NIKIFOROVA, O.A.

Ultrastructure of thrombocytes in healthy subjects and in those with cancer (electron microscopic study). Probl. gemat. i perel. krovi 5 no. 9:34-39 '60. (MIRA 14:1)
(BLOOD PLATELETS) (CANCER)

NIKIFOROVA, O.A.

Quantity of thrombocytes and the thrombocytic formula of the peripheral blood in healthy persons. Lab.delo 6 no.2:32-34 Mr-Ap '60. (MIRA 13:6)

1. Kliniko-ekspertnyy otdel (zav. - prof. M.I. Khvilivitskaya) Leningradskogo nauchno-issledovatel'skogo instituta ekspertizy trudosposobnosti i organizatsii truda invalidov.
(BLOOD PLATELETS)

ACC NR: AP6036804 SOURCE CODE: UR/0240/66/000/011/0078/0081

AUTHOR: Bashmakova, T. A.; Sukal'skaya, S. Ya.; Nikiforova, O. A.; Permyakov, A. A.

ORG: none

TITLE: Radiation-hygienic evaluation of ground in which radioactive wastes are buried

SOURCE: Gigiyena i sanitariya, no. 11, 1966, 78-81

TOPIC TAGS: radioactive waste disposal, radioactive waste disposal equipment, radioactivity measurement

ABSTRACT: The area observed, in use since 1962 has a complex of installations, including depositories for fluid and solid waste products, a place for decontaminating machines, and containers, etc. The study tested air pollution and variations in the radioactivity rate in operations connected with the transport and disposal of the waste products. Two main sources of pollution were the ventilation systems in the buildings and the sewage where it reached open reservoirs. Sr^{90}, Cs^{137}, Ce^{144}, and Ra^{226} were used as indicators. For control of the radioactivity level determined by aerial fallout, activity of the deposits and the settled dust, density fallout rate of Sr^{90} and Cs^{137}, aerosol air activity on the studied territory, adjacent ground, including plants, were measured. Samples were selected at various times of year. The control point was 8 km from the object. A total of 107 deposit and dust samples and 48 plant

UDC: 614.73:621.039.7

Card 1/2

ACC NR: AP6036804

samples were investigated. In two years, the untreated sewage produced no observable effects on the zone adjacent to the open reservoir. Occasional pollution of the territory and sanitary-protective zone was effected by the ventilation exhaust. The pollution was insignificant (within permissible limits) and did not exceed the limits of the sanitary-protective zone. The working personnel revealed no specific health impairment in the course of the three year study, and the exposure to radiation doses was within permissible limits. Orig. art. has: 3 tables.

SUB CODE: 18,06/ SUBM DATE: 03Jun65/ ORIG REF: 002

Card 2/2

L 5268-66 FBD/EWT(1)/FCS(k) GW/WS-2/WR

ACCESSION NR: AP5022800 UR/0141/65/008/004/0768/0770
621.396.677.497:523.164

AUTHOR: Grigor'yev, G. I.; Kovner, M. S.; Nikiforova, O. G.; Obolenskiy, L. M.; Samsomov, A. V.; Trakhtengerts, V. Yu.

TITLE: Logarithmic-periodic helical exciter for a paraboloid with 1:7 frequency coverage

SOURCE: IVUZ. Radiofizika, v. 8, no. 4, 1965, 768-770

TOPIC TAGS: antenna directivity, conic antenna, antenna polarization, radio telescope antenna

ABSTRACT: The authors present the results of tests on a model of a broadband exciter for the 15-meter paraboloid of the Zimenki radio telescope. The model scale was 1:10. The reflector used was a parabolic cylinder with focal distance 0.525 m, height 1 m, and aperture D = 1.5 m. The exciter was a conical bifilar-wound cable helix with vertex angle 90° and pitch angle 7°. The vertex of the cone was at the focus of the paraboloid. The directional pattern and the standing wave ratio of the system were measured in the range $1.5 \leq D/\lambda \leq 10$, where λ is the working wavelength. The results are shown in Fig. 1 of the Enclosure. The fact that a directivity angle of 10° can be obtained with D/λ close to 2 is taken as an indi-

Card 1/3

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L 5268-66

ACCESSION NR: AP5022800

6

cation that such a system can ensure high directivity with small antenna dimensions. It is emphasized, however, that no final conclusions can be drawn until phase-distribution measurements are made. The results for horizontally polarized radiation differ little from those for vertical polarization, except that side lobes appear at some frequencies. "The authors thank Yu. M. Zhidko for a discussion of the results." Orig. art.has: 2 figures. [02]

ASSOCIATION: Gor'kovskiy gosudarstvennyy universitet (Gor'kiy State University)

SUBMITTED: 08Jul64 ENCL: 01 SUB CODE: AA, EC

NO REF SOV: 001 OTHER: 004 ATD PRESS: 4137

Card 2/3

L 5268-66

ACCESSION NR: AP5022800 ENCLOSURE: 01

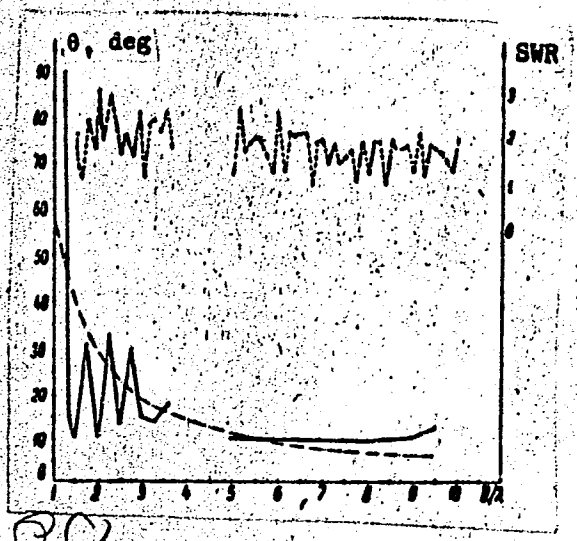


Fig. 1, Width of directivity pattern (θ, degrees) and standing wave ratio plotted against the aperture-to-wavelength ratio D/λ

Card 3/3

NIKIFOROVA, O.G.; RABINOVICH, B.D.

Standardization and production quality. Standartizatsiia 29 no. 11:61-62 N '63 (MIRA 17:1)

NIKIFOROVA, O.I.

Soviet psychological studies on the interpretation of fictional literature. Vop.psikhol. 3 no.3:88-96 My-Je '57. (MLRA 10:8)

1.Kafedra psikhologii Moskovskogo universiteta.
(Literature--Psychology)

[illegible]IFOROV[illegible], O.I.

Role [illegible] (Ex[illegible]ence). Vo[illegible] [illegible]11 -125 Jl-Ag [illegible] [illegible]

1. Kafedra [illegible] [illegible]ovskogo gosuniversiteta.
(Re[illegible]uction (Psychology))

NIKIFOROVA, O.I.(Moskva)

Significance of speech for accuracy in the reproduction of a visual image. Vop.psikhol. 7 no.1:133-140 Ja-F '61. (MIRA 14:3)
(Speech) (Reproduction(Psychology))

BOGOMOLOVA, S.N.; VAYTKUNENE, L.I.; KRASNOSEL'SKIKH, A.A.; NIKIFOROVA, O.I.

