SOV/136-59-1-18/24

Investigation of the Properties of Copper-Titanium Alloys

many applications and point out that they are 25 times cheaper.
There are 5 figures, 4 tables and 6 references, 3 of which are Soviet, 2 English and 1 German.

Card 4/4

31218

S/123/61/000/020/006/035
A004/A101

18.1220

AUTHORS: Kalinin, K. P., Spiridonova, M. Z.

TITLE: Investigating the properties of Cu-Ti alloys

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 20, 1961, 16, abstract
             20A115 ("Tr. Gos. n.-i. in-ta po obrabotke tsvetn. met.", 1960,
             no. 18, 46-57)

TEXT: As a result of investigations, Cu-Ti alloys were found, containing
5% Ti, 0.5% Cr, which, in their physical and mechanical properties approach the
properties of beryllium bronze and can be widely used in industry as substitute
of the latter. Cu-Ti alloys are easier in machining than beryllium bronze and
some 10 times cheaper.

[Abstracter's note: Complete translation]

Card 1/1

S/680/61/000/020/011/013
D205/D302

AUTHORS: Kalinin, K. P., Lyamina, M. P. and Spiridonova, M. Z.

TITLE: Design of the production technology of the bimetals
            steel-non-ferrous metals

SOURCE: Moscow. Gosudarstvennyy nauchno-issledovatel'skiy i pro-
            yektnyy institut obrabotki tsvetnykh metallov. Sbornik
            nauchnykh trudov. no. 20, 1961. Metallovedeniye i obra-
            botka tsvetnykh metallov i splavov, 218-229

TEXT: The present work was sponsored by the shipbuilding and che-
mical industries. The task was to work out the technology of the
production of the following bimetals: Steel - brass $Л62$ (L62),
steel - brass $Л062-1$ (L062-1), steel - bronze $БрО4$ (BrO4). Accord-
ing to the requests of the sponsors, a batch of bimetal was to be
prepared, using the worked out technology in the shape of sheets
having a plated layer of 30 - 50% of the thickness. There are only
few published data on the production of bimetals with a thick pla-
ted layer. The method of covering the steel by a melted non-fer-

Card 1/ 3

Design of the production ...

S/680/61/000/020/011/013
D205/D302

rous metal was used in most of the experiments. The following materials were employed: Low-carbon steels Ct.10 (St.10) and St.1 in the shape of sheets 10 and 20 mm thick, copper MO and Ml, zinc Ц1 (Ts 1), aluminum Al, tin O1, electrolytic manganese as a Cu-Mn alloy. The semi-industrial batch of bimetal was made using St.10 steel 30 mm thick. In parallel with the liquid-covering by non-ferrous metals, experiments were performed on combined hot-rolling of both metals, but the desired thickness of the plated layer could not be obtained by this method. Production of the bimetals by covering the steel sheets with liquid non-ferrous components proved feasible, the following being the main technological features of the process: The steel sheets are heated to 800 - 850°C in an induction furnace for covering by brasses L62 and L062-1 and to 900 - 950°C for covering by copper, brass L90 and bronzes Br04 and BrAMTs9-2. The temperatures of the melt before covering are 1100 - 1150°C for brasses L62 and L062-1 and 1200 - 1250°C for copper, brass L90 and bronzes Br04 and BrAMTs9-2. The rolling of the bimetals steel-copper, steel-brass L90, steel-bronze Br04 is

Card 2/3

Design of the production ...

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to be performed at 750 - 780°C, that of the bimetal steel-bronze BrAMTs9-2 at 800 - 850°C. The bimetals steel-brass L62 and steel-brass LO62-1 must be rolled in cold state with the total deformation between annealings of 45 - 60 and 35 - 45% respectively. A batch of products weighing about 2 tons was prepared on the experimental plant of the institute "Giprotsvetmetobrabotka" and sent to the sponsors. The quality of the bimetals was tested by bending, multiple bending, torsion and tearing tests. The resistance to tearing apart of the bimetal components is 20 - 35 kg/mm^2 for the L62 and LO62-1 brasses bimetals and 30 - 45 kg/mm^2 for the other bimetals. There are 6 figures and 7 references: 5 Soviet-bloc and 2 non-Soviet-bloc.

Card 3/3

S/680/61/000/020/012/013
D205/D302

AUTHORS: Kalinin, K. P. and Spiridonova, M. Z.

TITLE: Design of the production technology of bimetallic strips of nickel and silver

SOURCE: Moscow. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut obrabotki tsvetnykh metallov. Sbornik nauchnykh trudov. no. 20, 1961. Metallovedeniye i obrabotka tsvetnykh metallov i splavov, 230-237

TEXT: Bimetallic strips Ni-Ag are used for producing electrical contacts. They are not produced at present in the Soviet Union and according to literature their production is connected with considerable difficulties due to their mutual insolubility and large differences in mechanical properties. The method chosen for producing the bimetallic strips was of welding the components without pressure. This method is based on the insertion between the components of an intermediate layer having a lower melting point than the components, which acts as a solder. The choice of the inter-

Card 1/3

SPIRIDONOVA, M.V.

Dynamics of the indices of clinical electrocardiographic studies
in thyrotoxicosis patients before and following strumectomy.
Khirurgiia 40 no.12:73-77 D '64.   (MIRA 18:3)

1. Pervaya terapevticheskaya klinika (zav.- doktor med. nauk
M.G. Malkina) Moskovskogo oblastnogo nauchno-issledovatel'skogo
klinicheskogo instituta imeni Vladimirskogo.

SPIRIDONOVA, N.

Stimulus of business accounting to the utilization of industrial
fixed assets used in production. Vop.ekon. no.10:46-57 O '58.
(MIRA 11:11)

(Russia--Industries)

KASITSKIY, I.; MANEVICH, Ye.; ZVEREV, A.; KAPUSTIN, Ye.;
    NEMCHINOV, V., akademik; VOROB'YEVA, A.; YEVSTAF'YEV, G.;
    SHAKHURIN, A.; KOSYACHENKO, G.; PLOTNIKOV, K.; AL'TER, L.;
    ROTSHTEYN, L.; SPIRIDONOVA, N.; MASLOVA, N.; RUSANOV, Ye.;
    KAPITONOV, B.; KULIYEV, T.; GATOVSKIY, L.

    Problems of the economic stimulation of enterprises.
    Vop. ekon. no.11:87-142 N '62.   (MIRA 15:11)

    1. Komitet Vsesoyuznogo soveta nauchno-tekhnicheskikh
    obshchestv po ekonomike i organizatsii proizvodstva
    (for Kasitskiy). 2. Institut ekonomiki AN SSSR for
    Manivich, Zverev, Vorob'yeva, Yevstaf'yev, Shakhurin,
    Plotnikov, Maslova, Rusanov, Kapitonov). 3. Nauchno-
    issledovatel'skiy institut truda (for Kapustin).
    4. Nauchno-issledovatel'skiy finansovyy institut (for
    Kosyachenko). 5. Nauchno-issledovatel'skiy ekonomicheskiy
    institut Gosudarstvennyy nauchno-ekonomicheskogo soveta
    Soveta Ministrov SSSR (for Al'ter).
                                    (Continued on next card)

KASITSKIY, I.——(continued) Card 2.

6. Gosudarstvennyy nauchno-ekonomicheskiy sovet Soveta
Ministrov SSSR (for Rotshteyn). 7. Moskovskiy gosudarstvennyy
universitet (for Spiridonova). 8. Azerbaydzhanskiy
gosudarstvennyy universitet imeni S.M. Kirova (for Kuliyev).
9. Predsedatel' Nauchnogo soveta po khozyaystvennomu
raschetu i material'nomu stimulirovaniyu proizvodstva,
chlen-korrespondent AN SSSR (for Gatovskiy).
              (Industrial management)
              (Incentives in-industry)

ARAKELYAN, A., akademik; ZLOBIN, I.; IVANOV, Ye.; KANTOR, L.;
        SAID-GALIYEV, K.; SPIRIDONOVA, N.

    More on the theory of amortization. Vop. ekon. no.1:130-133
    Ja '64.   (MIRA 17:3)

    1. AN Armyanskoy SSR (for Arakelyan).

LAKHTIN, A.A., kand.tekhn.nauk; SPIRIDONOVA, N.I., assistant

Designing oval shells of revolution. Izv.vys.ucheb.zav.;
mashinostr. no.5:84-91 '59.   (MIRA 13:4)

1. Ural'skiy politekhnicheskiy institut.
          (Elastic plates and shells)

SPIRIDONOVA, N.I., assistent

Using the momentless theory in designing elliptic containers.
Trudy Ural. politekh. inst. no.71:155-164 '59.

(Elastic plates and shells)   (MIRA 12:8)

SPIRIDONOVA, N. I.

report presented at the 1st All-Union Congress of Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb '60.

S/124/62/000/005/042/048
D251/D308

/0. 6/00

AUTHOR: Spiridonova, N.I.

TITLE: The strength of near-ellipsoidal shells

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 5, 1962, 8,
            abstract 5V44 (Tr. Ural'skogo politekhn. in-ta, 1961,
            no. 102, 146-156)

TEXT: Computation formulas are obtained for bending and catenary
stresses in shells under the action of equilibrium internal pressu-
re and consisting of the coupling of an inclined spherical shell
with a short circular cylindrical or toroidal shell, on the suppo-
sition that the latter provides a rigid fixture for the rim of the
spherical shell. The well-known relationships are used for determi-
ning the bending moments and normal stresses in an inclined spheri-
cal shell fixed at the rim. The results of calculations by the for-
mula obtained are confirmed by experimental data. It is shown on
the basis of the comparison of the experimental results with the
calculated data that the momentless theory for determining the
stresses and radial displacements in shells having the form of an
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S/124/62/000/005/042/048

The strength of near-ellipsoidal shells   D251/D308

ellipsoid of revolution gives a negligible error in the range 3 -
20 %, making it possible to use the theory in practical calcula-
tions. [Abstractor's note: Complete translation].

