polyamides. Ethylene glycol, diethylene glycol, hexamethylene diamine and the ester of the dibasic acid bis-(p-carbomethoxy phenyl)-methyl phosphin-oxide were used for the condensation. Polymers (I), (II), (III) are described. The characteristic feature of these polymers is the circumstance that there are atoms of pentavalent phosphorus in their chain, which are linked by phosphocarbon compounds. Thus, polymers (I) and (III) differ from "Terylene" and "Nylon" by the fact that the radicals of bis-(p-carboxyphenyl)-methyl phosphin-oxide replace the radical of terephthalic acid in the chain of the former and the radical of adipic acid in the chain of the other. With respect to heating and reacting with various reagents containing organophos-

Cont 1,2

80734

Phosphatic Polyester- and Polyamide Resins

S/079/60/030/04/67/080
B001, B011

phorus compounds, phosphin oxides are the stablest, in contrast to the phosphites and phosphonates. The synthesis described in publications (Refs. 1-6), which yields complicated and bad products, of bis-(p-carbomethoxy phenyl)methylphosphin oxide, was modified and improved to a large extent. Thus, bis-(p-tolyl)methyl phosphin oxide was obtained in a yield of 82% by the reaction of acid dichloride of methyl phosphinic acid with p-tolyl magnesium bromide. Oxidation of bis-(p-tolyl)methyl phosphin oxide was carried out with alkaline permanganate (yield 81%), in contrast to other researchers. Acid dichloride resulted on heating bis-(p-carboxyphenyl)methylphosphin oxide with thionyl chloride. The polyester of ethylene glycol and diethylene glycol of bis-(p-carboxyphenyl)methylphosphin oxide (I and II) were obtained on a protracted heating of methyl ester of bis-(p-carbomethoxy phenyl)methyl phosphin oxide with ethylene glycol and diethylene glycol in the presence of zinc borate as catalyst and pentaerythrite. Transparent polyesters can be obtained only in the absence of oxygen. By heating in vacuum a salt prepared from hexamethylene diamine and bis-(p-carboxy phenyl)methylphosphin oxide polyamide (III) was obtained. There are 6 references, 4 of which are Soviet.

SUBMITTED: April 3, 1959

Card 2/2

15 5540 2109.2209, 1526

S/079/60/030/009/008/015
B001/B064

AUTHORS: Petrov, K. A., Parshina, V. A., Daruze, G. L.

TITLE: Phosphorus-containing Polyesters and Polyamide Resins¹⁵

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 9,
pp. 3000-3004

TEXT: As was already previously shown by the authors, the polyamide- and polyester resins synthesized from diamines or glycols and phosphine oxides (containing two carboxyl groups), are capable of developing fibers (Ref. 1). The present investigation deals with the synthesis of the hitherto unknown organo-phosphorus polymers that differ essentially from the polymers obtained from phosphine oxides. The initial substances of condensation were ethylene glycol, diethylene glycol, hexamethylene diamine and bis (p - carboxyphenyl) phosphinic acid or its methyl ester. Three polymers (I), (II), (III) are described. It is characteristic of these polymers that their chain contains the radicals of bis(p-carboxyphenyl) phosphinic acid with the unesterified phosphorus group in the case of the polymers (I) and (II), and in the case of the polymer (III) in the form of an ammonium salt. Thus, the first two polymers are weak acids, and the

Card 1/2

KROPACHEVA, A.A.; FARSHINA, V.A.; SERGIYEVSKAYA, S.I.

Derivatives of ethylenimine. Part 2: Ethylenimides of phosphoric
and thiophosphoric acids. Zhur. ob. khim. 30 no.11:3584-3588 N'60.
(MIRA 13:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S.Ordzhonikidze.
(Ethylenimine) (Phosphoric acid) (Phosphorothioic acid)

KROPACHEVA, A.A.; MUKHINA, L. Ye.; KASHNIKOVA, N.M.; PARSHINA, V.A.

Reactions of esters of certain amino acids an piperidine with
the phosphonitrile chloride trimer. Zhur. ob. khim. 31 no.3:1036-
1037 Mr '61. (MIRA 14:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevtiche-
sky institut imeni S. Ordzhonikidze.
(Phosphonitrile chloride) (Amino acids) (Piperidine)

25370

S/079/61/031/008/008/009

D215/D304

5363c

AUTHORS: Petrov, K.A. and Parshina, V.A.

TITLE: Reactions of Phosphines I, Reactions primary aliphatic phosphines with aldehydes and ketones

PERIODICAL: Zhurnal obshchey khimii, v. 31, no. 8, 1961, 2729-2731

TEXT: In this experimental work the authors studied the reaction of propylphosphine with formaldehyde, acetaldehyde, benzaldehyde, and acetophenone; they proved that primary phosphines easily react with different aldehydes and ketones. With formaldehyde the reaction proceeds according to the scheme.

$C_3H_7PH_2 + 3CH_2O + HCl \rightarrow C_3H_7P(CH_2CH)_3Cl$ With other carbonylic compounds the reaction sometimes stops on the first or second alkylation stage; it depends on the reagents as well as the solvent used; e.g. propyl phosphine with benzaldehyde in aqueous alcohol solution with HCl forms propyltri-(phenylmethylol) phosphonium chloride, but in absolute ether

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25370

S/079/61/031/008/008/009
D215/0304

Reactions of Phosphines I,...

with HCl it forms proton(dimethylol)phosphine, under the same conditions as the last, only a secondary phosphine is obtained with acetophenone-propyl and phenylethylol phosphine; [Abstractor's note The authors refer to aliphatic phosphines in the plural, actually investigating only one of them]. There are 4 references: 1 Soviet bloc and 3 non-Soviet bloc. The references to the English language publications read as follows: A. Hoffman, J. Am. Chem. Soc. 43, 1684, 1921.; A. Hoffman, J. Am. Chem. Soc. 52, 2995, 1930.

SUBMITTED: September 5, 1960

Card 2/2

L 27274-65 EPF(c)/EPR/EPA(s)-2/EWI(j)/EWA(c)/EWT(w)/T Pc-4/Pr-4/Pe-4/
Pt-10 RPL RM/WW/JW S/0191/64/000/001/0020/0023 42
ACCESSION NR: AP4009831 41
B

AUTHORS: Petrov, K.A.; Parshina, V.A.; Tsy*plna, G.M.; Luzanova, M.B.

TITLE: Phosphorus-containing polymers based on polyamidophosphinites
and phosphites

SOURCE: Plasticheskiye massy*, no. 1, 1964, 20-23

TOPIC TAGS: phosphorus containing polymer, transamidation, alkyl-
phosphonous acid, diamide transamidation, arylphosphonous acid,
alkylphosphorous acid, linear phosphorus containing polymer, branched
phosphorus containing polymer, polyamidophosphinite polymer, poly-
amidophosphite polymer, ion exchange resin, fire resistant impregnant

ABSTRACT: The tetraethyldiamides of methyl- and phenyl-phosphonous
and butylphosphorous acid were reacted with ethylene-, hexamethylene-,
and p-phenylene-diamines according to the equation in the enclosure.
Transamidation of the diamides of alkyl(aryl)phosphonous and alkyl-
phosphorous acids with diamines forms high molecular (23,600 - 53,000)
linear compounds. Transamidation of the indicated diamides with
diamines, with the addition of hexaethyltriamidophosphorous acid,

Cord 1/3

L 27274-65

ACCESSION NR: AP4009831

leads to branched polymers. The smaller the amount of the last ingredient the more the polymer properties approach those of the linear polyamidophosphinites; the greater the amount of hexaethyl-triamidophosphorous acid, the more rubbery the product. The polyamidophosphites and phosphinites have coordinated unsaturated phosphorus atoms which react with S, SO₂, COCl₂ and alkyl halides, in some instances causing hardening of the polymers. The products are usable as ion exchange resins and fire-resistant impregnants. Orig. art. has: 2 tables and 4 equations. 15

ASSOCIATION: None

SUBMITTED: OO

ENCL: 01

SUB CODE: OC, GC

NR REF SOV: 000

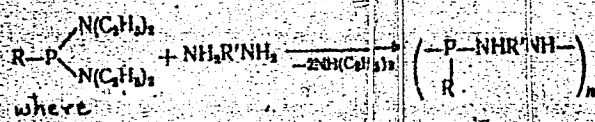
OTHER: 000

Card

2/3

L 27224-65
ACCESSION NR: AP4009831

ENCLOSURE: 01



where

R = CH₃, OC₂H₅, C₆H₅
R' = (CH₂)₂, (CH₂)₄, C₆H₄

Card 3/3

L 6970-66 EWT(m)/EPF(c)/EWP(j)/EWP(i)/EWP(b) IJP(c) JD/RM

ACC NR: AP5028204

SOURCE CODE: UR/0078/65/035/009/1602/1606

AUTHOR: Petrov, K. A.; Parshina, V. A.; Manuilov, A. F.