Development of imagination in law students during the practical study of criminology. Vop.psikhol. no.6:117-123 N-D '62. (MIRA 16:2)

1. Moskovskiy gosudarstvennyy universitet.
(Criminal investigation—Study and teaching)

NIKIFOROVA, O.I.

Stratigraphic plan of the upper Silurian in Podolia. Mat. VSEGEI. Ob. ser. no.8:43-54 '48. (MIRA 11:4)
(Podolia--Geology, Stratigraphic)

NIKIFOROVA, Ol'ga Ivanovna, 1905-

Stratigraphy andBrachiopoda of Silurian deposits in Podolia. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geologii i okhrane nedr, 1954. 217 p. (Trudy Vsesoiuznogo nauchno-issledovatel'sko-go geologicheskogo instituta) (54-44197)

QE796.N5

NIKIFOROVA, O.I.

New data on the stratigraphy and paleogeography of Ordovician and Silurian deposits in the Siberian Platform. Mat. VSEGEI no.7:50-106 '55. (MLRA 10:4)
(Siberian Platform--Geology, Stratigraphic)

NIKIFOROVA, O.I.; OBUT, A.M.

Correlation of Silurian sediments in the European part of the U.S.S.R. with those in Central Europe. Sov.geol. 2 no.1:56-61 Ja '59. (MIRA 12:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut i Leningradskiy gosudarstvennyy universitet.
(Geology, Stratigraphic)

NIKIFOROVA, O.I.

Kulumbella, a new genus of the family Stricklandiidae. Paleont.zhur. no.3:61-65 '60. (MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut.
(Siberian Platform--Brachiopoda, Fossil)

NIKIFOROVA, O.I.; ANDREYEVA, O.N.; DOLMATOV, P.S., vedushchiy red.; BRUSHKIN, D.M., vedushchiy red.; SAFRONOVA, I.M., tekhn.red.

[Paleozoic biostratigraphy of the Siberian Platform. Report No.1: Ordovician and Silurian stratigraphy of the Siberian Platform and its paleontological basis (brachiopods)] Stratigrafiia ordovika i silura Sibirskoi platformy i ee paleontologicheskoe obosnovanie. (brakhiopody). Leningrad. Gos. nauch.-tekhn. izd-vo neft.i gorno-toplivnoi lit-ry, Leningr. otd-nie 1961. 289 p. 54 plates. (Leningrad. Vsesoiuznyi geologicheskii institut. Trudy, vol.56). (MIRA 15:11)

(Siberian Platform--Geology, Stratigraphic)
(Siberian Platform--Brachiopa, Fossil)

NIKIFOROVA, O.I.; OBUT, A.M.

Silurian and Devonian boundary in the U.S.S.R. Sov.geol. 4 no.2:86-91 F '61. (MIRA 14:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut i Leningradskiy gosudarstvennyy universitet.
(Paleontology, Stratigraphic)

MYAGKOVA, Ye.I.; NIKIFOROVA, O.I.; VYSOTSKIY, A.A.; IVANOVSKIY, A.B.; SOKOLOV, B.S., otv. red.; KOTLYAREVSKAYA, F.S., red.izd-va; GALUSHKO, Ya.A., red.izd-va; MATYUKHINA, L.I., tekhn. red.; YEGOROVA, N.F., tekhn. red.

[Stratigraphy of Ordovician and Silurian sediments in the Moyyero Valley; Siberian Platform] Stratigrafiia ordovikskikh i siluriiskikh otlozhenii doliny reki Moiero; Sibirskaia platforma. Moskva, Izd-vo AN SSSR, 1963. 63 p. (MIRA 16:12)

1. Vsesoyuznyy geologicheskiy nauchno-issledovatel'skiy institut (for Vysotskiy, Nikiforova). 2. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR (for Myagkova). 3. Sibirskiy nauchno-issledovatel'skiy institut geologii, geofiziki i mineral'nogo syr'ya (for Ivanovskiy).
(Moyyero Valley--Geology, Stratigraphic)

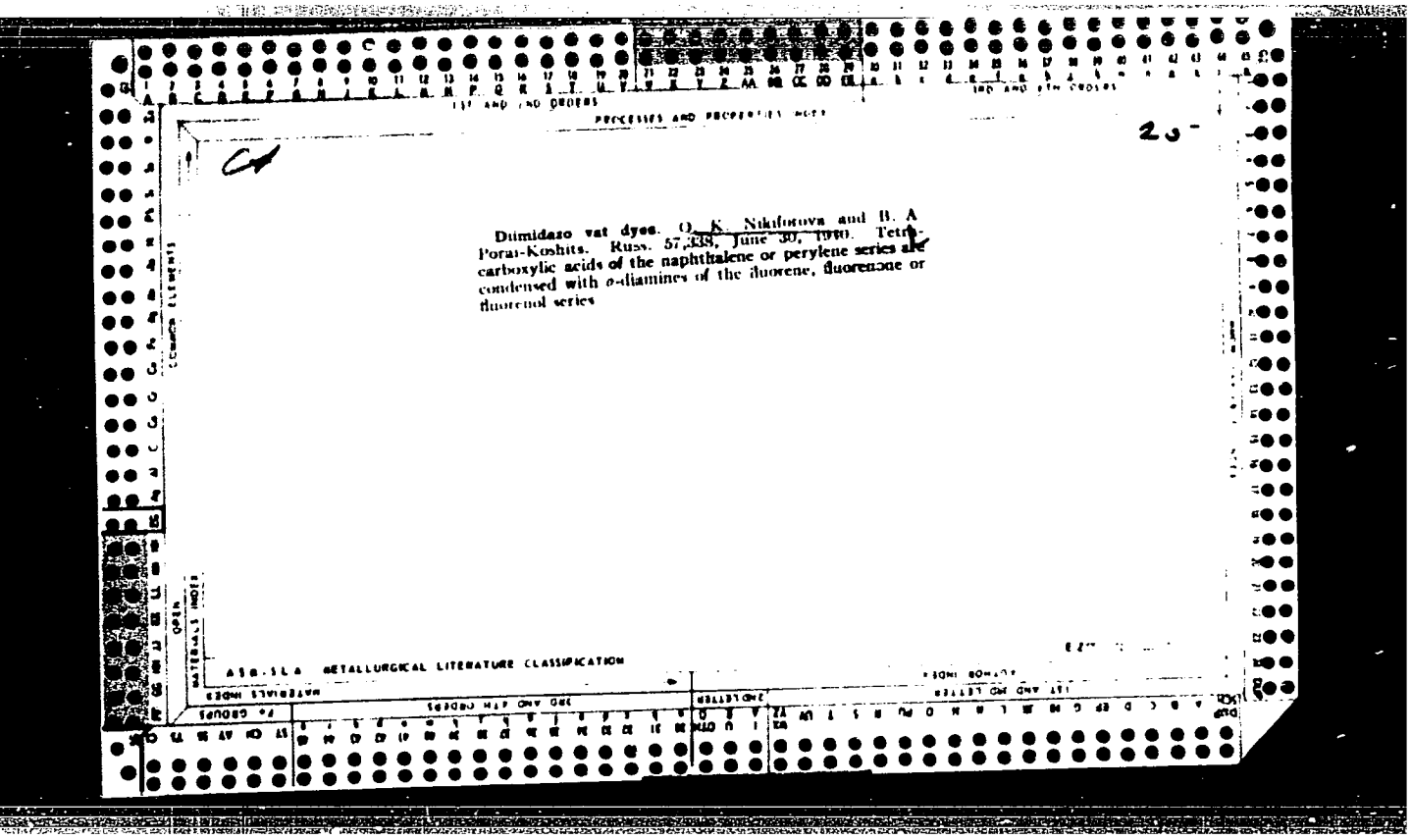
NIKIFOROVA, O.I.; OBUT, A.M.