Card 2/2

ZUBINA, E.M.; SPIRIDONOVA, N.P.

Biological characteristics of popular medical means applied
in White Russia in protozoic diseases. Zdrav.Belor. 5
no.8:53-57 Ag '59.   (MIRA 12:10)

1. Iz kafedry obshchey biologii Vitebskogo meditsinskogo insti-
tuta (zaveduyushchaya kafedroy E.M.Zubina).
            (WHITE RUSSIA--MEDICINE, POPULAR)

BC

a-4

Enzymic system of peas. E. V. ARDCHOVAKAJA and N. S. SPIRIDONOVA (Compt. rend. Acad. Sci. U.R.S.S., 1939, 23, 155—157).—The later is the variety of pea, the greater is the synthetic activity of the protease and the amount of protein formed. The ratio protein-N : total N is nearly the same in various grain peas but in sugar peas is much greater for late than for early varieties. The increase of carbohydrate in peas is inversely proportional to the increase in the amount of protein. Increase in the synthesis of carbohydrates is accompanied by increased oxidising activity of ascorbinase, but there is no relation between the latter and the earliness of grain peas.   J. N. A.

CA

110

Vitamin C and the oxidation capacity of plant tissues. B. A. Rubin and N. S. Spiridonova. *Biokhimiya* 5, 208-16(1940); cf. *C. A.* 34, 1711[3]—In those vegetable tissues where a correlation exists between the vitamin C content and the ascorbinase and peroxidase activity, the synthesis of vitamin C is the result of a specifically directed oxidation process taking place in the vegetable cell. Where no correlation exists, as in the tissues of fruits, ascorbic acid is a product of storage, and has been synthesized by other tissues. H. Priestley

Inst. of Biochem. of the academy of Sciences of USSR, Moscow

CA

11d

Variability of biochemical indexes in potato tubers.
N. S. Spiridonova and V. V. Chazova. *Doklady Akad.
Nauk S.S.S.R.* 60, 671-2 (1910).—The peripheral matter
has a higher vitamin C level than the interior of the tuber
(variation up to 10-15%) and the upper portion is richer
than the lower portion. Catalase activity has the same
pattern of distribution, while peroxidase is variable with
different specimens, although in all cases significant dif-
ferentiation occurs. Sol. carbohydrates are also more
prevalent in the upper portions, except for starch which
tends toward the lower sections.   G. M. Kosolapoff

METALLURGICAL LITERATURE CLASSIFICATION

SPIRIDONOVA, N. S.

Mbr., Inst. Biochemistry Ural Affil., Acad. Sci., -1939-c49-. "On the Relations between Oxidation Processes in Living Tissues and the Changes of Their Vitamin C Content," Biokhim., 4, No. 3, 1939; "On the Sources of Vitamin C Formation in the Living Plant Cell," ibid.; "Particulars in Enzymatic System of Various Peas," Dok. AN, 23, No. 2, 1939; "Periodicity of Certain Processes in Plants," biokhim., 10, No. 1, 1945; "Variability of Biochemical Indicators in Potato Tubers," Dok. AN, 66, No. 4, 1949.

SPIRIDONOVA, Nina Sergeyevna

[How man changes the nature of plants and animals] Kak chelovek izmeniaet prirodu rastenii i zhivotnykh. [Sverdlovsk] Sverdlovskoe kn-vo, 1955. 43 p.
    (Genetics)   (MIRA 9:9)

SPIRIDONOVA, N.S.

Effect of ascorbic acid on the translocation of water in plants.
Fiziol. rast. 12 no.2:340-341 Mr-Ap '65. (MIRA 18:6)

1. Kafedra botaniki Sverdlovskogo pedagogicheskogo instituta.

SPIRIDONOVA, N.S., otv. red.; SUVOROVA, M.I., red.; CHERKASOVA, L.A.,
        red.; OZIRA, V.Yu., red.; LAZAREVA. L.V., tekhn. red.

[Lecture course in the economics of presocialist formations]
Kurs lektsii po politicheskoi ekonomii; dosotsialisticheskie
formatsii. Moskva, Izd-vo Mosk. univ., 1963. 655 p.
                                        (MIRA 16:4)
1. Moscow. Universitet. Kafedra politekonomiki yestestven-
nykh fakul'tetov.
                (Economics)

SPIRIDONOVA, Nina Sergeyevna; SKIPETROV, P.A., red.; PEREKALINA, N.S., red.; GEORGIYEVA, G.I., tekhn. red.

[Business accounting under the new conditions of industrial management]Khoziaistvennyi raschet v novykh usloviiakh upravleniia promyshlennost'iu. Pod red. P.A.Skipetrova. Moskva, Izd-vo Mosk.univ., 1961. 511 p.   (MIRA 15:1)
                    (Finance)

BATULISH [?] IK, A.I.; SPIRIDONOVA, N.V.

Chemical properties and molecular structure of derivatives of
sym-triazine. Usp.khim. 33 no.7:900-911 Jl '64.
(MIRA 17:10)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut
azotnoy promyshlennosti i produktov organicheskogo sinteza, Dzer-
zhinskiy filial.

L 42108-65   EPF(c)/EPR/EPA(s)-2/EWP(j)/EWA(c)/EWT(m)/T   Pc-4/Pr-4/Ps-4/Pt-7   RM/HW
ACCESSION NR: AP5008718   S/0366/65/001/003/0606/0609

AUTHORS: Finkel'shteyn, A. I.; Spiridonova, N. V.

TITLE: Investigation of the products of thermal conversion of some sym-heptazine
by means of IR spectra

SOURCE: Zhurnal organicheskoy khimii, v. 1, no. 3, 1965, 606-609

TOPIC TAGS: IR spectrum, heat resistant plastic, thermal decomposition, pyrometer/
Kurnakov pyrometer

ABSTRACT: The derivatives of sym-heptazine were studied because of their potential
value in producing heat-resistant plastics. The authors worked on melem, cyameluric
and hydromellonic acids, and the salts of the latter two. A Kurnakov pyrometer was
used, calibrated for conversion temperatures of known compounds. Compounds were
identified by their IR spectra. Hydromellonic acid was precipitated from a satu-
rated solution of its potassium salt by concentrated HCl. After one-half hour of
boiling in the presence of ion-exchange resins it separated out as a white powder.
Cyameluric acid was precipitated by doubly distilled HCl from a saturated solution
of its potassium salt. On heating, melem underwent conversion at 188, 546, and
742C. The first change was very slight, not affecting the structure. The second

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L 42108-65
ACCESSION NR: AP5008718   O

involved absorption of heat and conversion to mellon. The color became yellow. At
742C more heat was absorbed, the mellon structure was preserved, and the yellow
color became more intense. The tripotassium salt of hydromellonic acid underwent
thermal conversions at 148 and 630C. The first was not accompanied by any visible
change in the sample. At 630C, however, the salt melted, decomposing, and giving
rise to the tripotassium salt of tricyanmelamine. This product also formed, at
660C, by melting the monopotassium salt of hydromellonic acid. Hydromellonic acid
itself changed at 130C, with no alteration of molecular structure, and at 740C, with
absorption of heat, due to the irreversible conversion to mellon. Cyameluric acid
changed at 120 and 480C. The second change involved decomposition, giving rise to
mellon. The tripotassium salt of cyameluric acid exhibited endothermic effects at
120 and 546C. The spectrum did not change after the first, but melting occurred at
the second, with decomposition and the formation of potassium and ammonium cyanates.
Orig. art. has: 3 figures and 4 formulas.

ASSOCIATION: none

SUBMITTED: 13Jan64   ENCL: 00   SUB CODE: OC, OP

NO REF SOV: 001   OTHER: 001

Card 2/2 CC

FINKEL'SHTEYN, A.I.; SPIRIDONOVA, N.V.

Study of the products of thermal transformations of certain
derivatives of sym-heptazine as determined by infrared
spectroscopy. Zhur.org.khim. 1 no.3:606-609 Mr '65.

(MIRA 18:4)

SPIRIDONOVA, O.I.
25678

Bop'be Za Vysokuyu Proizvoditel'nost' Oboudovaniya. [Iz Opyta Batershchitsy
Fabriki Im. Lakina]. Tekstil. Prom-st', 1948, No.6, s. 38-40

SO: LETOPIS NO. 30, 1948

FADDEYEV, Ye.T.; PLATONOV, G.V., doktor filosof.nauk, nauchnyy red.;
    SPIRIDONOVA, O.I., red.

    [Science and religion; album] Nauka i religiia; al'bom -
    vystavka. Red.G.V.Platonov. Leningrad, Sovetskaia Rossiia,
    1959. 41 l. [___Instructions for the use of the album
    "Science and religion."] ___ Metodicheskie ukazaniia k al'bomu
    "Nauka i religiia." 7 p.   (MIRA 12:10)
                (Science and religion)

SPIRIDOHOVA, O. L.,

"Industrial Methods of Painting Window and Door Assemblies." (Dissertation for Degree of Candidate for Technical Sciences) Min Higher Education USSR, Leningrad Order of Labor Red Banner Civil Engineering Inst, Chair of Construction Industry, Leningrad 1955

SO: M-1036 28 Mar 56

FORTUNOVA, Vera Nikolayevna; SPIRIDONOVA, O.M., kandidat tekhnicheskikh
nauk, nauchnyy redaktor; ROTENBERG, A.S., redaktor izdatel'stva;
PUL'KINA, Ye.A. tekhnichnicheskiy redaktor

[Preparation and assembly of glazed and painted window and door
frames] Izgotovlenie i montazh okrashennykh i osteklennykh okonnykh
i dvernykh blokov. Leningrad, Gos. izd-vo lit-ry po stroit. i arkhit.,
1956. 25 p.   (MLRA 10:5)
          (Doors) (Windows)

SPIRIDONOVA, O.M., kand.tekh. nauk

Industrial methods for the interior finishing of buildings. Sbor.
nauch.trudov LISI no.24:65-97 '56.   (MIRA 15:3)
                    (Construction equipment)

GOLANT, Sh.N.; RABINOVICH, G.M.; SPIRIDONOVA, O.M., kand.tekhn.nauk, nauchnyy
red.; ROTENBERG, A.S., red.izdatel'stva; PUL'KINA, Ye.A., tekhn.red.