44,55
44,55
44,55
41
38
B

ORG: none

TITLE: Preparation of tetraalkyl(aryl)alkylenediphosphine oxides from methylol-phosphines

SOURCE: Zhurnal obshchey khimii, v. 35, no. 9, 1965, 1602-1606

TOPIC TAGS: organic phosphorus compound, organic synthetic process

ABSTRACT: A new method of preparation of tetraalkyl(aryl)alkylenediphosphines and diphosphine oxides is proposed in which dialkyl(aryl)methylolphosphines (I) are alkylated by dihaloalkanes, the tetraalkyl(aryl)dimethylolalkylenediphosphonium salts (II) are dealkylated, and the alkylenediphosphines formed (III) are oxidized:

UDC: 547.241 + 547.438.1

Card 1/2

L 27704-66 EWP(1)/EWI(m) RM

ACC NR: AP6018512

SOURCE CODE: UR/0079/65/035/011/2062/2065

AUTHOR: Petrov, K. A.; Parshina, V. A.; Manuilov, A. F.

32
B

ORG: none

TITLE: Production of dialkylmethylolphosphines

SOURCE: Zhurnal obshchey khimii, v. 35, no. 11, 1965, 2062-2065

TOPIC TAGS: alkylphosphonium salt, alkylphosphine, bromide, alkylation, alkylphosphine oxide, hydrogen peroxide

ABSTRACT: Dibutyl- and diheptylmethylolphosphines were produced in high yields by the reaction of trimethylolphosphine with butyl and heptyl bromides, followed by conversion of the alkyltrimethylolphosphonium bromides formed to alkyl-dimethylolphosphines through the action of triethylamine. Secondary alkylation of the alkyl-dimethylolphosphines yielded dialkyldimethylolphosphonium bromides, in better yields when the reactions were conducted at 60-70°. Alkylation can be carried out both without and with a solvent (alcohols or alkyl bromides). Dialkyldimethylolphosphonium bromides, just like monoalkyltrimethylolphosphonium bromides, are decomposed by triethylamine to dialkylmethylolphosphines. The methylol-phosphines add sulfur to form alkylmethylolphosphine sulfides. Under the action of hydrogen peroxide, the dialkylmethylolphosphines are oxidized to dialkylmethylolphosphines oxides, the latter being converted to the corresponding dialkylchloromethylolphosphine oxides by the action of thionyl chloride.

Orig. art. has: 3 tables. [SPRS]

SUB CODE: 07 / SUBM DATE: 13Aug64 / ORIG REF: 004 / OTH REF: 001

Card 1/1 CC

UDC: 547.261/547.4381

REPORT, P. 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

KROPACHEVA, A.A.; KASHNIKOVA, N.M.; PARSHINA, V.A.

Reactions of phosphonitrile chloride trimers. Part 2: Interaction
of a phosphonitrile chloride trimer with glycine ethyl ester. Zhur.
ob.khim. 34 no.2:530-532 F '64. (MIRA 17:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut imeni S.Ordzhonikidze.

PETROV, K.A.; PARSHINA, V.A.; TSYPIA, G.M.

Phosphorus-containing polymers based on methylphosphines and
methylolphosphine oxides. Plast. massy no.11:11-13 '63.
(MIRA 16:12)

PETROV, K. A.; PARSHINA, V. A.; ORLOV, B. A.; TSYPLINA, G. M.

Properties of phosphines. Part 5: Reactions of phosphines
with chloroamines, sulfonyl chlorides, and amines. Zhur. ob.
khim. 32 no.12:4017-4022 D '62. (MIRA 16:1)

(Phosphine) (Sulfonyl chlorides) (Amines)

MUKHINA, A.YE., KASHNIKOVA, N.M., PARSHINA, V.A.

The replacement of chlorine atoms in phosphonitrichlorine trimer by amino compound radicals and the biological activity of its amine substitutes.

Khimiya i Primeneniye Fosfororganicheskikh Soedineniy (Chemistry and application of organophosphorus compounds) A. YE. ARBUZOV, Ed.
Publ. by Kazan Affil. Acad. Sci. USSR, Moscow 1962, 632 pp.

Collection of complete papers presented at the 1959 Kazan Conference on Chemistry of Organophosphorus Compounds.

SAZONOV, N.V., PARSHINA, V.A.

Ethylenimine derivatives of substituted phosphoric and thirphosphoric acids and their biological properties.

Khimiya i Primeneniye Fosfororganicheskikh Soedineniy (Chemistry and application of organophosphorus compounds) A. YE. APPELOV, Ed.
Publ. by Kazan Affil. Acad. Sci. USSR, Moscow 1962, 132 pp.

Collection of complete papers presented at the 1959 Kazan Conference on Chemistry of Organophosphorus Compounds.

PETROV, K.A., PARSHINA, V.A., DARUZE, G.L.

Phosphorus containing polyester and polyamide resins.

Khimiya i Primeneniye Fosfororganicheskikh Soyedineniy (Chemistry and application of organophosphorus compounds) A. YE. ARBUZOV, Ed.
Publ. by Kazan Affil. Acad. Sci. USSR, Moscow 1962, 632 pp.

Collection of complete papers presented at the 1959 Kazan Conference on Chemistry of Organophosphorus Compounds.

PARSHINA, V. A.



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PHASE BOOK EXPLOITATION

SOV/6034

Konferentsiya po khimii i primeneniyu fosfororganicheskikh soyedineniy. 2d.
Kazan', 1959

*Khimiya i primeneniye fosfororganicheskikh soyedineniy, trudy (Chemistry
and Use of Organophosphorus Compounds, Conference Transactions) Moscow,
Izd-vo AN SSSR, 1962. 670 p. Errata slip inserted. 2800 copies printed.*

Sponsoring Agency: Akademiya nauk SSSR, Kazanskiy filial.

Resp. Ed.: A. Ye. Arbuzov, Academician, Ed. of Publishing House: L. S.
Povarov, Tech. Ed.: S. G. Tikhomirova.

PURPOSE: This collection of conference transactions is intended for chemists,
process engineers, physiologists, pharmacists, physicians, veterinarians,
and agricultural scientists.

COVERAGE: The transactions include the full texts of most of the scientific
papers presented at the Second Conference on the Chemistry and Use of

Card 1/14

Chemistry and the Use of Organophosphorus (Cont.)

SOV. 6934

Organophosphorus Compounds held at Kazan' from 2 Nov through 1 Dec 1954. The material is divided into three sections: Chemistry, containing 67 articles, Physiological Activity of Organophosphorus Compounds, containing 26 articles, and Plant Protection, containing 12 articles. The reports reflect the strong interest of Soviet scientists in the chemistry and application of organophosphorus compounds. References accompany individual reports. Short summaries of some of the listed reports have been made and are given below.