New stage between the Silurian and Devonian. Geol.i geofiz. no.7:75-79 '63. (MIRA 16:10)

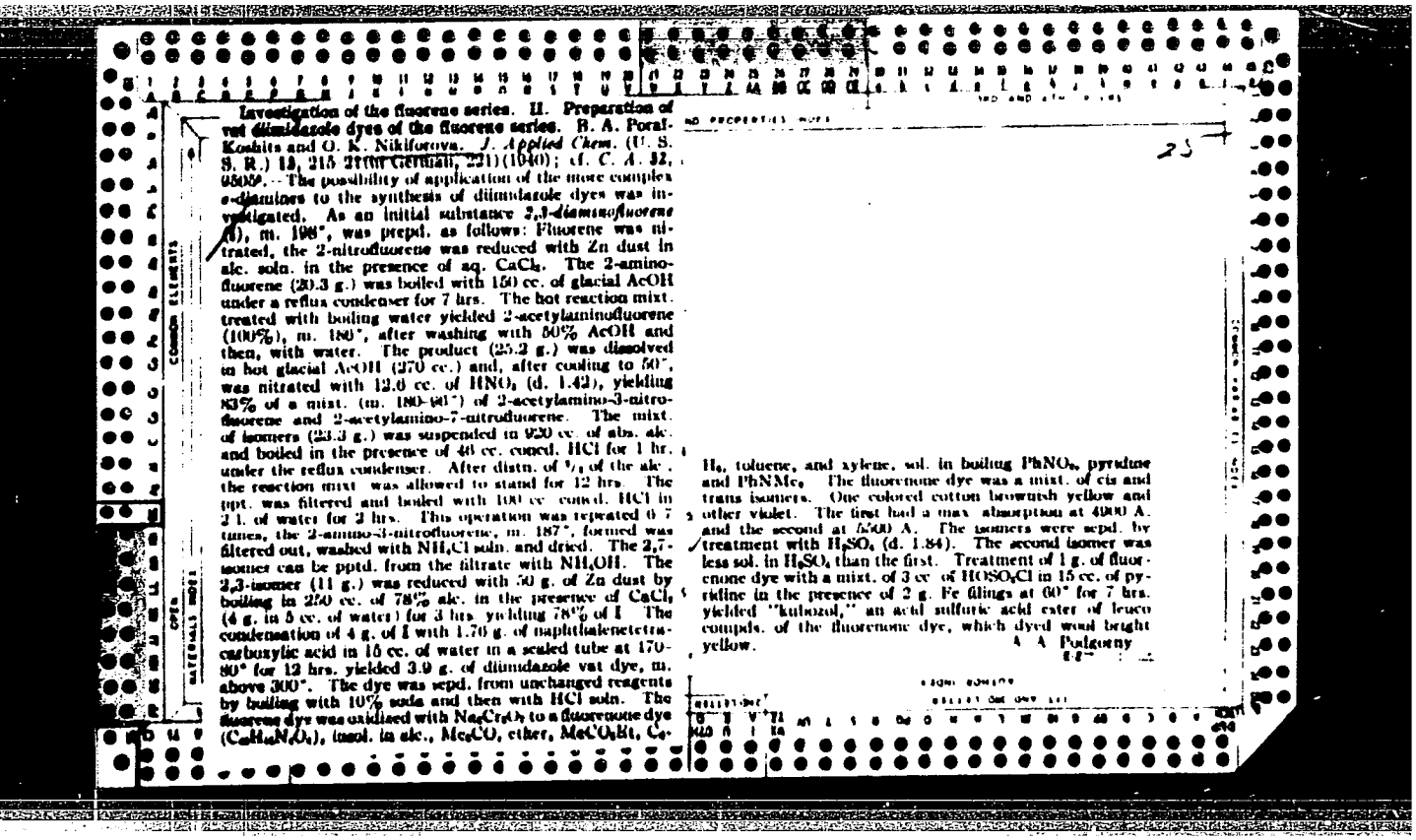
1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR, Novosibirsk.

NIKI[illegible]

[illegible] new Silurian Brachiopods in the Chatkal Range. Trudy VSEGEI (MIRA 3:7)
(Bl-[illegible] 1[illegible]4.



Dimidazo vat dyes. O. K. Nikiforova and B. A. Porai-Koshits. Russ. 57,338, June 30, 1940. Tetracarboxylic acids of the naphthalene or perylene series are condensed with *o*-diamines of the fluorene, fluorenone or fluorenol series