[Spray painting of buildings, using a paint without an oil base]
Mekhanizirovannaia okraska zdanii bezmaslianymi sostavami; opyt
raboty novatora-maliara A.P.Farutina. Leningrad, Gos.izd-vo lit-ry
po stroit.i arkhit., 1957. 40 p.   (MIRA 10:12)
                         (Spray painting)

SPIRIDONOVA, Ol'ga Mikhaylovna, kand.tekhn.nauk; KARPOV, V.V., kand.tekhn.
        nauk, nauchnyy red.; KAPLAN, M.Ya., red.izd-va; PUL'KINA, Ye.A.,
        tekhn.red.

[Comprehensive mechanization of finishing operations] Kompleksnaia
mekhanizatsiia otdelochnykh rabot. Leningrad, Gos. izd-vo lit-ry
po stroit. i arkhit. 1957. 93 p.   (MIRA 11:5)
        (Painting, Industrial)

ILYUKHIN, Ivan Petrovich;-SPIRIDONOVA, O.M., kand.tekhn.nauk, nauchnyy
red.; ROTENBERG, A.S., red.izd-va; PUL'KINA, Ye.A., tekhn.red.

[Work of a master plasterer] Rabota master-shtukatura. Lenin-
grad, Gos.izd-vo lit-ry po stroit., arkhit. i stroit. materia-
lam, 1958. 81 p.   (MIRA 12:8)
                      (Plastering)

GOLAND, Sh.N., kand.tekhn.nauk; LEDENTSOV, N.M., inzh.; NIKOLAYEV, A.S., inzh.; PAVLENKO, V.T., inzh.; PLAKIDA, M.A., kand.tekhn.nauk; PORADNYA, A.I., doktor tekhn.nauk; SPIRIDONOVA, O.M., kand.tekhn. nauk; SVYATSKIY, P.S., inzh.; FEDORTSOV, B.D., inzh., retsenzent; PUL'KINA, Ye.A., tekhn.red.

[Manual on finishing operations] Spravochnik po otdelochnym rabotam. Pod red. A.I.Poradnia i O.M.Spiridonovoi. Leningrad, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1960. 497 p.   (MIRA 14:4)

1. Leningrad. Glavnoye stroitel'noye upravleniye.
(Finishes and finishing)

GOLAND, Sh.N., kand. tekhn. nauk; LEDENTSOV, N.M., inzh.; NIKOLAYEV, A.S., inzh.; PAVLENKO, V.T., inzh.; PLAKIDA, M.A., kand. tekhn. nauk; PORADNYA, A.I., doktor tekhn. nauk; SPIRIDONOVA, O.M., kand. tekhn. nauk; SVYATSKIY, P.S., inzh.; FEDORTSOV, B.D., inzh., retsenzent; KAPLAN, M.Ya., red. izd-va; PUL'KINA, Ye.A., tekhn. red.

[Handbook of finishing operations] Spravochnik po otdelochnym rabotam. Pod red. A.I.Poradnia i O.M.Spiridonovoi. Leningrad, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 497 p.
(MIRA 14:7)

1. Leningrad. Upravleniye po zhilishchnomu i grazhdanskomu stroitel'-stvu.
(Finishes and finishing)

AISTOV, N.N., prof., doktor tekhn. nauk; VASIL'YEV, B.D., prof., doktor
tekhn. nauk; IVANOV, V.F., prof., doktor tekhn. nauk; SAKHNOVSKIY,
K.V., prof., doktor tekhn. nauk; SMIRNOV, N.A., prof.; ORLOV, A.I.,
dots., kand. tekhn. nauk; SHIFRIN, S.M., prof., doktor tekhn. nauk;
Prinimali uchastiye: AKIMOVA, L.D., kand. tekhn. nauk, dots.;
SPIRIDONOVA, O.M., kand. tekhn. nauk, dots.; MAKUKHIN, V.L.,
nauchnyy red.; STAROVOYTOV, I.F., inzh., red. izd-va; FUL'KINA,
Ye.A., tekhn. red.

[The history of building practices] Istoriia stroitel'noi tekh-
niki. [By] N.N.Aistov i dr. Pod obshchei red. V.F.Ivanova. Le-
ningrad, Gosstroiizdat, 1962. 560 p.   (MIRA 15:12)

1. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR
(for Vasil'yev, Sakhnovskiy).
                              (Building)

SPIRIDONOVA, Ol'ga Stepanovna; SAPOZHNIKOVA, Renata Pavlovna;
    VEDERNIKOVA, Valentina Anatol'yevna; STOLYAROV, K.P., red.

[Methods of the phase analysis of nickel-based alloys] Me-
tody fazovogo analiza splavov na osnove nikelia. Leningrad,
1964. 29 p.   (MIRA 18:3)

RAZUMOVICH, M.B.; MEDRESH, Ye.A.; SPIRIDONOVA, O.S.

Use of volatile garlic phytonicides in complex therapy of
Trichomonas colpitis. Akush.i gin. 37 no.2:109-110 F '61.

(MIRA 14:3)

1. Iz zhenskoy konsul'tatsii Brestskogo rodil'nogo doma (glav-
nyy vrach I.F. Koroleva).
            (GARLIC)   (TRICHOMONIASIS) (PHYTONCIDES)

SPIRIDONOVA, O. S.

Agriomati, I. M., Agriomati, I. L., and Spiridonova, O. S. ZIRCONIUM DIOXIDE. U.S.S.R. Pat. 52,483, Feb. 28, 1938.—An aqueous suspension of eudialyte is treated with SO_2, filtered, and the filtrate hydrolyzed to precipitate $ZrO(OH)_2$, which on heating gives ZrO_2. The SO_2 liberated in the hydrolysis is returned to the process.

SPIRIDONOVA, O.S.

Electrolyte for separating the carbide phase in molybdenum steel. O. S. Spiridonova. U.S.S.R. 102,253, Mar. 25, 1956. For anodic dissoln. of Mo steel, an electrolyte consisting of glycerol 1, H_3PO_4 1, and H_2O 4 parts is used.
M. Hosch

SPIRIDONOV A, O.S.

AUTHORS: Spiridonova, C.S., Bezuglova, T.I.   32-12-5/71

TITLE: Accelerated Method for the Isolation of the Carbide Phase in Steel
              (Uskorennyy metod izolirovanija karbidnoy fazy v **stalyakh**).

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 12, pp. 1412-1413 (USSR)

ABSTRACT: Such a method of determination is suggested in this paper, viz. the
              application of electrolytes by Popova, which is most often in use in
              the USSR: 1-n KCl and 5 g of citric acid per 1 l of the solution. In
              this case the time of analysis is reduced to 60 minutes as against
              6-8 hours needed during application of earlier methods. Analysis
              according to the method suggested is carried out at a current densi-
              ty of from $0.02-0.03$ A/cm^2. Precipitation on the sample is liberated
              from the electrolyte by dipping the sample successively into 6-8
              glasses each containing half a liter of distilled water saturated
              with carbon. The carbide remained chemically unaffected and was re-
              moved from the sample electrolytically by a 50% sodium hydroxide
              solution at a current of from $0.1-0.5$ A/cm^2. The sample is then
              washed, cleaned with spirit, dried and weighed. The carbide taken
              off together with the rest of the precipitation was dried, heated

Card 1/2   red-hot, melted with pyro potassium sulphide and de-leached by

Accelerated Method for the Isolation of the Carbide   32-12-5/71
Phase in Steel

        sulphuric acid. The solution obtained herefrom is investigated
chemically with respect to its elementary components. The results
are shown in 2 tables. There are 2 tables.

AVAILABLE: Library of Congress

Card 2/2   1. Steel-Carbide isolation-Method

SPIRIDONOVA, R.I.

Remote control of electrostatic filters. TSement 28 no.4:20-21
Jl-Ag '62.   (MIRA 15:7)

1. Novorossiyskiy tsementnyy kombinat.
        (Remote control)   (Dust collectors)

KARADZHOVA, E.; PASHOVA, A.; SPIRIDONOVA, S.

Case of diabetes insipidus following influenza encephalitis.
Suvrem. med. Sofia 5 no.4:80-82 1954.

1. Iz Vutreshnoto otdelenie pri Tsentralnata transportna bolnitsa
(nach. otdelenie: P.Logofetov)
        (ENCEPHALITIS,
            influenzal encephalitis, with diabetes insipidus)
        (DIABETES INSIPIDUS, complications,
            encephalitis, influenzal)

S/724/61/000/000/005/020

AUTHORS: Al'tman, M.B., Lotareva, O.B., Postnikov, N.S., Spiridonova, S.B.

TITLE: The cast Aluminum alloy BAЛ 4 [VAL4] (BA 15 [VL15]).

SOURCE: Liteynyye alyuminiyevyye splavy; svoystva, tekhnologiya plavki, lit'ya i termicheskoy obrabotki. Sbornik statey. Ed. by I. N. Fridlyander and M.B. Al'tman. Moscow, Oborongiz, 1961, 43-51.