TABLE OF CONTENTS [Abridged]:

Introduction (Academician A. Ye. Arbizov)

3

TRANSACTIONS OF THE CHEMISTRY SECTION

Gefter, Ye. L. (NII plastmass (Scientific Research Institute of Plastics, Moscow). Some Prospects for the Industrial Use of Organophosphorus Compounds

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Card 2/4

PETROV, K.A.; PARSHINA, V.A.; LUZANOVA, M.B.

New method of synthesis of tertiary aliphatic, aliphatic-
aromatic phosphines, and methylolphosphines. Zhur.ob.khim.
32 no.2:553-557 F '62. (MIRA 15:2)

(Phosphine)

FETROV, K.A.; PARSHINA, V.A.; GAYDAMAK, V.A.

Reactions of phosphines. Part 2: Reactions of primary aromatic
phosphines with aldehydes and ketones. Zhur.ob.khim. 31 no.10:
3411-3414 0 '61. (MIRA 14:10)
(Phosphine) (Aldehydes) (Ketones)

PETROV, K.A.; PARSHINA, V.A.

Reactions of phosphines. Part 3: Reactions of secondary phosphines
with aldehydes and ketones. Zhur.ob.khim. 31 no.10:3417-3420

● '61.

(MIRA 14:10)

(Phosphine) (Aldehydes) (Ketones)

PETROV, K.A.; PARSHINA, V.A.

Reactions of phosphines. Part 4: Properties of methylolphosphonium
chlorides and methylolphosphines. Zhur.ob.khim. 31 no.10:3421-
3424 0 '61. (MIRA 14:10)
(Phosphonium compounds) (Phosphine)

PETROV, K.A.; PARSHINA, V.A.

Reactions of phosphines. Part 1: Reactions of aliphatic
phosphines with aldehydes and ketones. Zhur.ob.khim. 31
no.8:2729-2731 Ag '61. (MIRA 14:8)
(Phosphine) (Aldehydes) (Ketones)

1392C

S/079/62/032/002/005/011
D227/D303

5.3630
AUTHORS

Petrov, K.A., Parshina, V.A. and Luzanova, M.B.

TITLE

A new method of synthesizing tertiary aliphatic, aliphatic-aromatic and methylol-phosphines

PERIODICAL

Zhurnal obshchey khimii, v. 32, no. 2, 1962, 553-556

TEXT: Synthesis of methylolphosphines and phosphonium chlorides with alkyl- and arylalkyl radicals jointed directly to phosphorus, and also tertiary aliphatic and aliphatic-aromatic phosphines, is described. The starting material for the synthesis was trimethylol-phosphine which was obtained from triethylamine and tetramethylol phosphonium chloride. By the action of alkyl halides and benzyl chloride on trimethylol phosphine alkyl- and benzyl-trimethylol phosphonium halides were produced which on removal of one methylol group, converted into the corresponding dimethylol phosphines. By repeating the reactions the authors were able to obtain monomethylol-phosphines and trialkyl (tribenyl) phosphines. Trimethylol phosphine was prepared by stirring tetramethylol phosphonium chloride

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S/079/62/032/002/005/011
D227/0303

A new method of ...

and dry ethylamine at room temperature in nitrogen, followed by heating to 60°C for 2 hours. Propyl trimethylol phosphonium bromide was prepared by reacting trimethylol phosphine with propyl bromide at 60°C in nitrogen. Propyl dimethylol phosphine and dipropyl dimethylol phosphonium bromide, also dipropyl methylol phosphine, tripropyl methylol phosphonium bromide and tripropyl phosphine were prepared by analogous reactions. In the aromatic series benzyl trimethylol phosphonium chloride, benzyl dimethylol phosphine, dibenzyl dimethylol phosphonium chloride, dibenzyl methylol phosphine, tribenzyl methylol phosphonium chloride and tribenzyl phosphine were similarly prepared from trimethylol phosphine and benzyl chloride. The method of synthesizing tertiary phosphines is based on alkylation of methylol phosphines and dealkylation of methylol phosphonium halides. Due to its general character it may, therefore, be used for producing various organophosphorus compounds with different functional groups. There are 19 references - 6 Soviet-bloc and 13 non-Soviet-bloc. The 4 most recent references to the English language publications read as follows: W.A. Reeves, F. Flynn and J.D. Guthrie, J. Am. Chem. Soc., 77, 3923 (1955); S.A. Buckler, J. Am. Chem. Soc., 82, 4215, (1960); M. Reuter and L. Orthner,

Card 2/3

33920

A new method of ...

S/079/62/032/002/005/011
D227/D303

Ch.A., 54, 14124 1 (1960); Sh.A. Buckler and N.E. Doy, Ch.A., 54, 15316e,
(1960)c

SUBMITTED January 25, 1961

Card 3/3

TSYKINA, N.P., inzh.; PARSHINA, V.I., inzh.

Casting rolling-mill rolls of boron-alloyed cast iron.
Mashinostroenie no.3:52-54 My-Je '63. (MIRA 16:7)

1. Lutuginskiy zavod prokatnykh valkov.
(Iron founding)

BEL'GOVSKIY, V.K.; PARSHINA, V.I.

Increasing the hardness of rolls for the paper industry. Int. project.
no.4:4 Ap '63. (MI A 1634)
(Paper-making machinery) (Cast iron) (Case hardening)

GLOTOV, V.V., inzh.; LYSENKO, N.A., inzh.; PARSHINA, V.M., inzh.;
SOKOLOVA, N.A., inzh.; ISADSKAYA, T.A., inzh.

Economic effectiveness of centralized electric power supply to
logging camps. Mekh.trud.rab. 12 no.12:29-35 D '58.
(MIRA 11:12)

(Lumbering--Machinery) (Electric power distribution)

SU711-44-12-4 17

AUTHORS: Plotov, V.V., Lysenko, M.A., Farshina, V.M., Sokolova, T.A.,
Isadskaya, T.A., Engineers

TITLE The Economical Effectiveness of a Centralized Electric Power
Supply for Lumbering Sites Ekonomicheskaya effektivnost'
tsentralizovannogo elektroabzheniya na lesnykh zapovednikakh

PERIODICAL: Mekhanizatsiya trudoyemkikh i tyazhelykh robot. 1986, No 12,
pp 29 - 35

ABSTRACT: The article deals in detail with the calculation of the
operational expenses at lumbering sites, using electric
power instead of oil driven engines. The research leads to
the conclusion that under definite conditions, the electri-
fication of the lumbering industry proves to be economically
more efficient as compared with the utilization of oil-fuel-
led mechanisms. There are 7 tables, and 1 graph.

Card 1/1

FARSHINA, V.I.

Psychoses originating from drug use. *Psikh. Zap.* 1951, 34:17.
no.10:494-499. 1952. (1952, 10:17)

1. 4-ya psikhovynozhnyy srazhaya t. Al'tsya p. Leningrada
(glavnyy vrach - M.V. Kabanov) i k. Pedra psikiatrit. Leningradskoye meditsinskoye instituta imeni I.I. Mechnikova
(Zav. kafedroy - prof. B.S. Sheretskovskiy).

PARSHINA, V.P.

Mental disorders in bronchial asthma. Vop. psikh i nevr. no.3:
66-74 '58. (MIRA 12:3)

1. Iz II Leningradskoy psikhonevrologicheskoy bol'nitsy.
(ASTHMA) (PSYCHOSES)

Handwritten:
GORBLIK, B.M.; MAYZEL'S, M.G.; PARSHINA, Ye. A.

High-temperature vulcanization of rubberized cloth by means of infrared rays. Kauch.i rez.16 no.9:1-9 S '57. (MIRA 10:12)

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti.
(Infrared rays--Industrial applications) (Vulcanization)

ZUYEV, Yu.S.; PARSHINA, Ye.A.; GRIDUNOV, I.T.