Investigation of the fluorene series. II. Preparation of vat diimidazole dyes of the fluorene series. B. A. Porai-Koshits and O. K. Nikiforova. *J. Applied Chem.* (U. S. S. R.) 13, 215-27(in German, 221)(1940); cf. *C. A.* 32, 9509.—The possibility of application of the more complex o-diamines to the synthesis of diimidazole dyes was investigated. As an initial substance *2,3-diaminofluorene* (I), m. 198°, was prepd. as follows: Fluorene was nitrated, the 2-nitrofluorene was reduced with Zn dust in alc. soln. in the presence of aq. $CaCl_2$. The 2-aminofluorene (20.3 g.) was boiled with 150 cc. of glacial AcOH under a reflux condenser for 7 hrs. The hot reaction mixt. treated with boiling water yielded 2-acetylaminofluorene (100%), m. 180°, after washing with 50% AcOH and then, with water. The product (25.2 g.) was dissolved in hot glacial AcOH (270 cc.) and, after cooling to 50°, was nitrated with 12.6 cc. of HNO_3 (d. 1.42), yielding 83% of a mixt. (m. 180-98°) of 2-acetylamino-3-nitrofluorene and 2-acetylamino-7-nitrofluorene. The mixt. of isomers (23.3 g.) was suspended in 920 cc. of abs. alc. and boiled in the presence of 40 cc. concd. HCl for 1 hr. under the reflux condenser. After distn. of ½ of the alc., the reaction mixt. was allowed to stand for 12 hrs. The ppt. was filtered and boiled with 100 cc. concd. HCl in 2 l. of water for 2 hrs. This operation was repeated 6-7 times, the 2-amino-3-nitrofluorene, m. 187°, formed was filtered out, washed with NH_4Cl soln. and dried. The 2,7-isomer can be ppted. from the filtrate with NH_4OH. The 2,3-isomer (11 g.) was reduced with 50 g. of Zn dust by boiling in 250 cc. of 78% alc. in the presence of $CaCl_2$ (4 g. in 5 cc. of water) for 3 hrs. yielding 78% of I. The condensation of 4 g. of I with 1.70 g. of naphthalenetetracarboxylic acid in 15 cc. of water in a sealed tube at 170-80° for 12 hrs. yielded 3.9 g. of diimidazole vat dye, m. above 300°. The dye was sepd. from unchanged reagents by boiling with 10% soda and then with HCl soln. The fluorene dye was oxidized with $Na_2Cr_2O_7$ to a fluorenone dye ($C_{26}H_{10}N_2O_4$), insol. in alc., Me_2CO, ether, $MeCO_2Et$, C_6H_6, toluene, and xylene, sol. in boiling $PhNO_2$, pyridine and $PhNMe_2$. The fluorenone dye was a mixt. of cis and trans isomers. One colored cotton brownish yellow and other violet. The first had a max. absorption at 4900 A. and the second at 5500 A. The isomers were sepd. by treatment with H_2SO_4 (d. 1.84). The second isomer was less sol. in H_2SO_4 than the first. Treatment of 1 g. of fluorenone dye with a mixt. of 3 cc. of $HOSO_2Cl$ in 15 cc. of pyridine in the presence of 2 g. Fe filings at 60° for 7 hrs. yielded "kulozol," an acid sulfuric acid ester of leuco compds. of the fluorenone dye, which dyed wool bright yellow.

A. A. Polgorny

Nikiforova, O. K.

USSR

Rearrangement of N-nitrosodiphenylamine and method of derivation of 4-nitrosodiphenylamine hydrochloride from diphenylamine. O. K. Nikiforova. *Trudy Khim.-Met. Inst., Akad. Nauk S.S.S.R., Zapadno-Sibirskii Filial* No. 7, 53-61(1953).—4-Nitrosodiphenylamine-HCl (I) may be obtained in 82.2-8.9% yield by rearrangement of Ph_2NNO (II) in the presence of dry HCl not only in abs. EtOH-abs. Et_2O, but also in 96% EtOH-com. grade Et_2O (1.5:1) and in EtOH-C_6H_6 (1:2) mixts. When concd. HCl is used, only 17-43% yield of I is obtain. When the reaction is carried out in C_6H_6 alone (28% yield), this yield may be markedly increased by adding small amts. (1/4 of the vol. of C_6H_6) of EtI (84.7%) and MeI (88%). EtOH (96%) (425 ml.) satd. with dry gaseous HCl is added to 100 g. II in 300 ml. Et_2O and dry HCl is slowly bubbled through until I crystals appear. After 30-40 min. standing at room temp. and 1 hr. on ice, the ppt'd. I is filtered off, washed several times with Et_2O, and dried at 50-60° (82% yield). I may be conveniently prepd. directly from Ph_2NH (III) without isolating II from the alc. soln. To 100 g. III in 960 ml. 96% EtOH cooled to 0° is added in one step 80 ml. concd. HCl and 55 g. $NaNO_2$ in 80 ml. H_2O. After 1.5 hrs. stirring, dry gaseous HCl is bubbled through at temp. below 55°, until yellow ppt. of II is completely dissolved. After cooling at room temp. and 1 hr. on ice, 350 ml. H_2O contg. HCl is added with stirring, and the ppt'd. I, filtered off and heated with 400 ml. C_6H_6, is isolated and dried (92.7% yield). Cf. M. Jenta, *Annalen* 243, 272(1888). Elisabeth Barabas

NIKIFOROVA, O. K.

Production and properties of 3-amino-10-(p-anilino-phenyl)phenazonium chloride, O. K. Nikiforova. *Trudy* [illegible] *S.S.S.R.* 1953, No. 7, 63-74; *Referat. Zhur., Khim.* 1954, No. 44649.—The purpose of this investigation was to study the properties of the violet dye which is formed in the dye vat when wool is dyed black with 4-nitrosodiphenylamine-HCl. It was assumed that the violet product is an intermediate in the formation of the black dye. By boiling 7 g. of wool with 20 g. of 4-nitrosodiphenylamine-HCl in 4 l. distd. H_2O for 1 hr. 10 min., followed by filtration and salting out of the dye with NaCl, there was obtained 1.95 g. of 3-amino-10-(p-anilinophenyl)phenazonium chloride (I), which was purified by reppta., with extn. of admixts. with ether, and recrysta. from BuOH. The product consisted of black-violet small crystals. From I by the action of 2 aq. soln. of soda followed by extn. with ether was sepd. 3-imino-10-(p-anilinophenyl)phenazine (II), m. 222°, $\lambda_{max.}$ 550 mμ. I and II dyed silk, wool, and tannin-treated cotton in a clear, violet color which did not darken under any circumstances. Thus, I is not an intermediate in the formation of the black dye. I also acted as a photographic desensitizer. Boiling 8 g. of II in 55 ml. of $(MeCO)_2O$ for 4 hrs. gave the diacetyl deriv. m. 318°, $\lambda_{max.}$ 620 mμ. The latter dyed silk, wool, and tannin-treated cotton brown; it also had weak sensitizing effect.

M. Hosch

NIKIFOROVA, O.K.

USSR/Chemistry - Organic synthesis

Card 1/1 Pub. 151 - 32/37

Authors : Nikiforova, O. K.

Title : Derivation of 4,(5)-imidoazolylmethyl esters of 4-amino- and 4-butylamino-benzoic acids

Periodical : Zhur. ob. khim. 24/10, 1866-1870, Oct 1954

Abstract : The synthesis of hitherto unknown 4,(5)-imidoazolylmethyl 4-aminobenzoate and 4,(5)-imidoazolylmethyl 4-butylaminobenzoate, is described. The synthesis of the above mentioned compounds was realized through condensation of 4,(5)-chloromethylimidazole with silver salt of 4-aminobenzoic acid, condensation of 4,(5)-hydroxymethylimidazole with 4-butylaminobenzoyl chloride, butylation of the 4,(5)-imidoazolylmethyl 4-aminobenzoate with butyric aldehyde and reduction of the formed azomethin. The local anesthetic properties of these esters were established through pharmacological tests. Seven references: 3-USSR; 2-USA and 2-German (1905-1949).

Institution : Acad. of Sc. USSR, West Siberian Branch, Laboratory of Organic Synthesis

Submitted : May 14, 1954

NIKIFOROVA, O. K.

N,N'-Dibenzylethylenediamine. O. K. Nikiforova. U.S.S.R. 104,111, Oct. 25, 1956. ($PhCH_2NCH_2$)$_2$ in a medium of abs. MeOH is catalytically reduced at 78–80° with Raney Ni and H under 135 atm. pressure. From the alc. soln. ($PhCH_2NHCH_2$)$_2$ is removed in the usual way.
M. Hoseh

NIKIFOROVA, O. K.