TEXT: The paper describes a new alloy of the system Al-Mg-Zn, developed by I. F. Kolobnev, M. B. Al'tman, and O. B. Lotareva to achieve better strength characteristics than those of the similar alloy A612F described in the ALCOA Aluminum Handbook, 1957. The technological properties of the new alloy permit its application over a wide range of casting dimensions and configurations. The alloy excels in the stability of its mechanical properties across the cross-section of a thick casting. The alloy machines and polishes well and is readily welded and brazed, all of which makes it suitable for complex parts of electrical and radio equipment. The step-by-step development of the alloy is described, leading up to the final composition of the alloy: 3.5-4.25% Zn, 1.5-2% Mg, 0.2-0.5% Mn, 0.1-0.2% Ti, the remainder Al. The alloy is essentially an $Al-Al_2Mg_3Zn_3$ alloy. The phase diagram of this type of alloy is examined to obtain guidance for a suitable heat treatment.

Card 1/2

The cast Alumium alloy....

S/724/61/000/000/005/020

A two-stage heating procedure prior to quench, comprising a heating to 475°C for 2 hrs and 580° for 3 hrs was selected, except that thin-walled parts, free of any local thickenings, can be heated directly to 580° for 5 hrs. Parts are then quenched and are maintained at 120° for 8 hrs to achieve a further strengthening. Air-cooling from 580° was also tested. The microstructure of the cast alloy consists of solid-solution grains, along the boundaries of which small quantities of $MgZn_2$ and im-purities appear. After heat treatment, a $MgZn_2$ phase is no longer observed, and the amount of T phase is significantly reduced. Corrosion tests showed a corrosion resistance of the VAL4 alloy close to that of the AL2 and AL13 alloys, and, hence, far exceeding that of the ordinary cast alloys which con-tain Cu. The hermeticity of VAL4 is not outstandingly good; leakage began at 60- to 80-atm pressure, thus placing the VAL4 alloy into the same category as the AL7 and AL8 alloys. There are 4 figures, 3 tables, and 4 references (2 Russian-language Soviet and 2 English-language: Metallurgia, v.51, no.306, 1955, and the ALCOA Aluminum Handbook, 1957).

Card 2/2

L 40374-66   ETI/E P(t)/E T(m)   IJP(c)   JH/JD/WB/JT
ACC NR: AP6025629   SOURCE CODE: UR/0413/66/000/013/0080/0080

INVENTOR: Al'tman, M. B.: Ambartsumyan, S. M.: Kolobnev, I. F.: Lotareva, O. B.:
Loktionova, L. I.: Spiridonova, S. B.

ORG: none

TITLE: Cast aluminum-base alloy. Class 40, No. 183398

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 80

TOPIC TAGS: aluminum alloy, cast alloy, zinc containing alloy, magnesium containing
alloy, manganese containing alloy, titanium containing alloy, iron containing alloy,
beryllium containing alloy, stress corrosion, corrosion resistant metal

ABSTRACT: An Author Certificate has been issued for a cast aluminum-base alloy con-
taining zinc, magnesium, manganese and titanium. In order to reduce susceptibility
to stress corrosion while retaining high mechanical properties, the content of alloying
elements should be kept within the following limits in %: zinc 3.5—5.5, magnesium
1.2—2.2, manganese 0.2—0.7, titanium 0.05—0.25, chromium 0.1—0.6, iron 1.0—1.6,
and beryllium 0.01—0.5. The alloy may also contain silver, niobium, cobalt, nickel,
molybdenum, boron, tungsten, and rare-earth metals in an amount up to 1.5%.   [DV]

SUB CODE: 11/ SUBM DATE: 12Jun64/ ATD PRESS: 5053

Card 1/1   UDC: 669.715'5'721'74

Essential oils from grass. S. Spiridonova. *Byull. Nauch.-Issledovatel. Khim.-Farm. Inst.* 1930, 8-9.—*Artemisia caspia* var. citrodora Kazakevics. on steam distn. gave a 0.4% yield of oil of d$_4^{20}$ 0.9002, [a]$_D$ —10.50°, n$_D$ 1.4740, acid no. 8.27, esterification no. 47.23, esterification no. A (?) 144.32, free alc. (C$_{10}$H$_{18}$O) 44.5%, aldehydes and ketones 42.02% (hydroxylamine), aldehydes 34% (sulfite), phenols about 2%. There was sepd. with sulfite 34% of citral, evidently present in the *a* and *b* forms. Sapon. and steam distn. of the oil after sepn. of citral give 2.3% of valeric acid and about 1% phenol (cresol). The vacuum-distd. oil was fractionated into (a) a-pinene and camphene, (b) borneol, a liquid alc. the nature of which was not established, and *l*-camphor, (c) *l*-camphor, and (d) a compd. probably cadinene. *Artemisia maritima* var. Kazakevics gave on steam distn. 0.59% of an oil from which, by cooling to —17°, 36% of *l*-camphor was sepd. The liquid left after the removal of camphor had d$_4^{20}$ 0.9381, [a]$_D$ 33.20°, n$_D$ 1.4692, acid no. 2.80, esterification no. 36.74, esters (C$_{10}$H$_{17}$OOCCH$_3$) 12.8%, esterification no. A (?) 112.04, free alcs. (C$_{10}$H$_{18}$O) 33.0%, aldehydes and ketones 61.51% (hydroxylamine), aldehydes — 5% (bisulfite), phenols none. From the liquid oil 35.82% of *l*-camphor was sepd. as semicarbazone. There were probably present a-pinene, camphene and borneol.   A. A. Borntlinok

PROCESSES AND PROPERTIES INDEX

17

Essential oil of Thymus marschallianus Willd. S. L. Spiridonova. J. Gen. Chem. (U. S. S. R.) 6, 1510-13 (1936).—The flowering plant contains 0.54% oil, d 0.9025, n 1.493. It is of light brown color and has a pleasant odor differing from that of the common thyme oils. It contains a-pinene 10.7, camphene 3.6, sabinene 9.9, p-cymene 8.1, undecylic acid 0.2, AmOH 2, carvacrol 3.1, thymol 5.5, borneol about 30, sesquiterpenes 16.8 (contg. some cadinene) and resins 1.8%.   C. B.

ASM-SLA   METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

17

Changes of coriander essential oil in relation to the plant growth. S. I. Spiridonova. *J. Gen. Chem.* (U. S. S. R.) 6, 1536-8(1936).—Changes in the physicochem. consts. of the oil of *Coriandrum sativum* L. during the successive stages of growth from flowering to full maturity of fruit are studied. From the yields and optical rotation the accumulation of lanalool (I) during the various stages of plant growth is detd. (on the supposition that the rotation is caused exclusively by d-I). Coriander of Crimea and that of Saratov planted in the fall under snow were examd. Five basic growth stages were investigated: full florescence, defloration and milky, pulpy and full maturities of fruit. Accordingly corolla petals, pistils, stalks, leaves and fruits are freshly distd. (fruits after 3 months) and immediately analyzed. A definite relation exists between the consts. (and therefore chem. compn.) of the oil and the vegetation stages, as well as the plant parts. The oil yield, at the max. during the defloration and milky-fruit stages, gradually decreases with the ripening of the fruits. The d. increases gradually from 0.83 to 0.86, which is, evidently, related to the increasing content of oxidation products in the oil. The sp. rotation very small (0-1.73°) during florescence, increases sharply at the defloration stage and then rises very slowly to the end of the fruit ripening. This feeble accumulation of d-I in oil during the ripening of fruits shows that the com. maturity of coriander is attained before its physiol. ripeness, a increases throughout all the stages of growth; this is connected with the increasing oil d. The ether no. shows a decrease of alc. groups from the flowering to the ripening stages of the plant. Evidently, this does not take place at the expense of I, because the sp. rotation constantly rises with the growth. A rearrangement of alcs. resulting in greater I contents is possible. Since stalks and leaves give considerable oil (0.95%), the entire plant

ASM-SLA METALLURGICAL LITERATURE

PROCESSES AND PROPERTIES INDEX

17

Simultaneous production of essential oils and furfural from plants. S. I. Spiridonova. *J. Applied Chem.* (U. S. S. R.) 9, 1108-11(1936).—Furfural was distd. from a mixt. of the residue of camphor wormwood, freed from essential oil, and treated with 12% HCl and 10% NaCl at 155-60° for 2 hrs. The yield was 7.22-7.40% of furfural, b. 150-61°, d. 1.1500. The use of an autoclave at a pressure of 8-10 atm. and substitution of 12% HCl by 0.5-2.0% H₃PO₄ are proposed. Furfuramine is suggested as a suitable form for isolating furfural from the aq. soln. Eight references.   A. A. Podgurny

Determination of camphor in alcoholic solutions. S. I. Spiridonova. *J. Applied Chem.* (U. S. S. R.) **10**, 765-70 (in English 770) (1937).—Add water (30-40 drops per 1 cc.) to the soln. of camphor in alc. till slight clouding of the soln., which does not disappear after shaking. The concn. of camphor in an alc. soln. (X) is calcd. by means of the formula: $X = C_s/[1 + [(a - a_1)/(a_2 - a_3)]]$ where C is the concn. of camphor in the standard soln., and a, a_1, a_2, a_3 are the vol. of water used in the titration of sample and standard before and after the diln. of the soln., resp. The method permits detn. of 0.1-0.2 g. camphor in 5 cc. in 20-30 min. Six references.   A. A. Podgorny

Determination of concentration of a solution by the method of two solvents. I. Determination of concentration of water-insoluble compounds. S. L. Spiridonova. *J. Gen. Chem.* (U. S. S. R.) 7, 1071-81 (1937).—The soly. of a H₂O-insol. compd. was studied in a mixt. of H_2O and another solvent in which the compd. is sol. The systems investigated were camphor, borneol and naphthalene in H_2O-EtOH and H_2O-Me₂CO mixts. The method consisted in the addn. of H_2O, drop by drop, to solns. of the compd. in EtOH or Me₂CO until pptn. of the compd. begins. The relation between the concns. of the compd. and H_2O in a given triple system can be expressed by the formula $x = c/[1 + (a_2 - a_1)/(a_1 - a_3)]$, where c is concn. of the compd. in the original soln., x is concn. of the compd. in the soln. after the addn. of a given amt. of H_2O, a_1 is the amt. of H_2O required to begin pptn. of the compd. from a given vol. of the original soln., a_2 is amt. of H_2O required to begin pptn. of the compd. from the same vol. of original soln. dild. with an equal vol. of H_2O, a_3 is the amt. of H_2O required to begin pptn. of the compd. from a soln. in which the concn. of the compd. is x. This equation is similar to that given by Nikitin (C. A. 31, 2126⁴) for the relation: concn.-rate of reaction.