Methods for accelerated aging of rubberized cloth. Nauch. i rez. 17
no.9:27-32 S '58. (MIRA 11:10)

1.Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti.
(Rubberized fabrics)

KRIVITSKIY, B. [Krivsky, B.]; KLESKEN, I. [Klesken, I.]; NEUMAYYER, V. [Neumayer, V.]; GRADETSKIY, Z. [Gradecky, Z.]; DEBYAREV, P. V. [translator]; PARSHINA, Ye. A. [translator]; PETRENKO, V. Ya., general-leutenant, red.; ARTEM'V, A. P., red.; MUKHANOVA, M. D., tekhn. red.

[Night fighting] Nochnoi boi. Pod red. Petrenko V. IA. Moskva, Voenizdat, 1963. 170 p. Abridged translation from the Czech.
(MIRA 16:2)

(Night fighting (Military science))

SOV/138578-9-16/17

AUTHORS: Zuyev, Yu. S.; Parshin, Ye. A.; Iridakov, I. S.

TITLE: Method of Accelerated Ageing of Rubber-Coated Materials
(Metodika uskorenogo stareniya procezinennykh materialov)

PERIODICAL: Kauchuk i Rezina, 1968, No 9, pp 27 - 30 (USSR)

ABSTRACT Under atmospheric conditions, ageing of rubber articles is due to ozone and light. It can, therefore, be assumed that ageing of rubber coated fabrics and fibres is also caused by the same factors. Few results of tests on the effect of ozone on rubber coated fibres have been published so far, and the authors investigated the effect of ozone and light and the character of tension in the ageing of these materials. They also found a method of quantitative evaluation of the efficiency of rubber coated materials. The efficiency was evaluated by estimating the permeability. The tested materials differed according to the types of rubbers employed (1a and 2B), and also according to the composition of the gaseous layer (1a, 2a, 2b, 2c, 2d, 2e, 2f, 2g, 2h, 2i, 2j, 2k, 2l, 2m, 2n, 2o, 2p, 2q, 2r, 2s, 2t, 2u, 2v, 2w, 2x, 2y, 2z, 2AA, 2aDE). The action of ozone and the simultaneous interaction of ozone and light on material 1a, subjected to stretching along the warp (100 kg/m) and along

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Method of Accelerated Ageing of Rubber-Coated Materials. SOV/138588-14/11

weight (50 kg/m) is shown in Table 1. The gas-permeability of the rubber-coated material 2a during ageing under the influence of various tensioning under atmospheric conditions is given in a graph (Fig.1a). These results indicate that an increase in the two-dimensional tensioning causes a decrease in the ageing stability of the rubber-coated materials. Fig.2: changes in the gas-permeability of material 1a during ageing under atmospheric conditions when 1- and 2-dimensional tensioning is applied. It can be observed that under the action of two-dimensional tensioning the material ages much faster than when one-dimensional tensioning is applied. The effect of tensioning on the rate of ageing of materials 1a and 2a under accelerated light-ozone ageing, when concentration of ozone equals $1 \times 10^{-3}\%$ for material 1a and $1 \times 10^{-2}\%$ for material 2a, is given in Fig.3. The rate of ageing depends to a considerable extent on the intensity of sunlight radiation. The unit of "equivalent summer days" (ELS) was adopted. The coefficients depending on the magnitude of sunlight radiation were defined by experiments (Figs. 4 and 5). The concentration of the atmospheric ozone is considerably lower in the inner layer

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SOV/138-58-10/11

Method of Accelerated Ageing of Rubber-Coated Materials

of the rubber than in the surrounding atmosphere. This is to be taken into account when evaluating the efficiency of the rubber-coated materials (Figs. 8 - 9). The ageing stability of rubber-coated materials to ageing under atmospheric conditions, was quantitatively estimated at 50°C, and the intensity of the light was approximately twice that of sunlight. The tests were carried out at room temperature (Figs. 9 and 10). The required concentration of ozone was found to be $3.7 \times 10^{-7}\%$ for material 1a and $1 \times 10^{-9}\%$ for material 2a. Comparative results of accelerated and natural ageing of various rubber-coated materials are tabulated (Table 2). This method can also be used in industry. There

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SOV/1302001001
Method of Accelerated Aging of Rubber-Jointed Material

are 2 Tables, 10 Figures and 3 References: 1 English
and 5 Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinnoy promyshlennosti (Scientific Research Institute of the Rubber Industry)

Card 4/4

SOV/138-58-10-7 '10

AUTHORS: Mayzel's, M. G.; Bayevskiy, V. G.; Parshina, Ye. A.

TITLE: Butyl Rubber (Butilkauchuk). 1. The Principles of Establishing an Economical Technology for the Production of Rubber Products Based on Butyl Rubber (Printsiy poslozheniya ratsional'noy tekhnologii proizvodstva rezinovykh tekhnicheskikh izdeliy na osnove butilkauchuka)

PERIODICAL: Kauchuk i Rezina, 1958, No 10, pp 11 - 15 (USSR)

ABSTRACT: During investigations of the above principles, butyl rubber "B" with a molecular weight of 28,000 was tested. Plasticisation of butyl rubber was found to be ineffective because of the high degree of saturation of the rubber which may cause destructive oxidation. Several processes, such as mixing, refining, calendaring and spraying can be carried out at increased temperatures. Investigations on the properties of butyl rubber mixtures showed that the load required for causing deformation decreases sharply at increasing temperatures (Fig.1). On comparing the temperature dependence and changes of the elastic properties of analogous mixtures of butyl rubber, and a number of other industrial polymers, it was found that the deformation of butyl rubber, within a given temperature interval, is characterised by the load and the reducing properties of

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SOV/139-58-10-3/10

Butyl Rubber (Butilkauçuk). 1. The Principles of Establishing an Economical Technology for the Production of Rubber Products Based on Butyl Rubber

the mixtures (Figs. 1 and 2). Mixing tests were carried out on butyl rubber coatings and adhesives containing larger and smaller amounts of fillers. This process could be carried out when the temperature of the rollers equals 75 - 85°C. Table 1 gives data on the energy consumption during the preparation of various rubber mixtures not containing fillers. The optimum temperature at the beginning of the mixing process was found to be of the order of 100°C with subsequent increase of the temperature to 120 - 130°C. Sulphur and thiuram is led onto the rollers. Mixtures containing 75% carbon black could be prepared in 8 - 10 minutes. The mixtures could be homogenised and purified by refining and straining; they could easily be calendared. The addition of steam is recommended to improve calendaring. The optimum temperatures of calendaring were: temperature of the top roller 90 - 120°C, of the middle roller 90 - 110°C and of the bottom roller 80 - 100°C. The addition of fillers, such as 10 - 15% of a talcum mixture, also

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SOV/138-58-10-5/10

Butyl Rubber. 1. The Principles of Establishing an Economical Technology for the Production of Rubber Products Based on Butyl Rubber

improves conditions of calendaring and imparts to the coating a smooth surface. The temperature conditions of the rollers should be slightly changed to 90 - 120°C on the top roller, 50 - 80°C on the middle roller and 70 - 100°C on the bottom roller. The temperature of calendaring influences the bond strength of the rubber mixture (Fig.3). Spraying and straining of mixtures based on butyl rubber is only possible at high temperatures. The mixtures show a tendency to sedimentation. Mixtures not containing any fillers have 65 - 85% sediments according to the type of rubber used. Light fillers such as powdered silica gel, titanium white, calcium silicate and chalk or carbon fillers decrease the amount of deposits and improve the surface. The addition of plasticisers improves conditions of spraying. Adhesives based on butyl rubber can easily be prepared because butyl rubber shows good solubility in aromatic hydrocarbons, and also in petroleum ether. A graph shows the effect of the treatment of textiles and the strength of the bond of calendered substances (Fig.5). Butyl rubber adhesives cannot be mixed with adhesives based on other polymers because butyl rubber cannot be vulcanised in the presence