The preparation of N,N'-dibenzylethylenediamine. O. K. Nikiforova. *Med. Prom.* 10, No. 1, 13–16 (1956).—$(CH_2NHCH_2Ph)_2$ (I) is prepd. by reducing $(CH_2N:CHPh)_2$ (II). $(CH_2NH_2.HCl)_2$ (300 g.) and 900 cc. H_2O in a flask equipped with a condenser, thermometer, and stirrer, treated with 180 g. NaOH with const. stirring and cooling, then at 19–20° with 475 g., BzH in 1000 cc. ether, the mixt. stirred intensively during 2 hrs. at 29–30°, the ether layer removed, ⅓ of the Et_2O distd., and the solid cryst. residue carefully mixed with 100–200 cc. aviation gasoline, filtered off, and vacuum-dried at 30–5° yields 430–60 g. (81–6%) II, m. 51–2°. II (100 g.) in 250 cc. abs. alc. with 4 g. of a Ni catalyst in a dry autoclave is hydrogenated at 78–80° and 135–145 atm. pressure, and when the pressure drops to 110–15 atm. more H is introduced until the original level is reached; after 4–4.5 hrs. no more H is absorbed. The alc. soln. filtered from the catalyst and allowed to stand 10–15 hrs. deposits crystals of 1,3-dibenzyl-2-phenyltetrahydroimidazole (III), which is filtered off, the filtrate evapd., and the oily residue distd. at 203°/6 mm., yielding 49 g. II; another 6 g. is obtained from III, giving a total yield of 55 g. (55%). I is a mobile, yellowish, water-insol. oil, sol. in acetone, alc., ether, and C_6H_6. I carbonate, obtained by passing CO_2 through a soln. of 3 g. I in 12 cc. abs. ether, washing the pptd. salt twice with ether, and drying it in an evacuated desiccator, is sol. with difficulty in acetone, alc., C_6H_6, and xylene. A. S. Mirkin

A-U. Sci Rev. Chem. Pharm. Ind

Am. Chem. Society Abstracts

ONISHCHUK, A.Ye.; NIKIFOROVA, O.K.

Synthesis of histamine from invert sugar. Zhur.prikl.khim. 29 no.5:789-793 My '56. (MLRA 9:8)
(Histamine) (Sugar)

AUTHORS: Nikiforova, G. K., Suvorov, N. N. SOV/79-28-7-55/64

TITLE: I.The Synthesis of 21-Bromopregnanol-17α-Trione-3,11,20 From Pregnanol-3β-Dione-11,20 (I. Preparative Way to 21-Brompregnanol-17α-triona-3,11,20 in Pregnanol-3β-dione-11,20)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 7, pp 1864 - 1867 (USSR)

ABSTRACT: Different from Gallagher's method (Gallahher)(Refs 1-5) of the bromination of pregnandiol-3α,17α-dione-11,20, and further conversion into the 21-bromine derivative it was converted by subsequent or simultaneous bromination and oxidation into the 21-bromopregnanol-17α-trione-3,11,20; the substitution of bromine in the position 21 by the acetoxy group yielded the acetate of dihydrocortisone. In patent literature it is mentioned in one place that the selective reduction of pregnantrione does not cause pregnanol-3α-dione-11,20 to form, but pregnanol-3β-dione-11,20 (Ref 6). In another place of patent literature the general scheme for the conversion of the acetate of pregnanol-3β-dione-11,20 into the pregnanol-3α,17α-dione-11,20 is given

Card 1/3

I.The Synthesis of 21-Bro opre anol-[illegible]-Trione- SOV/[illegible]-28-7-36/64
3,11,20 From Pre nanol-3β-Dione-11,20

without the co[illegible] being mentioned. The possibility of the construction of the dioxyacetone side chain from pre nanol-7β-dione-11,20 is of great interest as it substitutes the expensive $NaBH_4$ by nickel and also considerably increases the yields (90% with Ni as compared to 70-72% with $NaBH_4$), which fact is very important for the production of such an expensive preparation as cortisone. The synthesis of 21-bromopre nanol-[illegible]a-trione-3,11,20(VII) from pre nantrione-3,11,20 is shown by the given scheme. Different from patent data the enolization of (II) to acetic anhydride and toluene was carried out with sulfosalicylic acid. The formed compound (III) was converted into (IV) by oxidation with monoperphthalic acid. The aqueous methanol solution of sodium was used for the saponification of the oxide (IV) and for the production of (V). The compound (VI) was obtained from the bromination of (V) with dioxane dibromide in methanol; this product was again oxidized easily into compound (VII) by means of N-bromosuccinimide. [illegible] references, 4 of which are Soviet.

Card 2/3

I. The Synthesis of 21-Bromopregnanol-17α-Trione-3,11,20 From Pregnanol-3β-Dione-11,20 SOV/79-28-7-59/64

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

SUBMITTED: May 25, 1957

1. Bromopregnanol--Synthesis 2. Substitution reactions
3. Cyclic compounds--Chemical reactions

Card 3/3

5 (3)
AUTHORS: Nikiforova, O. K., Suvorov, N. N. SOV/79-29-7-71/87

TITLE: Steroids (Steroidy). IV. Synthesis of 11-Dehydro Corticosterone From 11-Ketoprogesterone (IV. Sintez 11-degidrokortikosterona iz 11-ketoprogesterona)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 7, pp 2428-2431 (USSR)

ABSTRACT: In the report by I. A. Hogg (Ref 2) and co-workers as well as in American patents (Refs 3, 4) it is indicated in brief that it may be possible to obtain the 11-dehydro corticosterone acetate by condensation of 11-ketoprogesterone with diethyl oxalate. The resultant 21-ethoxy derivative was subjected to further transformations and finally yielded the wanted product. Also similar syntheses according to H. Ruschig (Ref 5) and P. Ruggieri (Ref 6) have to be mentioned. In the report by Hogg no experimental data are given. Besides, the authors had to carry out the synthesis of 11-dehydro corticosterone for pharmacological purposes and further investigations. They synthesized this compound from 11-ketoprogesterone according to the given scheme. The 11-ketoprogesterone (I) was synthesized by oxidation of the acetic acid solution of 11α-oxy-progesterone (Ref 7) with the chromium mixture. The condensation of compound (I) with excess

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diethyl oxalate was carried out in benzene at room temperature with freshly prepared sodium methylate. The aqueous solution of the enolate (II) was transformed into the free ketoester (III) by treating it with dilute hydrochloric acid, for purification reasons. Compound (III) was dissolved in methanol, treated with a calculated quantity of alcoholic sodium hydroxide and re-transformed to give (II). The iodination of (II) with iodine at -20° yields (IV) which was subjected unseparatedly to saponification, under formation of (V), and to a keto cleavage with sodium methylate in methanol at 0°. The substitution of the acetoxy group for the iodine in (VI) by means of potassium acetate in acetone yielded (VII). The technical (VII) was purified by means of adsorption and saponified according to T. Reichstein (Ref 8). The end product is the free hormone (VIII). There are 9 references, 4 of which are Soviet.