S. L. Madorsky

ASM-SLA   METALLURGICAL LITERATURE CLASSIFICATION

Determination of essential oil in alcoholic solutions.
S. I. Spiridonova. *Novosti Nauki i Tekh. Efirno-Mas-lichnoi Prom. 1938, No. 3-4, 61-5, Khim. Referat. Zhur. 2, No. 3, 86(1939).*—Prep. several dilns. of the alc. soln. and titrate 1 cc. of each with water from a 2-cc. micro-buret until the first permanent slight turbidity appears. Take the mean of the results of 3 titrations as the true value. Plot the vol. of water for the titration of 1 cc. of each soln. against the ratio of the vol. of alc. used for the diln. to the vol. of the initial soln. for each concn.

W. R. Henn

ASM-SLA   METALLURGICAL LITERATURE CLASSIFICATION

Determination of the concentrations of solutions in a system of two solvents. II. Determination of the concentration of organic solvents in their homogeneous water mixtures. S. I. Spiridonova. *J. Applied Chem.* (U. S. S. R.) 13, 1169-77(in French, 1177)(1940); cf. *C. A.* 31, 7311'.—The following systems were investigated: water-BtOH-camphor; water-EtOH-borneol; water-acetone-

camphor; water-acetone-borneol; water-MeOH-camphor and water-MeOH-borneol. The method, previously described, involves prepn. of several solns. of org. components of the system and dilg. them with various amts. of water. The relation between the concns. of the compd., (solvent) and water can be expressed by the formula $x = 50 \{[(a - a_1)/(a_2 - a_1)] + 1\}$; the notation used was explained previously.

A. A. Podgorny

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

Determination of concentrations of solutions by the method of two solvents. III. Determination of moisture in organic compounds which are insoluble in water. S. I. Shklyanenen. *J. Applied Chem.* (U. S. S. R.) 14, 646-51 (1941); cf. C. A. 35, 3083.—The systems EtOH-camphor-H_2O and EtOH-borneol-H_2O were studied in respect to the possibility of detn. of moisture in these H_2O-insol. org. substances by variation of soly. in org. solvents, such as EtOH, MeOH and MeCO, in the presence of varying amts. of water. By titration of solns. with H_2O until turbidity appears it is possible to est. empirically the amt. of moisture present in the sample of camphor, or borneol, used. It is proposed that the method may be used for other org. compds. that are insol. in H_2O, for the purpose of detg. their moisture content. G. M. K.

A 3 8 - 3 L A   METALLURGICAL LITERATURE CLASSIFICATION

1423. **Determination of the concentration of solutions by a system of two solvents. IV. Determination of moisture in organic solvents miscible with water.** S. I. Spiridonova (*J. appl. Chem. USSR*, 1946, **19**, 966—971).—The method depends on the appearance of a turbidity when water is added to a moist, water-miscible org. liquid containing a component, *e.g.*, camphor, furfuraldehyde, sol. in that liquid only up to a definite water content. Using furfuraldehyde as the indicator component, the water content of alcohol or acetone may be determined with an accuracy of ±2%. The dry solvent, a control solution of known water content, and the unknown solution are titrated with water in presence of furfuraldehyde until the appearance of turbidity; the % of water is then $C(V_1 - V)/(V_1 - V_2)$, where C is the % of water in the control, and V, V_1, and V_2 are the vols. of water taken by equal vols. of the unknown solution, dry solvent, and control, respectively.

E. B. Uvarov.

PROCESSES AND PROPERTIES INDEX

Determination of the concentration of solutions by means of a system of two solvents. V. Analysis of binary mixtures of acetone, methanol, and methyl acetate by means of titrating them with water in the presence of furfural. S. I. Spiridonova. *Zhur. Priklad. Khim.* (J. Applied Chem.) 20, 635-41(1947); cf. C..1. 41, 5809h.— An equal vol. of furfural is added to the binary soln., and the mixt. titrated with water from a microburet; the furfural serves as an indicator. MeOH-acetone solns. could be titrated accurately only in the range 0-10% MeOH, where the vol. of water required for the appearance of turbidity was a linear function of the concn. and where the sensitivity was sufficiently high. For pure acetone, with 2-ml. samples, 0.764 ml. of water was required, while for a 10% soln. of MeOH in acetone, about 1.050 ml. of water was required, giving a sensitivity of about 0.28 ml. water per 10% MeOH. In dil. solns. of acetone in MeOH the sensitivity was only about 0.1 as large. In the acetone-methyl acetate system accurate titrations could be made in the range 0-10% methyl acetate; the water required (for 2-ml. samples) was 0.735 ml. for pure acetone and 0.620 ml. for the 10% methyl acetate soln. The MeOH-methyl acetate system could be titrated from 0 to about 35% methyl acetate, where the vols. of water required were 1.090 ml. for pure MeOH, 1.403 ml. for 20% methyl acetate, and 1.238 ml. for 35% methyl acetate. The precision of the titrations was about 2.5%.   A. I. M.

A S a . S L A   METALLURGICAL LITERATURE CLASSIFICATION

SPIRIDONOVA, S. I.

Spiridonova, S. I., The determination of the concentration of solutions by the system of two solvents. VI. The determination of the composition of binary mixtures of alcohols, ketones and alcohol with a ketone by titration with water in the presence of furfural. p. 948

By titration with water turbidity isotherms have been obtained of the systems ethanol-isoamyl alcohol-furfural, ethanol-acetone-furfural and acetone-methylethyl-ketone-furfural. The conditions are determined for the linear expression of obtained isotherms depending on the concentration of the initial binary mixtures (without furfural). The possibility is shown of quantitative determination of isoamyl alcohol in ethanol, ethanol in acetone and methylethyl ketone in acetone.

Chair of General Chemistry of the Saratov Zoo-Veterinary Institute.
February 2, 1948

SO: Journal of Applied Chemistry (USSR) 21, No. 9 (1948)

SPIRIDONOVA, S. I.

57/49T20

USSR/Chemistry - Indicators   May/Jun 49
Chemistry - Furfural

"Furfural as an Indicator in Physicochemical
Analysis of Organic Compounds," S. I. Spiridonova,
Chair of Inorg and Anal Chem, Saratov Zootech
Vet Inst, 3½ pp

"Zhur Anal Khim" Vol IV, No 3

Research on binary systems of organic solvents
by titration of water to turbidity with furfural
as the indicator shows analytical importance of
these systems. Proposes a quick method to

57/49T20

USSR/Chemistry - Indicators (Contd)   May/Jun 49

determine isoamyl alcohol in ethanol.
Submitted 15 Jan 48.

57/49T20

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7

Determination of the concentration of aqueous solutions of electrolytes by titration with alcohol. S. I. Spiridonova (Saratov Zoovet. Inst.). Zhur. Priklad. Khim. (J. Applied Chem.) 22, 1284-91(1949); cf. C.A. 35, 2063². — Inorg. salts such as Na_2SO_4, $MgSO_4$, Na_2CO_3, $Na_2S_2O_3$ can be detd. by titration with EtOH and by using the turbidity of the soln. as the index. G. M. Kosolapoff

1951

SPIRIDONOVA, S. I.   Doc Chem Sci

Dissertation: "Determination of Solution Concentrations and Substance Moisture by Titration with Water." 21/6/50

Moscow Order of Lenin Chemical-Technological Inst imeni D. I. Mendeleyev.

SO Vecheryaya Moskva
      Sum 71

SPIRIDONOVA, . I.

Determination of the concentration of solutions in two-solvent systems. VIII. Titration of aqueous solutions of electrolytes in the presence of nonelectrolytes as indicators. B. I. Spiridonova (Saratov Zootech. Vet. Inst.). J. Appl. Chem. U.S.S.R. 25, 169-76(1952)(Engl. translation); Zhur. Priklad. Khim. 25, 159-67(1952); cf. C.A. 45, 3282b.—Studied were the salting-out (or -in) effects of approx. 25 electroytes on the solubilities of alc. solns. of camphor, borneol, nitrobenzene, aniline, furfurol, and isobutyl alc. Then there was investigated a method of indirect titration with water to the point of turbidity, in the presence of nonelectrolytes as indicators for the detn. of the concn. of aq. solns. The sensitivity of the nonelectrolytic indicator is detd. by $V - V_0$, where V is the vol. of water used in titration of 1 ml. of salt soln. + 1 ml. of indicator and V_0 is the vol. of water used in titration of 1 ml. of indicator + 1 ml. of water. In cases of salt in, $V > V_0$, whereas in cases of salt out, $V_0 > V$. All the electrolytes used exerted only a salting-in effect on the camphor and borneol, but the effect was very weak. The effect of salts on the other 4 nonelectrolytic indicators varied. Thus, KBr salted-in camphor, borneol, nitrobenzene, and aniline, but strongly salted-out furfurol and isobutyl alc. NaNO₃ and KNO₃ behaved similarly, but NH₄NO₃, KI, and thiocyanates exerted a salting-in effect throughout. Furfurol and isobutyl alc. solubilities were greatly affected by the salts. The turbidity isotherms in titrating aq. salt solns. with H₂O in the presence of a 40% alc. furfurol soln. were investigated by titrating solns. of KClO₃ and Na₂SO₄.