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Butyl Rubber. 1. The Principles of Establishing an Economical Technology for the Production of Rubber Products Based on Butyl Rubber

of unsaturated compounds. The time required for vulcanising mixtures based on butyl rubber can be shortened from 45 to 50 minutes to 17 minutes when increasing the vulcanisation temperature from 143 to 159°C (Fig. 6). The strength of the butyl rubber vulcanisates and other polymers is affected by the vulcanisation temperature (Fig. 7). A shorter time of vulcanisation can also be achieved by increasing the unsaturation of the butyl rubber. High quality rubberised substances are obtained by vulcanisation. The continuous vulcaniser "Bersterf" was used in these experiments. Optimum conditions of vulcanisation of rubberised substances based on butyl rubber are tabulated (Table 2). Optimum conditions for moulded articles from butyl rubber are listed. There are

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Butyl Rubber. 1. The Principles of Establishing an Economical Technology for the Production of Rubber Products Based on Butyl Rubber

7 Figures, 2 Tables and 3 References: 3 Soviet, 2 English.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti (Research Institute of the Rubber Industry)

Card 5/5

SOV/138-58-12-2/17

AUTHORS: Mayzel's, M. G.; Ravevskiy, V. G. and Parshina, Ye. A.
TITLE: Butyl Rubber (Butilkauchuk). Principles of Formulating Effective Compositions of Rubber Mixtures (Principy postroyeniya ratsional'noy retseptury rezinovykh smesey)

PERIODICAL: Kauchuk i Rezina, 1966, Nr 12, pp 3 - 8 (USSR)

ABSTRACT: At present, three types of butyl rubber (A, B and C) are used in industry which differ by their molecular weight: (A) not less than 40,000, (B) not less than 35,000 and (C) not less than 30,000. The technological, as well as physico-mechanical characteristics of vulcanisates (strength, relative and residual elongation, wear and tear resistance, and adhesive properties) depend on the molecular weight. The various uses of these three types of butyl rubber are described. Investigations showed that the bond strength of rubbers increases with decreasing molecular weight of the butyl rubber. This data agrees with the contemporary theory on the adhesion of high polymers according to which the bond strength of polymeric material depends on the diffusion of the terminal parts of the molecular chains (Ref.1). Various types of vulcanisation agents were tested and the physico-mechanical characteristics of the

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SOV/138-58-12-2/17

Butyl Rubber. Principles of Formulating Effective Compositions of Rubber Mixtures

butyl rubber vulcanisates, containing an optimal vulcanisation group and vulcanised at different temperatures, are shown in Fig.1. The most suitable mixture was: sulphur 1%, thiuram 1.3% and captax 1%. A further increase in the amount of accelerator is not permissible because migration occurs. The effect of various fillers on the mechanical properties and thermal stability of vulcanisates was investigated. Butyl rubber is a crystalline polymer and, therefore, the introduction of active fillers does not increase the strength of the vulcanisates. The addition of fillers increases some of the physico-mechanical characteristics of the vulcanisates and their stability to ageing and to aggressive media, and also ensures the required quality. The addition of furnace and lamp black decreases their break resistance, but increases to a slight degree their tear resistance. Carbon blacks increase resistance to ageing, hardness and elasticity. Powdered silica gel, kaolin and titanium dioxide are most satisfactory as fillers. Table 1: data on the characteristic influence of a number of light fillers on the basic physico-mechanical

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Butyl Rubber. Principles of Formulating Effective Compositions of Rubber Mixtures

characteristics of butyl rubber G. Butyl rubber shows a high degree of saturation and, therefore, S-bonds are of less importance during the formation of the structure of the vulcanisate than in other unsaturated rubbers. The thermo-stability of the rubber is increased when 50 - 60% of gas channel black (Fig.2) is added. Relevant tests were carried out in the temperature interval from +25°C to 150°C. The tear and break resistance are also increased (Fig.3). The addition of white fillers increases the thermal stability, but to a much lesser degree. All these fillers decrease the frost resistance of vulcanisates. The coefficient of frost resistance at -45° lies between 0.28 to 0.32. Fillers also influence the resistance of the vulcanisates to ageing. Table 2: data on the characteristic ageing of vulcanisates containing 30% channel black at 130 - 150°C; Fig.4: effect of the content of channel black on changes in the strength of vulcanisates during ageing at 150°C. It was also found that fillers such as lamp black, powdered silica gel and chalk do not affect the light and heat ageing of butyl rubber. Tests were

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Butyl Rubber. Principles of Formulating Effective Compositions of Rubber Mixtures

also carried out on the effect of sunlight radiation on butyl rubber and on SKB rubber. Under analogous conditions, in SKB vulcanisates structural changes could be observed which showed themselves in a 30% increase in the strength, but a decrease of the relative elongation from 350 to 230%. When evaluating the effect of fillers on the ageing stability, the process of ozone destruction is also to be taken into account. A small quantity of carbon black (up to 5%) makes it possible to increase the time, at which rupture occurs, by 100% at 0.4% concentrations of ozone. Finely-dispersed white fillers also increase the resistance to ageing by ozone of the vulcanisates. The fillers also affect the properties of adhesion of the vulcanisates (Table 3). The bond strength of the fibres in butyl rubber is 2 to 3 times higher than in SKB. Adhesion is less affected by the addition of chalk, kaolin and gas and lamp black. The most effective by increasing carbon-containing fillers are gas black, followed by lamp black and the least effective is graphite. The same applies to polyamide and glass fibres. The adhesion can be increased by various addi-

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SOV/138-58-12-2/17

Butyl Rubber. Principles of Formulating Effective Compositions of Rubber Mixtures.

tives such as "Neozon D", the epoxide resin E-40 and the phenol-epoxide resin No.101 (Table 4). The resin E-40 or 101 is used as a hardener for polyamide resin. Plasticizers such as oleic acid, rosin and calcium stearate play an important role in the distribution of the fillers. These plasticizers tend to decrease the stability to gas diffusion and to aggressive media. Stearic acid and zinc stearate have the least deleterious effect with respect to these properties. Anti-ageing agents are not so important for butyl rubber because of its high degree of saturation. Ordinary butyl rubber contains up to 0.5% Neozon D. Satisfactory results were obtained. Minimum increase in the modulus of the resins is observed in rubbers containing Neozon D together with nickel diethylthiocarbamate. The author then deals with the preparation of butyl rubbers of various colouration, and gives the required quantities

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SOV/138-58-12-2/17

Butyl Rubber. Principles of Formulating Effective Compositions of
Rubber Mixtures

of pigments which are to be added to the mixtures.
There are 4 Tables, 4 Figures and 6 References: 2
English and 4 Soviet.

Card 6/6

DYMSHITS, S.A.; BITUK, S.M.; PARSHINA, Ye.P.; ORLOVA, N.S.;
SEME NOV, S.S.; BROV-KARRE, G.V.

Potential content of water soluble phenols in generator
tar and the optimal conditions for their separation. Tr. 1.
VNIIT no.120102-108 '67. (M-11) 18

KULIKOV, A.I.; KURLINA, I.P.; POLYAKOV, I.M.; SHIPINOV, N.A.;
ZELENIN, N.I.; FEGILOV, Ye.Ye.; GARNOVSKAYA, G.N. [deceased];
PARSHINA, Ye.P.

Utilization of shale and coal phenols for the synthesis of
chemicals for plant protection. Khim. i tekhn. gor. slan. i
prod. ikh perer. no.8:152-158 '60. (MIRA 15:2)

1. Vsesoyuznyy institut zashchity rasteniy i Vsesoyuznyy institut
po pererabotke slantsev.

(Phenols)

(Plants, Protection of)

PEOFILOV, Ye.Ye.; GARNOVSKAYA, G.N.; PARSHINA, Ye.P.