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

Steroids. IV. Synthesis of 11-Dehydro Corticosterone From 11-Ketoprogesterone SOV/79-29-7-71/87

SUBMITTED: June 2, 1958

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SUVOROV, N.N.; NIKIFOROVA, O.K.; SOKOLOVA, L.V.; KOVYLKINA, N.F.; LEYBEL'MAN, F.Ya.

New synthesis of Reichstein's substance "S." Med.prom. SSSR 14 no.12: 9-12 D '60. (MIRA 13:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikizde.
(CORTICOSTERONE)

NIKIFOROVA, P.G.

Views of S.A.Sukhanov on the clinical aspects of involutional psychoses. Zhur.nevr.i psikh. 55 no.6:465-467 - (MLRA 8:8)

1. Psikhiatricheskaya klinika Odesskogo meditsinskogo instituta imeni N.I. Pirogova.

(PSYCHOSES, INVOLUTIONAL.)

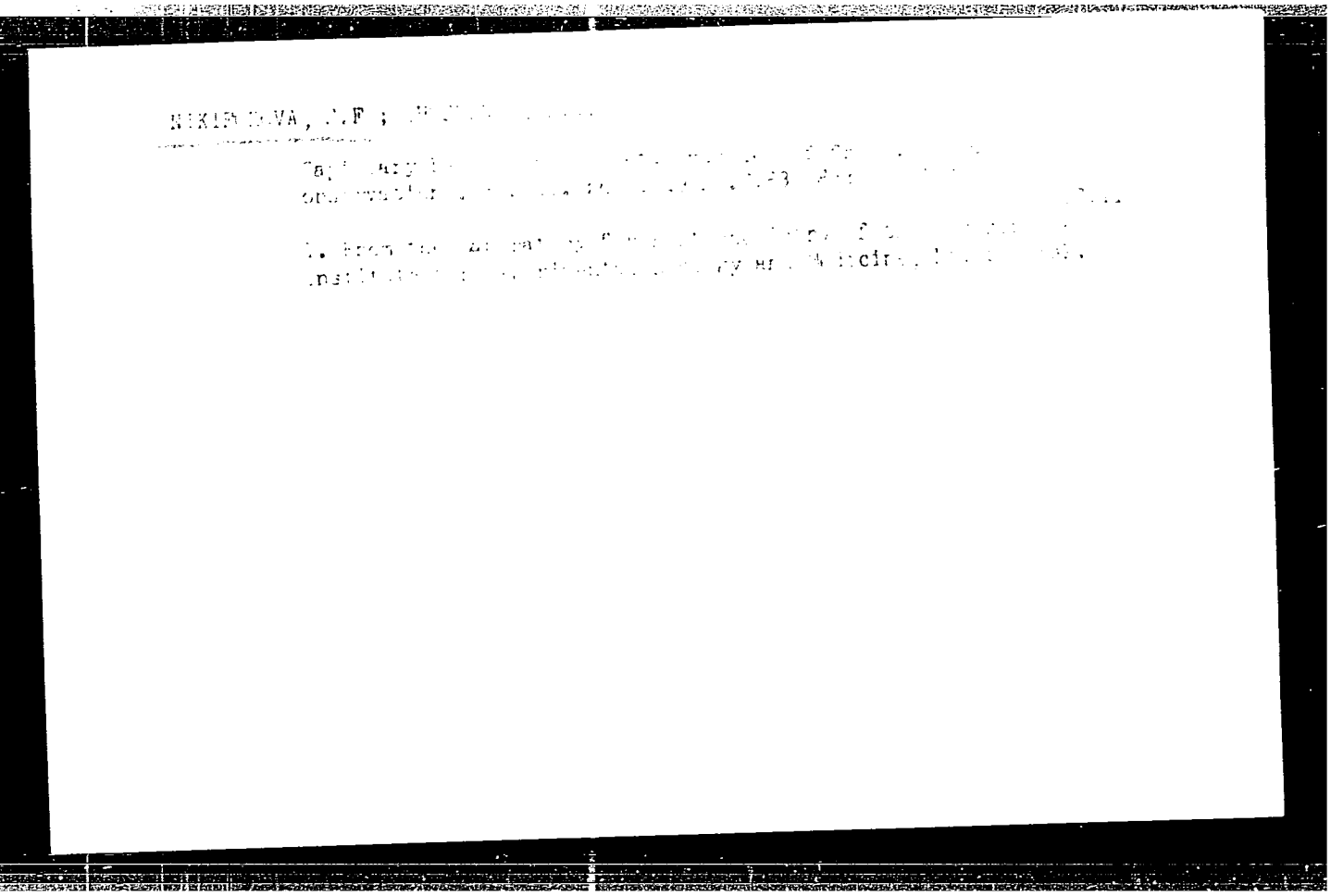
NIKIFOROVA, P.G.

Systematized form of late paraphrenia. Zhur. nerv. i psikh. 60 no. 6:724-730 '60. (MIRA 13:12)

1. Psikhiatricheskaya klinika (zav. - prof. L.A. Mirel'zon) Odesskogo meditsinskogo instituta imeni N.I. Pirogova.
(PARANOIA)

PYATYSHKIN, N.M.; NIKIFOROVA, R.A.

Improving gas burning in heating boilers and in small district heating installations. Gaz. prom. 4 no.2:24-27 F '59. (MIRA 12:3)
(Kiev--Gas--Heating and cooking)



NIKIFOR VA, S.F.; SHOSHENKO, K.A.

Some principles of the structure and function of the capillary bed. Biul. eksp. biol. i med. 59 no.2:45-49 F '65.

(MIRA 18:?

1. Kabinet mikrofiziologii (zav. - K.A. Shoshenko) otdela eksperimental'noy biologii i patologii (zav. N.N. Fuks) Instituta tsitologii i genetiki (dir. N.K. Belyayev) Sibirskogo otdeleniya AN SSSR, Novosibirsk.

NIKIFOROVA, S.F.; SHOSHENKO, K.A.

Structure and development of the capillary bed in the skin of the frog. Arkh. anat., gist. i embr. 47 no.9:92-98 S '64.
(MIRA 18:11)

1. Kabinet mikrofiziologii (zav. - kand.med.nauk K.A.Shoshenko) Instituta tsitologii i genetiki Sibirskogo otdeleniya AN SSSR, Novosibirsk. Submitted Sept. 21, 1963.

BURGSDORF, M.V., prof. NIKIFOROVA, T.A. (Chelyabinsk)

State of arterial pressure in mitral stenosis. Klin.med. 35[i.e.34] no.1 Supplement:10 Ja '57. (MIRA 11:2)

1. Iz kafedry fakul'tetskoy terapii (zav. - prof. M.V.Burgsdorf) Chlyabinskogo meditsinskogo instituta.
(HEART--VALVES--DISEASES) (BLOOD PRESSURE)

ACC NR: AP6033465 SOURCE CODE: UR/0413/66/000/018/0042/0043

INVENTOR: Gatsenko, L. G.; Sigal, B. M.; Nikiforova, T. A.; Shipova, S. N.; Munyakova, Z. N.; Petrova, M. F.