The linearity of these isotherms makes possible the calcn. of the concn. of the substance being detd. by the relation $X = C(V_0 - V)/(V_0 - V_e)$, where C is the concn. of the control salt soln., V_0 is the vol. of H₂O used in titration of the blank sample, and V_e is the vol. of H₂O used in titration of the test soln. The accuracy lies within the limits of exptl. error, which is ±2.5%. Good results can be obtained only when the furfurol soln. is fresh. The "aging" of the furfurol, possibly a polymerization in alc. and a depolymerization when water is introduced, is a drawback to its use as an indicator. A strong salting-out effect on isobutyl alc. by N solns. of sulfates, carbonates, and chlorides was observed. The magnitude of this effect for N solns. can be of analytical interest in this method of detg. the concn. of electrolytes.   Herbert Liebeskind

SPIRIDONOVA, S. I.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Analytical Chemistry

Determination of solution concentrations with a system
of two solvents. IX. Determination of chloride concen-
trates in solutions by titration with water in the presence of
isobutyl alcohol as an indicator of turbidity. S. I. Spirido-
nova. *J. Appl. Chem.* (*U.S.S.R.*) 25, 471–0(1952)(Engl.
translation).—See *C.A.* 46 ^?00c.   H. I. H.

SPIRIDONOVA, S. I.

SPIRIDONOVA, S. I.

Electrolytes

Titration of aqueous solutions of electrolytes with water in the presence of non-electrolytes used as indicators. Zhur. prikl. khim., 25, No. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, August 1952   1953, Uncl.

SPIRIDONOVA, S. I.

Volumetric Analysis

Determination of the concentration of solutions of chlorides by titration with water
in the presence of isobutyl alcohol which serves as a turbidity indicator. Zhur.prikl.
khim. 25 No. 4, 1952.

Monthly List of Russian Accessions, Library of Congress, August 1952. Unclassified.

Turbidity indicators for physical titration of aqueous and nonaqueous solutions of nonelectrolytes. S. I. Spiridonova (Zootech.-Vet. Inst., Saratov.) Zhur. Fiz. Khim. 26, 1827-33(1952); cf. C.A. 46, 6996b.—A homogeneous 2-component mixt. is titrated to a turbidity or phase-sepn. end point where one component of the soln. reaches its satn. point at a given temp.; the titration involves no chem. reaction. The quant. compn. of EtOH-H$_2$O, MeOH-H$_2$O, acetone-H$_2$O, MeOH-acetone, acetone-MeOAc, and many other mixts. was detd. by titration with H$_2$O from a microburet. Where both components were miscible with H$_2$O, a H$_2$O-insol. compd. (d-camphor, borneol, furfural) was added as indicator. Thus, to 1 ml. of an EtOH-H$_2$O mixt. was added 1 ml. of 12% alc. soln. of camphor; the mixt. was then titrated in a const.-temp. bath at 18°. The method is convenient for analyzing mixts. of liquids difficult to sep. by distn.; also it can be used for detg. moisture in solvents.   M. M. Anderson

SPIRIDONOVA, S.I.

USSR/ Chemistry - Titration

Card 1/1   Pub. 147 - 19/26

Authors   :   Spiridonova, S. I.

Title   :   Physical titration of aqueous electrolyte solutions in the presence of
                 cloud indicators

Periodical   :   Zhur. fiz. khim. 29/1, 159-165, Jan 1955

Abstract   :   Efforts were made to expand the physical titration method to the field
                 of aqueous electrolyte solutions. A rapid method was introduced for
                 the study of the effect of electrolytes on nonelectrolytes in water-
                 alcohol mixtures through physical titration with water up to the
                 cloud threshold. The results obtained are tabulated. The applicabil-
                 ity of the physical titration method in the presence of cloud in-
                 dicators to the study of salting-and salting-out with aqueous elec-
                 trolyte solutions is discussed. Ten references: 1 USA and 1
                 German (1886-1952). Tables; graphs.

Institution: Zootechnical-Veterinary Institute, Saratov

Submitted :   June 5, 1954

SPIRIDONOVA, S.I.; NIKITIN, Ye.K.

Solvent capacity of mixtures in physical titration in the
presence of turbidity indicators. Izv.vys.ucheb.zav.; khim.
i khim.tekh. 1 no.5:22-27 '58.   (MIRA 12:2)

1. Saratovskiy zooveterinarnyy institut, kafedra neorganiche-
skoy i analiticheskoy khimii.
        (Nephelometric analysis)   (Solubility)

5(2)
AUTHOR: Spiridonova, S. I.   SOV/153-58-2-9/30

TITLE: Rapid Determination of the Concentration of Electrolyte
                 Solutions by Means of the Titration With Water in the
                 Presence of Turbidity Indicators (Skoroye opredeleniye
                 kontsentratsii rastvorov elektrolitov titrovaniyem vodoy
                 v prisutstvii indikatorov pomutneniya)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimiches-
                 kaya tekhnologiya, 1958, Nr 2, pp 51 - 57 (USSR)

ABSTRACT: In laboratory practice the necessity often occurs
                 that the concentration of any substance in an
                 aqueous or non-aqueous solution (without additions)
                 has to be rapidly determined. The usual titration
                 cannot be employed with some salts and non-electrolytes.
                 The determination of the content of the dissolved
                 substance in such cases causes long and tedious
                 determinations by the gravimetric analysis, using
                 expensive and rare reagents. In such cases it is
Card 1/4   extremely useful to have at hand a general and rapid

Rapid Determination of the Concentration of Electrolyte SOV/153-58-2-9/30
Solutions by Means of the Titration With Water in the Presence of
Turbidity Indicators

        method of determining the concentration. The
        author assumes that the physical isothermal
        titration to the turbidity threshold could serve
        as such (Ref 1). The method of investigation (Refs 2,3)
        is recalled. SULFATE SOLUTIONS. Sulfates salt
        out isobutyl alcohol from its aqueous mixtures
        with the ethanol rectifying product. For this reason
        normal sulfate solutions become immediately turbid
        on mixing with the same volume of the indicator
        produced (isobutyl and ethyl alcohol 1:1). The
        results of the physical titration are given in
        table 1. The titration curves (isothermal lines
        of turbidity) of sodium, potassium, and magnesium
        sulfate have the shape of straights from the
        lowest concentrations till 0.3N; at higher con-
        centrations they show a curvature in the direction
        of the horizontal line. The occurrence of straight
        sections can be used for the rapid calculation
Card 2/4   of the concentration of the salts mentioned according

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to the equation $x = c \cdot \dfrac{v_o - v_x}{v_o - v_c}$ (Ref 3). The

results of the determination of the concentrations
of the solutions of the sulfates mentioned by this
method are shown in table 1. CARBONATE SOLUTIONS.
Carbonates have a considerable salting out capability
as compared to isobutyl alcohol. The turbidity iso-
thermal lines of sodium, potassium, and ammonium
carbonate are also straight within a wide range of
concentration. Table 3 gives a comparison of the
calculated with the actual concentrations of these
salts. NITRATE SOLUTIONS. Ethanol solutions of some
non-electrolytes, which are water soluble to a certain
extent, were used. Table 4 gives the test results
of the alcoholic solutions of aniline, furfurol and
isobutyl alcohol in the titration of their mixtures
with normal nitrate solutions by water (1 ml indicator
+ 1 ml salt solution). In the case of butyl alcohol

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Rapid Determination of the Concentration of Electrolyte   SOV/153-58-2-9/30
Solutions by Means of the Titration With Water in the Presence of
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a relatively small salting out by $NaNO_3$ and KNO_3, and almost no action of NH_4NO_3 are found. In the case of furfurol all three salts have a high salting out effect. This effect makes possible the use of furfurol alcohol solutions as turbidity indicator in the physical titration of aqueous solutions of various nitrates. Tables 5 and 6 give the results. There are 3 figures, 7 tables and 3 Soviet references.

ASSOCIATION: Saratovskiy zooveterinarnyy institut (Saratov Veterinary Institute) Kafedra neorganicheskoy i analiticheskoy khimii (Chair of Inorganic and Analytic Chemistry)

SUBMITTED: September 10, 1957

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SOV/153-58-5-3/28

5(2, 3)
AUTHORS: Spiridonova, S. I., Nikitin, Ye. K.

TITLE: On the Dissolving Effect of the Mixtures in the Physical Titration in the Presence of Turbidity Indicators (O rastvoryayushchey sposobnosti smesey pri fizicheskom titrovanii v prisutstvii indikatorov pomutneniya)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 5, pp 22-27 (USSR)

ABSTRACT: Some time ago, the author mentioned first suggested a titration method with water, as mentioned in the title (Refs 1, 2). In the present paper the authors discussed some characteristic features of this system which occur in investigations of aqueous solutions of salting electrolytes. Table 1 shows the investigation results of H_2SO_4, HCl, HNO_3, CH_3COOH, $(COOH)_2$ and the "uncharged" mixture using a 60% (per cent by volume) isobutyl and ethylalcohol mixture. In the physical titration of salt solutions with water the appropriate concentration of the working solution of the turbidity indicator is determined by the character of the effect of the electrolyte used upon the solubility of the said indicator (non-electrolyte), i.e. by the salting out and salting effect of the electrolyte.