Recovery of alkali from salt solutions after the decomposition of
phenolates. Trudy VNIIPS no.4:218-222 '55. (MIRA 1955)
(Alkalies) (Phenols) (Oil shales)

FEOFILOV, Y.Ye.; GARNOVSKAYA, G.N.; PARSHINA, Ye.P.

Chemical composition of phenols in the intermediate tar fraction
from the semicoking of Baltic oil shales. Trudy VNIIPS no.4:
205-217 '55. (MIRA 13:4)
(Oil shales) (Phenols)

SEME NOV, S.S.; DYMSHITS, S.A.; BITUK, S.M.; PARSHINA, Ye.P.; ORLOVA, N.S.

Potential phenol content of shale oil from semicoking of shales
at the "Slantsy" combint. Trudy VNIIT no.10:166-174 '61.

(MIRA 15:3)

(Shale oils)(Phenols)

GARNOVSKAYA, G.N.; PARSHINA, Ye.P.; PEOFILOV, Ye.Ye.

Removal of neutral oils and sulfur compounds from phenols.
Trudy VNIIPS no.7:237-246 '59. (MIRA 12:9)
(Oil shales) (Phenols)

GARNOVSKAYA, G.N. [deceased]; KULIKOV, A.I.; KURLINA, I.P.;
PARSHINA, Ye.P.; PREYS, M.O.; FEOFILOV, Ye.Ye.

Synthesis of the preparation 125 from phenols of tars produced by
semicoking of Baltic shales and Cheremkhovo coals. Khim.
i tekhn. gor. slan. i prod. ikh perer. no.8:15-185 '60.

(MIRA 15:2)

1. Laboratoriya pererabotki smoly Vsesoyuznogo nauchno-issledo-
vatel'skogo instituta po pererabotke slantsev i laboratoriya
organicheskoy khimii Vsesoyuznogo instituta zashchity
rasteniy.

(Pesticides)
(Phenols)

DYMOVITS, S.A.; SIMON V, ...; ...

Studying the composition of the ...
of the "Chale" engine. ...

GI'SHENKOVA, Ye.V.; BYLENKO, S.A.; PAVLOVA, N.S.; LITVINOV, V.I.

Refining the methods for determining the content of
phenols in liquid scale-refinement products. Izv. Vsesoyuzn. Nauchn. Tsentr. Khim. Anal. 1964, 219-226.

PARSHINA, Z.S.

SUVOROV, N.I.; PARSHINA, Z.S.

Hypothesis of the paleobotany of Mars. Vest. AN Kazakh. SSR 11 no. 4:
98-102 Ap '54. (MLRA 7:5)

Predstavleno deystvitel'nym chlenom Akademii nauk KazSSR G.A. Tikhovym.
(Mars (Planet)) (Plurality of worlds) (Paleobotany)

PARSHINA, Z. S.

SUVOROV, N.I.; PARSHINA, Z.S.

Spectrophotometric study of chlorophyll absorption line in connection with the problem of cosmic evolution of the photosynthesis. Trudy Sekt. astrobot. AN Kazakh.SSR 3: 33-47 '55.

(MLRA 9:12)

(Photosynthesis) (Mars (Planet))

PARSHINA, Z.S.

Biogenetic variability of the absorption band of chlorophyll in higher
plants. Trudy Sekt. astrobot. AN Kazakh. SSR 5:221-227 '57.
(Chlorophyll) (Photosynthesis) (MLRA 10:6)
(Leaves--Spectra)

USSR/Physiology of Plants - Photosynthesis

I.

Abs Jour : Ref Zhur - Biol., No 15, 1958, 67709

Author : Parshina, Z.S.

Inst : Academy of Sciences KazSSR.

Title : Biogenetic Variability of the Chlorophyll Absorption Belt in Higher Plants.

Orig Pub : Tr. Sektora astrobotan. AN KazSSR, 1957, 5, 221-227.

Abstract : Using the photospectrometry method, a study was made of the basic chlorophyll absorption belt in plants at various stages of evolution, and also using leaves of different ages. Species of older derivation assimilated relatively less light energy -- principally red rays in the 666-689 $m\mu$ area. In plants of phylogenetically young species the curves of light absorption by chlorophyll slanted more in the 600-700 $m\mu$ section; in addition to red rays, they also

Card 1/2

PARSHINA, Z.S.

Phylogenetic characteristics of spectral brightness of plants in
reflected rays. Trudy Sekt.astrobot. AN Kazakh.SSR 6:84-140
' 58. (MIRA 11:12)

(Plants--Spectra)

PARSHINA, Z. S., Candidate of Biol Sci (diss) -- "The spectral clarity of plants of various systematic groups". Alma-Ata, 1959. 16 pp (Kazakh State U in S. M. Kirov), 150 copies (KL, No 22, 1959, 112)

GORJUNOVA, G.S.; PARSHINA, Z.S.; BELENKO, V.P.

Optical properties and photosynthesis of some cultivated and wild
plants as related to ecological conditions. Trudy Sekt. astrobot.
AN Kazakh. SSR 8:31-45 '60. (MIRA 13:12)

(Plants--Optical properties)
(Photosynthesis)

BREITING, A. I.; LEE, R. M.; LEE, W. A., V. I.

Greenland, 1975-1976, 1975-1976. 1975-1976.
1975-1976. 1975-1976.

YAKOVLEVA, Z.A., RUBAN, I.G., PARSINA, I.G.

Drying of goby in a conveyor steam dryer. Study Akoserniro
no.21:36-40 '63. (MIRA 17.8)

PARSHINSKIY, V.A.

Digital device for programming the machining of sections of
simplest surfaces. Sbor.rab.po vop.elektromekh. no.7:250-261
'62. (MIRA 16:1)
(Machine tools—Numerical control) (Automatic control)

L 34069-66 EWT(d)/EWP(1) IJP(c) GG/BB
ACC NR: AP6019780 SOURCE CODE: UR/0119/66/000/006/0016/0017

AUTHOR: Parshinskiy, V. A. (Engineer)

ORG: none

TITLE: A continuous digital integrator using ferrite-transistor elements

SOURCE: Priborostroyeniye, no. 6, 1966, 16-17

TOPIC TAGS: digital computer, transistor, computer component

ABSTRACT: A digital integrator using ferrite-transistor modules is shown in the figure. The unit is basically a binary multiplier performing this function by AND, OR, and INHIBIT logic operations. As seen from the figure, the unit contains k (k-integrand bit length) dynamic flip-flops, each consisting of 4 ferrite-transistor cells. The cell with a constant magnetization I_n performs the delay function; the output cell is an INHIBIT gate. The register consists of a k serially connected row of static flip-flops ($T_0 - T_{k-1}$) forming a reversible binary counter. Switching from addition to subtraction mode is done by a transistor flip-flop T_{3H1} . Counting pulses from the frequency divider ($T_0 - T_{k-1}$ static flip-flop column) are applied to diagonal dynamic flip-flop inputs. The synchronization is performed by a 6-stage

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UDC: 681.142.644.3

L 34069-66

ACC NR: AP6019780

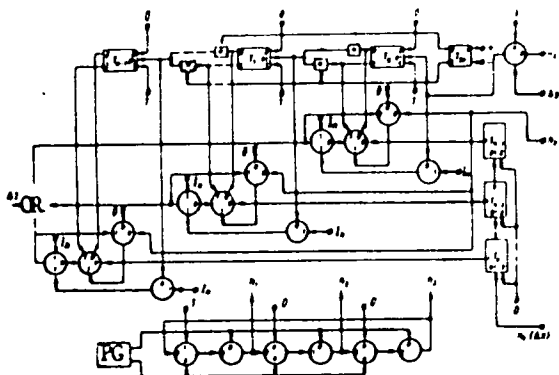


Fig. 1. A continuous digital integrator

ring shift register driven by a two-phase pulse generator PG. The schematic diagram of the static ferrite-transistor flip-flop is given. It performs reliably in a temperature environment extending from -10 to +60C with input pulse train repetition frequency up to 120kc. The pulse generator is also shown. It has a relaxation oscillator stage and a buffer stage. The row of flip-flops is initially prepared by application of pulses on their 0 and 1 inputs. The initial value of the integrand is introduced into the register in parallel form. The PG is activated and integration proceeds in 3 steps: 1) a pulse is applied

Card 2/3

1. 34069-66

ACC NR: AP6019780

to the independent variable terminal Δx ; the counting pulse from the frequency divider flip-flops, which change states from 0 to 1, reads out the information from the corresponding cell, thus forming a Δx output; 2) next a 1 is rewritten into the cell which reintroduces the original code combination; and 3) a pulse Δy (representing an incremental integrand change) is applied to the terminal marked Δy . The integrator output only appears during each first step in a series of the 3 step iteration process. Orig. art. has: 3 figures. [BD]

SUB CODE: 09/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 001/
ATD PRESS: 5018

Card 3/3 *DD*

PARSHINSKIY, V.A.