ORG: none

TITLE: Preparation of 1-methyl-4-dichlorocarbamylpiperazine salts. Class 12, No. 185926 [announced by "Akrikhin" Chemical and Pharmaceutical Plant (Khimiko-farmatsevticheskiy zavod "Akrikhin")]

SOURCE: Izobret prom obraz tov zn, no. 18, 1966, 42-43

TOPIC TAGS: ~~methyldichlorocarbamylpiperazine salt~~ phosphoric acid, alcohol, organic salt

ABSTRACT: To simplify the preparation of 1-methyl-4-diethylcarbamylpiperazine salts by the reaction of ditrazine with acids (phosphoric or citric) and to increase the yield of the salts, the reaction is carried out in isopropyl alcohol. [W.A. 50]

SUB CODE: 07/ SUBM DATE: 22Jul65

Card 1/1 UDC: 615.45:547.861.3

NIKIFOROVA, T.B.; SOLDATKINA, L.V.

Cardiac aneurysm in rheumatism. Trudy MONIKI no.5:251-257 '62.
(MIRA 16:4)

(ANEURYSMS) (RHEUMATIC HEART DISEASE)

Nikiforova, I.F.

AUTHOR: [illegible]

TITLE: A Method for the Determination of the Tendency for Pore Formation in Rubber Mixtures During Vulcanization

PERIODICAL: Kauchuk i Rezina, 1959, No. 12, pp. 25-28

TEXT: The authors stress the importance of controlling the rubber mixtures during vulcanization to avoid pore-forming and the formation of pores and to ensure the production of monolithic rubber articles. The presence of gases and steam due to moisture and the worse conditions of the rubber mixture can be harmful in this connection. Other causes of pore formation are listed. The gasometric method for moisture determination is briefly mentioned (Ref. 1). The duration of this method (12 minutes for vacuum determination) renders it unpractical for industrial purposes. The degree of porosity is determined by the specific gravity method. Ref. 2. However, the specific gravity changes during vulcanization, particularly if pore formations occur. The ratio of the specific gravities of the vulcanizate

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and the rubber mixture is given in Formula 1. The relation between the moisture of the rubber mixture, the K value, i.e., the above-mentioned ratio, and the porosity of the vulcanizate was studied. The experimental procedure is outlined. The value of K was computed according to atmospheric data. Fig. 1 shows the instrument used for the determination of the specific gravity. The formula for the determination of the specific gravity before heating is given in Formula 2 and for determination after heating in Formula 3. The values of K obtained are listed in Table 4. The authors used the gasometric method for determining the moisture in the rubber mixture. Fig. 2 shows the relationship between the moisture in the rubber mixture, the moisture content of the initial rubber mixture according to the specification No. 151. The relationship which is obtained is explained by the fact that during the heating and vulcanization under relatively hard conditions (temperature 170-180°C) part of the moisture contained in the rubber mixture volatilizes. A special method was applied to the determination of the moisture content and the dependence of the porosity on the K value and the moisture content in the case of press-molded articles at the "Krasnyy Treugol'nik" plant. It was applied in production to the control of rubber

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mixtures used in the manufacture of these overshoes, which, in turn, were vulcanized at atmospheric pressure and also in the manufacture of heels for shaped boots. As many as 89 rubber mixtures were tested in the plant mill. The results of the K value obtained are listed in Table 4. It can be seen from the table that in order to obtain monolithic overshoes vulcanized at atmospheric pressure the rubber mixtures must be characterized by a value of K $\geq$0.985. The processing of rubber by the "stirring" method requires increase in the K value by 15 to 17%, both in industry and under laboratory conditions. Other tests were carried out for the K determination of rubber mixtures used in the manufacture of boot heels. The results are given in Table 6. A linear relationship exists between K and the moisture content of the boot heels manufactured by molding according to modern standard industrial procedures. The authors conclude that they were able to develop a qualitative method for the determination of the tendency of rubber mixtures for pore formation during vulcanization, and that this tendency is characterized by the value of K, which, in turn, depends on the moisture of the rubber mixture. The method recommended was tested in industry n GKB-60 (SKB-60) and GKC 30 (SKS-30) rubber-based materials and was found

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to be applicable to the control of rubber mixtures. The admissible minimum value of K can be made part of the technological regulations, since it is one of the indices characterizing the quality of rubber mixtures. The numerical value of this figure depends on the composition, processing conditions and vulcanization of the rubber mixtures and is selective each time according to the composition of the rubber mixture used and applicable to the specific production conditions. There are 6 tables, 2 figures and 6 references: 5 Soviet and 1 English.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy i servod "Krasnyy treugol'nik (Scientific-Research Institute of Rubber and Latex Articles and the "Krasnyy Treugol'nik" Plant)

Card 4/4

VOL'KENSHTEYN, V.S.; GAL'BRAYKH, I.Ye.; GEL'MAN, A.A.; MEDVEDEV, N.N.; NIKIFOROVA, T.F.; RAVDEL', A.A.

Development and application of the method of express-control of moisture in crude rubber mixtures under production conditions. Kauch.i rez. 21 no.5:55-57 My '62. (MIRA 15:5)

1. Zavod "Krasnyy treugol'nik" i Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Rubber—Moisture)

PESCHANSKAYA, R.Ya.; GOL'DREYER, M.I.; FORER, Ye.R.; SHCHERBAKOVA, L.I.; GAL'BRAYKH, L.Ye.; NIKIFOROVA, T.F.; FILIPOVA, A.V.

New softeners for the manufacture of rubber footwear. Kauch. i rez. 23 no.5:20-24 My '64. (MIRA 17:9)

1. Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy i zavod "Krasnyy treugol'nik".

NIKIFOROVA, T.I. [translator]; ZOLOTAREV, G.S., red.; MAKSIMOV, S.N., red.; KARASEV, A.D., red.; POTAPENKOVA, Ye.S., tekhn. red.; REZOUKHOVA, A.G., tekhn. red.

[Problems of engineering geology; collected studies. Translated from the English and French] Problemy inzhenernoi geologii; sbornik statei. Pod red.i s pred. G.S.Zolotareva i S.N.Maksimova. Moskva, Izd-vo inostr. lit-ry. No. 2. 1960. 382 p. (MIRA 14:5)

(Engineering geology)

NIKIFOROVA, T.K. (Leningrad 215, ul. Z. Portnovoy, d. 26, kv.1)

Clinical aspects and treatment of dislocations of the hip joint in congenital multiple arthrogryposis. Ortop., travm. i protez. 27 no. 1:9-14 Ja '66 (MIRA 19:1)

1. Iz kursa ortopedii (rukovoditel' - dotsent V.A. Shtumm) Leningradskogo pediatricheskogo meditsinskogo instituta i ortopedicheskogo otdeleniya Detskoy b-l'nitsy Moskovskogo rayona Leningrada (glavnyy vrach -V.M. Koroleva). Submitted October 31, 1964.