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On the Dissolving Effect of the Mixtures in the Physical Titration in the Presence of Turbidity Indicators

SOV/153-58-5-3/28

In the case of the s a l t i n g o u t electrolyte the dissolving effect of the solution to be titrated becomes weaker than that of the "uncharged" mixture at the same concentration of the turbidity indicator. In a titration not higher than at 20° a mixture of 50 : 50 (with respect to volume) of iso-butyl and ethyl alcohol is recommended. The s a l t i n g electrolytes (in relation to the non-electrolyte used) in contrast to the salting out mixtures increase the solubility of the turbidity indicator in the mixtures. Therefore, the curves of the maximum and the actual indicator concentration deviate and it becomes less probable that they intersect. A considerable displacement of the point of intersection of the curves on the curve of the actual indicator concentration to the right exerts a noticeable influence upon the clearness of the turbidity threshold: a range of opalsscence precedes a constant turbidity (Table 3). To obtain positive results in such cases the point of intersection of the actual concentration with the curve of the maximum concentration of the turbidity indicator must be clearly displaced on the curve

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On the Dissolving Effect of the Mixtures in the Physical Titration in the
Presence of Turbidity Indicators

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mentioned first. It is sufficient to decrease to a certain
degree the dissolving effect of the mixture to be prepared,
i. e. to increase the concentration of the working solution
of the turbidity indicator. In the investigation of aqueous
solutions of salting electrolytes also such non-electrolytes
can be used as turbidity indicators which are infinitely
soluble in ethyl alcohol. Good indicators of this type are:
furfurol and isobutyl alcohol (9 g in 100 g water at 20°).
In the case of salting electrolytes alcoholic solutions of
acetic ester, acetyl acetone and isobutyric acid are suitable.
There are 1 figure, 3 tables, and 3 Soviet references.

ASSOCIATION: Saratovskiy zooveterinarnyy institut, Kafedra neorganicheskoy
i analiticheskoy khimii (Saratov Zoo-Veterinary Institute,
Chair of Inorganic and Analytical Chemistry)

SUBMITTED: November 5, 1957

Card 3/3

NIKITIN, Ye.K.; SPIRIDONOVA, S.I.

Study of the complex formation of alcohols with electrolytes,
based on the curves of physical titration to the turbidity
threshold. Izv.vys.ucheb.zav.; khim.i khim.tekh. 4 no.1:33-37
'61.   (MIRA 14:6)

1. Saratovskiy meditsinskiy i zooveterinarnyy instituty.
                    (Alcohols) (Complex compounds)

SPIRIDONOVA, S.I.

Determination of the water of crystal hydrates by titration
with water in the presence of turbidity indicators. Izv.
vys. ucheb. zav.; khim. i khim. tekh. 4 no. 2:186-188 '61.
(MIRA 14:5)

1. Saratovskiy zooveterinarnyy institut. Kafedra neorganicheskoy
i analiticheskoy khimii.
(Hydrates)

SPIRIDONOVA, S.I.

Sensitivity of the method of physical titration by water as determined by the nature of the solvent of turbidity indicators. Izv.vys.ucb.zav.;.khim.i khim.tekh. 5 no.4:549-552 '62.
(MIRA 15:12)

1. Saratovskiy zootekhnichesko-veterinarnyy institut, kafedra neorganicheskoy i analiticheskoy khimii.
(Electrolyte solutions)
(Turbidity)   (Solvents)

SPIRIDONOVA, S.I.

Systems with acetoacetic ester. Zhur. prikl. khim. 36 no.12:
2729-2734 D'63.   (MIRA 17:2)

1. Kafedra neorganicheskoy i analiticheskoy khimii Saratovskogo
zootekhnichesko-veterinarnogo instituta.

SPIRIDONOVA, S.I.; NIKITIN, Ye.K.

Mutual effect of furfurole and isobutanol on their solubility
in mixed solvents. Izv. vys. ucheb. zav.; khim. i khim. tekh.
8 no.1 31-35 '65.   (MIRA 18:6)

1. Saratovskiy zooveterinarnyy institut i Saratovskiy
meditsinskiy institut.

SPIRIDONOV, I. G.

AUTHORS: Bruker, A. B. , Spiridonova, I. G. , Sobolevski , L. Z.

TITLE: Investigation of the Reaction of Tetrafluoroethylene With Trichloro-
            arsenic in the Presence of Aluminum Chloride (Issledovaniye reak-
            tsii tetraftoretilena s **trekhkhloristym** mysh'yakom v prisutsvii khlo-
            ristogo alyuminiya)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 2, pp. 350 - 355 (USSR)
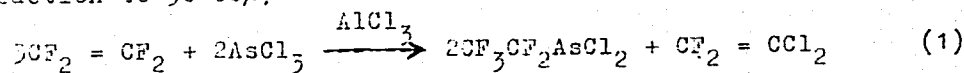
ABSTRACT: In the present work the authors investigated the reaction of tri-
            chloroarsenic with tetrafluoroethylene. The interaction between
            trichloroarsenic and unsaturated compounds is only investigated
            in the example of the reaction with acetylene (references 2 - 7).
            It is less thoroughly investigated with ethylene. Ren'shou, Uor
            and Nekrasov (references 8 and 9) showed that on saturation of tri-
            chloroarsenic with ethylene in the presence of dehydrated aluminum
            chloride, under atmospheric pressure and at an ordinary temperature
            the formation of β-chloroethyldichloroarsine with a small yield
            takes place. The authors originally tried to perform the interaction
            between tetrafluoroethylene and trichloroarsenic under conditions
            analogous as in the reaction with ethylene. The results were nega-
            tive. Just as negative were the attempts which were performed in
Card 1/4   an autoclave under pressure, but without aluminum chloride. Upon

79-2-16/64

Investigation of the Reaction of Tetrafluoroethylene With Trichloroarsenic in the Presence of Aluminum Chloride

closer examination of this reaction it was found that in the interaction between trichloroarsenic and tetrafluoroethylene in the presence of aluminum chloride a substance is produced which contains carbon, fluorine, chlorine and arsenic. This substance was identified as the hitherto unknown pentafluoroethyldichloroarsine. Beside it another substance was eliminated from the reaction mixture which corresponds to 1,1-difluoro-2,2-dichloroethylene described in publications (reference 10). The theoretical yield of pentafluoroethyldichloroarsine according to the trichloroarsenic reacted through amounts to 70 %, according to the tetrafluoroethylene used in the reaction to 50-60%:
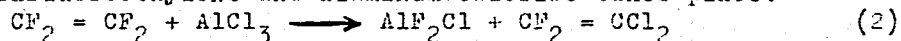
$$3CF_2 = CF_2 + 2AsCl_3 \xrightarrow{AlCl_3} 2CF_3CF_2AsCl_2 + CF_2 = CCl_2 \qquad (1)$$

The formation of pentafluoroethyldichloroarsine, as a result of reaction (1), instead of the expected tetrafluoro-β-chloroethyldichloroarsine indicated the difference of this process from the usual reaction in which trichloroarsenic is added to unsaturated compounds. The explanation for this lies in the capability of aluminum chloride to exchange the chlorine atom with fluorinated organic hydrocarbons against fluorine (references 11-15). It seems probable
Card 2/4   that in the observed case at first an exchange of halides between
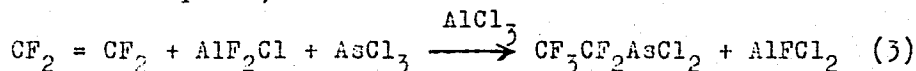
79-2-15/54

Investigation of the Reaction of Tetrafluoroethylene With Trichloroarsenic in the Presence of Aluminum Chloride

tetrafluoroethylene and aluminum chloride takes place.

$$CF_2 = CF_2 + AlCl_3 \longrightarrow AlF_2Cl + CF_2 = CCl_2 \qquad (2)$$

As a confirmation of this may be considered the fact that in all these tests simultaneously with pentafluoroethyldichloroarsine, difluorodichloroethylene was separated in a ratio corresponding to that in equation (1). Further the formation of pentafluoroethyldichloroarsine and aluminum fluorodichlorides under interaction of tetrafluoroethylene with trichloroarsenic and aluminum difluorochloride takes place,

$$CF_2 = CF_2 + AlF_2Cl + AsCl_3 \xrightarrow{AlCl_3} CF_3CF_2AsCl_2 + AlFCl_2 \qquad (3)$$

The resulting aluminum fluorodichloride may also enter an interaction with tetrafluoroethylene and again form aluminum difluorochloride.

$$CF_2 = CF_2 + 2AlFCl_2 \longrightarrow CF_2 = CCl_2 + 2AlF_2Cl \qquad (4)$$

The schemes given sufficiently show that comparatively small amounts of aluminum chloride are sufficient for converting considerable amounts of tetrafluoroethylene to pentafluoroethylenedichloroarsine and difluorodichloroether (see table). Summary: 1) The authors

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79-2-15/64

Investigation of the Reaction of Tetrafluoroethylene With Trichloroarsenic in the Presence of Aluminum Chloride

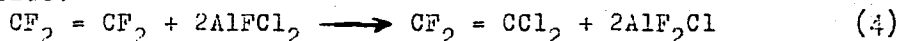realized the reaction of tetrafluoroethylene with trichloroarsenic in the presence of aluminum chloride at elevated temperatures and under pressure. They expressed their opinion on the mechanism of this process. The pentafluoroethyldichloroarsine not described was separated as main products. 2) Pentafluoroethyldifluoroarsine, pentafluoroethylarsine and pentafluoroethylarsenic acid hitherto not discribed in publications were produced and characterized. There are 1 table, and 16 references, 1 of which is Slavic.

SUBMITTED: February 2, 1957

AVAILABLE: Library of Congress

Card 4/4

5(3)

AUTHORS:

Soborovskiy, L. Z., Zinov'yev, Yu. M.,   SOV/79-29-4-21/77
Spiridonova, T. G.