Investigating and designing a time-pulse multiplier. Priborostronika
no.4:10-12 Ap '62. (MIRA 15 4.)
(Electronic analog computers)

PARSHINSKIY, V.A., mladshiy nauchnyy sotrudnik

Frequency characteristics of DATs-50 point-type arc lamps. Svyaz-
tekhnika 6 no.7:11-13 I 1960. (MIRA 13:7)
(Electric lamps, Arc)
(Telecommunication)

PARSHENKIN, Y.A.; SEMENOV, G.M. (Soviet).

Soviet Branch of the Krasnodar Scientific Pharmaceutical
Society. Int. J. Pharm. 1976; 1: 1-6. (MIRA 1976)

GUSENKOV, A.P. (Moskva); PARSHINTSEVA, T.S. (Moskva); SHNEYDEROVICH, R.M.
(Moskva)

Some characteristics of repeated-strain curves in case of a symmetrical
stress cycle. Izv.AN SSSR. Otd.tekh.nauk.Mekh.i mashinostr. no.5:108-
112 S-O '60. (MIRA 13:9)

(Strains and stresses)

LIN'KOV, I.M., kand. tekhn. nauk; Primala uchastiye PAKHINTSEVA, V.A.,
starshiy tekhnik

Tests conducted with wall panels with a wooden framework and
asbestos cement coverings. Trudy TSNIISK no.26:5-41 '63.
(MIRA 16:8)

(Asbestos cement--Testing) (Walls)

PARSHKOV, A.A., inzh.

Surveying instruments for railroad surveying. Study NIIZHI
no.30:23-28 '62. (MIRA 16:9)

1. Sibgipretans.

ACC NR: AP70001407

A)

SOURCE CODE: UR/0413/56/000/021/0109/0109

INVENTOR: Chetverikov, A. F.; Pashkov, A. B.; Samborskiy, I. V.; Grachev, L. L.

ORG: none

TITLE: Preparative method for polymers containing anthraquinone redox groups. Class 39, No. 187999 [announced by Scientific Research Institute of Plastics (Nauchno-issledovatel'skiy institut plasticheskikh mass)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 109

TOPIC TAGS: redox polymer, polyvinylanthraquinone, *Styrene, quinone, substance*

ABSTRACT: An Author Certificate has been issued for a preparative method for polymers containing anthraquinone redox groups, based on styrene and divinylbenzene. A styrene-divinylbenzene copolymer is treated with phthalic anhydride in an inert solvent in the presence of an excess of aluminum chloride, and the resulting polyvinylbenzoylbenzoic acid is converted to polyvinylanthraquinone by treatment with concentrated sulfuric acid or oleum.

SUB CODE: 07, 11/ SUBM DATE: 13Mar65/ ATD PRESS: 5109

Card 1/1

UDC: 661.183.123.2:678.746.22-136.002-018.01...

ACC NR: AR6029474

SOURCE CODE: UR/0196/66/000/006/1011/1011

AUTHOR: Shor, A. M.; Parshukov, B. A.; Matsanova, A. L.; Churkin, V. S.

TITLE: Eddy-current loss in printed conductors of electric-machine windings

SOURCE: Ref. zh. Elektronika i energetika, Abs. 6I66

REF SOURCE: Sb. dokl. k Nauchno-tekhn. konferentsii po elektr. mashinam s pechatn. obmotkami. Novosibirsk, 1965, 56-70

TOPIC TAGS: electric machine, printed winding, eddy current loss, *electronic manufacturing machinery*

ABSTRACT: Formulas have been developed for determining the eddy-current loss in printed-winding conductors, in disk-type and cylindrical c-c machines. At first, a curve of magnetic induction in the interpole space (which essentially differs from the straight line) has been plotted by using the method of conformal transformation and also experimental data. The losses are calculated on a digital computer for various dimension ratios of the magnetic system. In the case of disk armature, the loss was determined in copper-foil segments pasted on a disk which was rotated in a magnetic field by an auxiliary motor at a constant rpm. The losses were calculated from the braking torque measured by a spring-type

Cord 1/2

UDC: 621.313.13.024.001.24:621.3.017.22

ACC NR: AR6029473

SOURCE CODE: UR/0196/66/000/006/1010/1010

AUTHOR: Shor, A. M.; Matsanova, A. L.; Parshukov, B. A.

TITLE: Distribution of eddy-current loss along the printed-winding conductor in a d-c machine armature

SOURCE: Ref. zh. Elektronika i energetika, Abs. 6I165

REF SOURCE: Sb. dokl. k Nauchno-texhn. konferentsii po elektr. mashinam s pechatn. obmotkami. Novosibirsk, 1965, 71-76

TOPIC TAGS: electric machines, ^{motor} dc machine, printed winding, ^{manufacturing machinery} electronic

ABSTRACT: The distribution is considered of specific eddy-current loss along the active portion of the armature conductor. It is assumed that the magnetic-induction vector is perpendicular to the conductor surface and remains constant along the conductor. In the interpole space, the induction varies linearly. The loss-distribution calculation includes determining the components of the electric-field strength, from which the loss-vs.-coordinate relation is derived. Formulas are derived of specific-loss distribution along the conductors in disk- and cylindrical-armature machines; curves are plotted from these formulas. The curves show that, in the disk printed windings, the eddy-current loss in the conductor is distributed practically as the square of the disk radius. In the cylindrical-armature conductors, the eddy-current loss is distributed uniformly along the conductor. Four figures. N. Astakov.

[Translation of abstract]

SUB CODE: 09

Card 1/1

UDC: 621.313.13.024.001.24;621.3.017.22

L 26267-66 EWT(r)/T/EWA(d)/EWP(w)/EWP(t) IJP(c) JD

ACC NR: AP6012582

(N)

SOURCE CODE: UR/0314/66/000/004/0020/0023

AUTHOR: Katikhin, V. D. (Engineer); Kofman, A. P. (Candidate of technical sciences);
Pashkov, P. O. (Doctor of technical sciences); Yavor, A. A. (Engineer)

ORG: none

TITLE: High-strength two- and three-layer steel as a structural material

SOURCE: Khimicheskoye i neftyanoye mashinostroyeniye, no. 4, 1966, 20-23

TOPIC TAGS: steel, high strength steel, clad steel, stainless steel clad steel, clad steel strength, clad steel ductility/30KhGSA steel, 1Kh18N10T steel, 30KhSNVFA steel

ABSTRACT: Cladding of high-strength structural steels with a ductile material on one or both sides greatly reduces the notch sensitivity of the latter. In this case, the adhesion between the base steel and the cladding must be stronger than the strength of the weaker metal. For example, hardened and tempered 30KhGSA steel has a tensile strength of 160 kg/mm² and an elongation of 3-4%. When clad on one side with 1Kh18N10T steel (tensile strength 60 kg/mm², elongation 30%), 30KhGSA has a tensile strength of 115 kg/mm² and an elongation of 2-4% with poor adhesion and 135 kg/mm² and 7-8% with strong adhesion. The notch sensitivity of 30KhGSA steel drops sharply with one-side cladding, and the notch sensitivity of the two-side clad steel was almost equal to that of 1Kh18N10T steel (the ratio of the tensile strength of notched

Card 1/2

UDC: 621.9.419:620.17

L 26267-66

ACC NR: AP6012582

and smooth specimens at 200C increased from 0.45% to 0.78 and 94%, respectively). Cladding increased the notch toughness of steels, especially those susceptible to temper brittleness. The increase in ductility of two- and three-layer steels is due mainly to uniform deformation, which is especially important in parts working under tensile stresses. The mechanical properties of 30KhGSA steel clad with a 0.25 or 0.4 mm 1Kh18N10T layer did not decrease even after exposure for several hours to stresses close to the tensile strength. Orig. art. has: 3 figures and 9 tables. [MS]

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 004/ ATD PRESS: 4243

Card 2/2 CC

ACC NR: AR6029504

SOURCE CODE: UR/0137/66/000/006/I038/I039

AUTHOR: Pashkov, P. O.; Yavor, A. A.

TITLE: Crack propagation in clad high strength steel

SOURCE: Ref. zh. Metallurgiya, Abs. 6I261

REF SOURCE: Sb. Materialy Nauchn. konferentsii. Sovmarkhoz Nizhne-Volzhs. ekon. r-na. Volgogradsk. politekhn. in-t. T. I. Volgograd, 1965, 293-297

TOPIC TAGS: high strength steel, crack propagation, metal cladding

TRANSLATION: Crack representation according to shape was calculated in a high strength steel with a ductile surface layer. The critical crack length was calculated, at which the crack becomes unstable, according to the formula

$$L = \frac{\gamma E_T}{\sigma_p^2} + 2 \frac{\alpha}{\pi} \frac{E_M}{E_M} \frac{\sigma_{bM}^2}{\sigma_p^2} h_M$$

where γ is the effective surface energy per unit crack surface; E_T and E_M are the elastic moduli of the high strength steel and the cladding material of the layer respectively; σ_p is the fracture stress, numerically close to the ultimate strength of the high strength steel; σ_{bM} is the ultimate tensile strength of the cladding material;

UDC: 539.4.01:669.14

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ACC NR: AR6029504

α is the coefficient of proportionality; and h_M is the thickness of the clad layer. The increase in uniform deformation in a clad sample relative to an unclad sample was determined by the formula

$$\Delta l_p = K \frac{\sigma_{bM}}{\sigma_p} \cdot h_M$$

where K is a coefficient. The experimental data that were obtained agreed satisfactorily with the theoretically obtained values of uniform deformation. L. Ustinov.

SUB CODE: 11,13

Card 2/2

ACC NR: AR6029510

SOURCE CODE: UR/0137/66/000/006/I064/I064

AUTHOR: Burminskaya, L. N.; Zabolev-Zotov, V. V.; Nikulin, Yu. M.; Pashkov, P. G.

TITLE: Mechanical properties of aluminum alloyed with corundum

SOURCE: Ref. zh. Metallurgiya, Abs. 61442

REF SOURCE: Sb. Materialy Nauchn. konferentsii. Sovnarkhoz Vzhne-Volzhsk. ekon. r-ona. Volgogradsk. politekhn. in-t. T. I. Volgograd, 1965, 359-363

TOPIC TAGS: corundum, containing alloy, mechanical property

TRANSLATION: A study was made of the hardness and strength of alloys composed of a mixture of aluminum with electrocorundum for all concentration ranges. The particle size of the electrocorundum was 100 μ . The samples studied were cylinders 25 mm in diameter and 4-8 mm high. The hardness change did not obey an additive law. In the range of 20 to 55 volume % corundum, H_v remained constant (about 70 kg/mm²). In the high corundum concentration range, H_v of the material increased sharply (to 150 kg/mm² at 65-70 volume % corundum), while the strength of the impression ball dropped catastrophically.
P. Novik.

SUB CODE: 11,13

UDC: 669.715.018.9

Card 1/1

L 04289-67

ACC NR: AP6018951

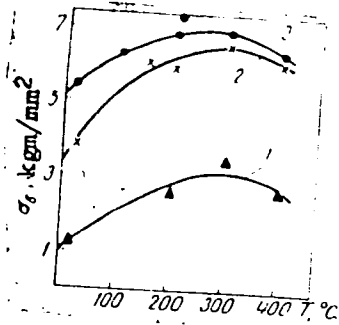


Fig. 1. The effect of annealing on the strength limit during elongation of magnesium films. 1 - double condensation onto a glass substrate; 2 - double condensation onto an aluminum substrate; 3 - single condensation onto an aluminum substrate.

such films, obtained earlier by L. S. Palatnik and A. I. Il'inskiy (DAN SSSR, 1962, 146, 79). They thank the following students who took part in the experimental work: V. V. Berezhnuy, N. A. Yerofeyev, and S. P. Pisarev. Orig. art. has: 2 tables and 2 graphs.

SUB CODE: 11/

SUBM DATE: 19Apr65/

ORIG REF: 006/

OTH REF: 001

ml
Card 2/2

L 05014-67 EWT(m)/EWP(w)/EWP(L)/ETI ISF(c) 22

ACC NR:

AR6031296

SOURCE CODE: UR/0277/66/000/006/0011/0011

AUTHOR: Kofman, A. P.; Pashkov, P. O.; Vavor, A. A.

TITLE: Failure characteristics of high-strength clad steel

SOURCE: Ref. zh. Mashinostroitel'nyye materialy, konstruksii i raschet detaley mashin. Hidroprivod, Abs. 6.48.69

REF SOURCE: Sb. Materialy Nauchn. konferentsii. Sovnarkhoz Nizhne-Volzhs. r-na. Volgogradsk. politekhn. in-t. T. I. Volgograd, 1965, 298-302

TOPIC TAGS: high strength steel, clad steel

ABSTRACT: A substantial improvement was shown experimentally in the ductility and structural reliability of steel by cladding it with a thin layer of material of high plasticity. In particular, it was shown that the uniform deformation of hard steel increased proportionately with the thickness of the cladding layer up to a certain value, beyond which the deformation began to decrease. It was proven that the notch sensitivity of a hard steel decreases when a material of high plasticity is applied to its surface, which, however, decreases the susceptibility of the steel to brittle fracture. The changes in the above properties of hard steel

Card 1/2

UDC: 669.14.018.295:539.4

L 04527-57 EMI(e)/EWT(n)/EMP(w)/T/EMP(L)/EPI ICP(c) JD/WH/JH
ACC NR: AR6031072 SOURCE CODE: UR/0277/68/000/007/0014/0014

AUTHOR: Burminskaya, L. N. ; Zaboylev-Zotov, V. V. ; Nikulin, Yu. M. ; Pashkov, P. O. 20

TITLE: Mechanical properties of aluminum corundum alloys

SOURCE: Ref. zh. Mashinostr mat konstr i raschet detal mash. Gidroptr, Abs. 7. 48. 99

REF SOURCE: Sb. Materialy Nauchn. konferentsii. Sovnarkhoz Nizhne-Volzhsk. ekon. r-na. Volgogradsk. politekhn. in-ta. T. 1. Volgograd, 1965, 359-363

TOPIC TAGS: alloy, mechanical property, aluminum alloy, aluminum corundum alloy

ABSTRACT: A study was made of the hardness and strength of aluminum electrocorundum alloys over the entire concentration range at room and elevated temperatures up to 300C. The particle size of the electrocorundum was 100 μ. The samples tested were cylinders, 25 mm in diameter and 4-8 mm high. The changes in hardness of the material do not follow the additivity rule. Within the 20 to 50% by volume range of the corundum, the hardness of the material remains

Card 1/2

UDC: 669.715.018.9