TITLE:

Synthesis of Organo-phosphorus Compounds From
Hydrocarbons and Their Derivatives (Sintez
fosfororganicheskikh soyedineniy iz uglevodorodov
i ikh proizvodnykh). X. Oxidation Chlorophosphination
of Some Ethylene Derivatives (X. Okislitel'noye
khlorfosfinirovaniye nekotorykh proizvodnykh etilena)

PERIODICAL:

ABSTRACT:

In addition to some reports on the oxidation chlorophosphination
(Refs 1 - 3) the authors were able to introduce into this
reaction also ethylene derivatives which contain bromine,
chlorine, fluorine and a rather complex group such as the
sulfofluoride radical. The oxido-chlorophosphination of
1,2-dichloroethylene, vinyl bromide, vinyl fluoride,
1,2-fluorochloroethylene and vinyl sulfofluoride yielded
the acid chlorides of the corresponding substituted alkyl
phosphinic acids. As is known, this oxido-chlorophosphination

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Synthesis of Organo-phosphorus Compounds From   SOV/79-29-4-21/77
Hydrocarbons and Their Derivatives. X. Oxidation
Chlorophosphination of Some Ethylene Derivatives

of vinyl chloride under the formation of isomers which
differ from one another by the relative position of
chlorine and the radical $POCl_2$ (Ref 2). These acid

chlorides synthesized in this paper apparently form also
a mixture of two isomers of the structure $CH_2ClCHXP(O)Cl_2$

and $CHClXCH_2P(O)Cl_2$. In particular for the product of the

reaction of vinyl fluoride with phosphorus trichloride and
oxygen experimental data are available on the occurrence of
isomers, the separation of which will be the subject of
a special report. The reaction product of the
oxido-chlorophosphination of vinyl bromide was divided
by fractionation into two fractions which differ not only
by the boiling temperature but also by their composition.
The low-boiling fraction proved to be the acid chloride
of bromo-vinyl-phosphinic acid, while the higher boiling
one was the acid chloride of chloro-bromo-ethane phosphinic
acid. The formation of the first compound probably results

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Synthesis of Organo-phosphorus Compounds From   SOV/79-29-4-21/77
Hydrocarbons and Their Derivatives. X.   Oxidation
Chlorophosphination of Some Ethylene Derivatives

from the second dehydrogenation reaction of the acid
chloride of chloro-bromo-ethane phosphinic acid in the
distillation. Reference 2 confirms that the low-boiling
product is the 2-bromine-substituted substance, while
forms the higher boiling one the 1-chloro-2-bromine-derivative,
and accordingly their formulae are $BrCH\!\!=\!\!CHP(O)Cl_2$ and

$CH_2BrCHClP(O)Cl_2$ (Table). As by-product of the reaction of
chlorine with vinyl bromide the 1,2-dichlorobromide ethane
hitherto unknown was obtained. Consequently, the synthesis
covered the acid chlorides of 1-chloro-2-bromo-,1,2,2,-
   trichloro-, fluorochloro-, fluorodichloro- and chloro-
(fluorosulfo)-ethane phosphinic acid. There are 1 table
and 5 Soviet references.

SUBMITTED: March 3, 1958

Card 3/3

L 08463-67   EWP(m)/EWT(1)   WW

ACC NR: AR6016466   (N)   SOURCE CODE: UR/0124/65/000/012/B085/B086

AUTHOR: Kuznetsov, A. V.; Spiridonova, T. G.

TITLE: Flow of a weightless fluid with a free boundary around a plate

SOURCE: Ref. zh. Mekhanika, Abs. 12B612

REF SOURCE: Tr. Seminara po obratn. krayev. zadacham. Kazansk. un-t, vyp. 2, 1964, 84-87

TOPIC TAGS: fluid flow, flat plate, streamline flow

ABSTRACT: A previously derived general solution (Kuznetsov, A. V., Zh. Prikl. mekhan. i tekhn. fiz., 1963, No. 6, 94-99-RZhMekh, 1964, 4B378) is used as a basis for numerical solutions on the "Ural-1" computer on determining the lift factor C_y of a plate of length l moving under the free surface of a weightless fluid with velocity V_∞. In expressions for

$$\ln \frac{1}{V_\infty} \frac{dw}{dz}, \frac{dz}{dv}, \Gamma, H, Y,$$

where Γ is circulation, H is depth of immersion, Y is lift $v = v_1 + iv_2$ $(0 < v_1 < 2K, \ 0 < v_2 < K')$.

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ACC NR: AR6016466 O

it is assumed that

$$\gamma(v) = \frac{\zeta(K)}{K} + \lambda^2 \operatorname{cosec}^2 \lambda v$$

$$\zeta(v) = \frac{\zeta(K)}{K} + \lambda \operatorname{ctg} \lambda v$$

$\gamma(v)$, $\zeta(v)$ are elliptic functions. In the equations for determining the constants which appear in these expressions, quantities of an order higher that the first with respect to δ (angle of attack) are dropped. The numerical calculations are used as the basis for constructing a family of curves giving C_y as a function of δ and the quantity $\bar{l}=l/H$. The equation of the family for the range of values $0 < \delta < 7^\circ$, $0 < \bar{l} < 1.2$ is given in the form $C_y = \delta [2\pi - (0.3466 + 3.2442\,\delta)\,\bar{l}]$. G. G. Tumashev. [Translation of abstract]

SUB CODE: 20, 12

Card 2/2

SPIRIDONOVA, V., doyarka

How we organize the competition of stockbreeders.   Sov. prof'soiuzy
18 no.18:12-14 S '62.   (MIRA 15:9)

1. Organizator profsoyuznoy gruppy fermy sovkhoza Biryulinskiy,
Tatarskaya ASSR.
      (Tatar A.S.S.R.--Stock and stockbreeding)
      (Tatar A.S.S.R.--Socialist competition)

L 41053-65   EPF(c)/EWP(j)/EWT(m)   Pc-4/Pr-4   RM
ACCESSION NR: AP5007141   S/0303/65/000/001/0020/0023

AUTHOR: Nikitina, S.A.; Spiridonova, V.A.; Taubman, A.B. .

TITLE: Stabilization of polyvinylacetate latexes by nonionogenic emulsifiers

SOURCE: Lakokrasochnyye materialy i ikh primeneniye, no. 1, 1965, 20-23

TOPIC TAGS: latex stabilization, polyvinylacetate, latex, latex emulsifier, nonionogenic
emulsifier, surfactant polymer, ethylene oxide copolymer, propylene oxide copolymer,
film strength, ethylenediamine copolymer, latex stability, polyvinyl film/proxanol,
proxamine

ABSTRACT: American made copolymers of ethylene oxide and propylene oxide, American made
ethylenediamine-based copolymers, and similar Soviet-made compounds (proxanols-2, 3, 4, 5,
6, and proxamines-1 through 6) were the nonionogenic surface-active substances used by the au-
thors as emulsifiers in the synthesis of polyvinylacetate latexes. The 2-4 hr. polymerization at 58-
60C, with the phase ratio between polymer and aqueous solution of emulsifier maintained
at 1:1, was carried out in nitrogen-filled ampules in a constant temperature water bath,
using potassium persulfate (0.08% of polymer weight as the reaction initiator. The low-
temperature stability of the obtained latexes was investigated according to a method
developed at VNIISK, i.e., repeated 1-hr freezing of the samples at -25C, sedimentation
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L 41058-65
ACCESSION NR: AP5007141

at room temperature, 1-hr. centrifugation at 4000 rpm and determining the dry residue in the separated coagulates. Tensile strengths of 34 to 117.8 kg/cm^2 with a relative elongation of 200 to 980% were obtained in polyvinyl films prepared with proxanol 3 and 6 and proxamine 2 and 3, indicating that highly stable latexes yielding polymer films with adequate physical properties can be prepared using these emulsifiers. "The authors thank K. M. Mizuch and Ts. M. Gel'fer, candidates in the chemical sciences, who provided the emulsifier preparations." Orig. art. has: 5 tables and 2 figures.

ASSOCIATION: none

SUBMITTED: 00   ENCL: 00   SUB CODE: MT, OC

NO REF SOV: 011   OTHER: 006

CC

Card 2/2

SHTARKH, B.V.; SPIRIDONOVA, V.A.; PISARENKO, A.P.

Effect of thermal treatments on the dispersity of synthetic latexes. Kauch.i rez. 21 no.7:8-10 Jl '62.   (MIRA 15:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut plenochnykh materialov i iskusstvennoy kozhi.
              (Rubber, Synthetic)

S/020/63/149/004/022/025
B106/B186

AUTHORS: Nikitina, S. A., Taubman, A. B., Kuligina, N. V.,
             Spiridonova, V. A.

TITLE: Structuration in interphase adsorption layers of solutions of
             surface-active substances and stability of emulsions and
             aqueous dispersions of polymers (latex)

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 149, no. 4, 1963, 905 - 908

TEXT: The values of the shear stress P_m of the adsorption layers in
aqueous ОП-10 (OP-10) (alkyl phenol polyhydroxyethylene ether) solutions
during the period of their formation under static conditions were measured
along the water - xylene interface. Furthermore, the stability of con-
centrated emulsions of xylene in water and polymer dispersions (polystyrene
latex stabilized with OP-10 and pluronic (hydroxy ethylene and hydroxy
propylene block polymer)) was studied. The rate of increase in strength
of the protective emulsifier layers increases rapidly with the concentra-
tion of OP-10 solutions. Even in 5% solutions, however, maximum strength
(P_m = 0.25 dyn/cm) is only reached after 25 hrs. When the same amount of
OP-10 was previously distributed between the two phases, high strength was
Card 1/3