NIKIFOROVA, Tamara Romanovna; GRIGOR'YAN, A.T., doktor fiz.-mat. nauk, otv. red.

Osip Ivanovich Somov. Moskva, Izd-vo "Nauka," [illegible]
(MIRA 18:3)

LOSEV, V.I.; NIKIFOROVA, T.S.

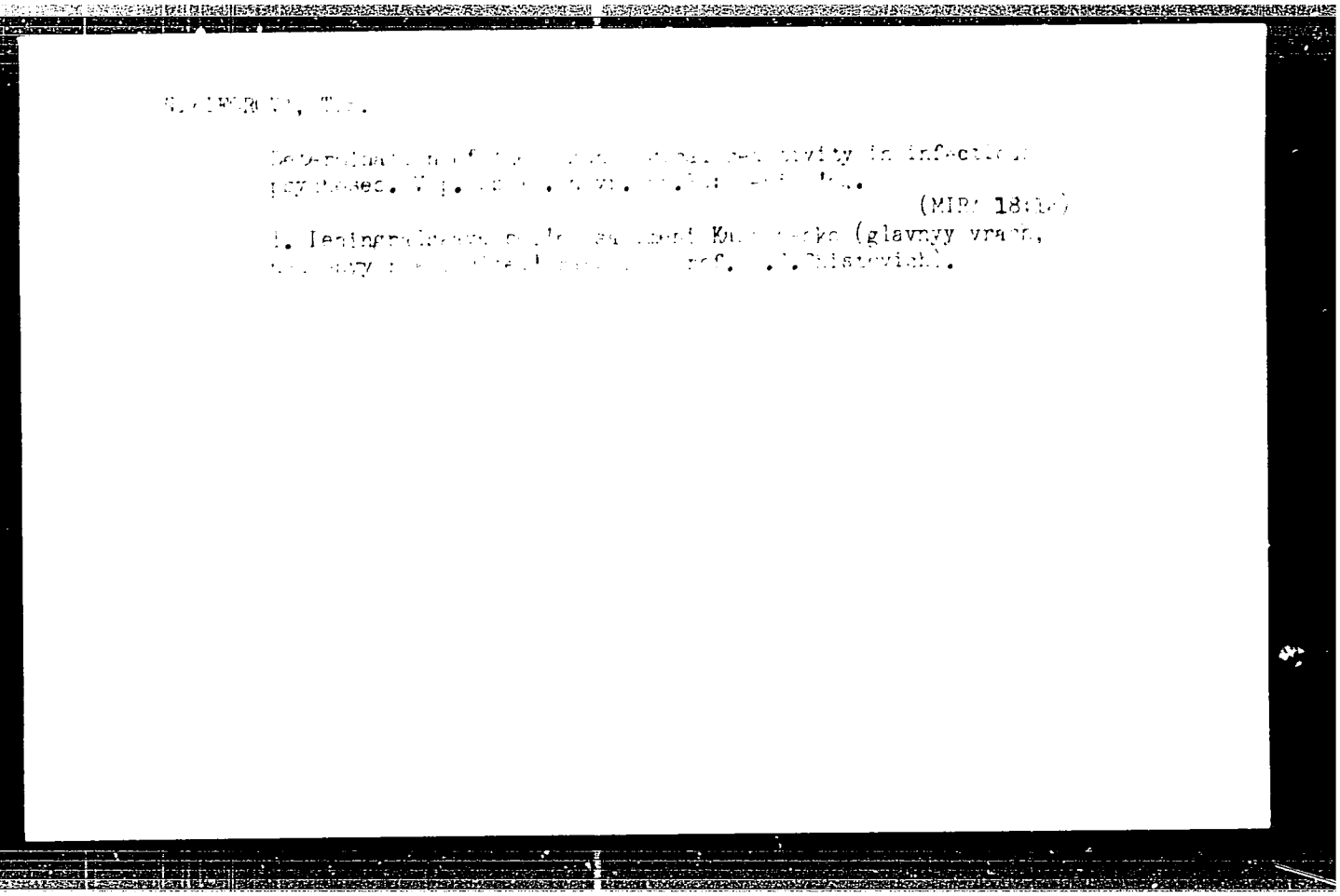
Germanium in coal. Zhur.prikl.khim. 33 no.3:730-732 Mr '60. (MIRA 13:6)
(Germanium)

MIL'CHENKO, V.A.; NIKIFOROVA, T.S.; SUKHOSTAT, G.G.

Psychoses in bronchial asthma. Vop.psikh.i nevr. no.7:189-199 '61. (MIRA 15:8)

1. Iz psikhiatricheskoy bol'nitsy imeni P.P.Kashchenko (glavnyy vrach kand.med.nauk V.I.Bondarev, nauchnyy rukovoditel' prof. Ye.S. Averbukh).

(ASTHMA) (PSYCHOSES)



MAKAROV, S.P.; YAKUBOVICH, A.Ya.; GINSBURG, V.A.; FILATOV, A.S.; ENGLIN, M.A.; PRIVEZENTSEVA, N.F.; PRIVEZENTSEVA, N.F.; NIKIFOROVA, T.Ya.

Reactions of polyfuorinated nitrosoalkanes with amines. Dokl. AN SSSR 141 no.2:357-360 N '61. (MIRA 14:11)

1. Predstavleno akademikami I.L.Knunyantsem i M.I.Kabachnikom.
(Nitroso compounds) (Amines)

ENGLIN, M.A.; YAKUBOVICH, A.Ya.; MAKAROV, S.P.; NIKIFOROVA, T.Ya.; LYSENKO, V.V.; DUBOV, S.S.

Heterogeneous fluorination with elementary fluorine. Part 7: Fluorination of hydrochlorides of aliphatic amines. Zhur. ob. khim. 35 no.7:1167-1171 Jl '65. (MIRA 18:8)

NIKIFOROVA, V.A.

AUTHORS: Vartanov, V. N., Ivanov, M. G., SOV/48-23-4-18/28
Kamelkin, V. V., Bogdanovskiy, G. A., Korobyev, Yu. V.,
Klyukin, V. Ya., Nikiforova, V. A., Chernyshov, Yu. V.

TITLE: The Series Electron Microscope EM-5 (Seriynyy elektronnyy mikroskop EM-5)

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 4, pp 485 - 489 (USSR)

ABSTRACT: The electron microscope EM-5 is a high-resolution instrument (Fig 1). The principal elements are arranged vertically and the image screen exhibits high resolution. There is a camera and various adjusting facilities also good working conditions. In the object, the part hit by the electron beam has a diameter of 7-5 μm. The object is situated on an object slide, which is movable from outside. The object lens and its stigmator consisting of eight coils are accurately described, as well as the intermediate and projecting lens. The diffraction mount allows electronography with penetrating and reflected beam. The camera works with plate dimensions of 4,5×6 cm and 1,2×3 cm. The instrument features a special vacuum system. Acceleration takes place by the voltage steps 40,50, and 60 kv. The current source is stabilized, its

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fluctuation amounting to 0,001%. The electrical supplies are discussed. The electron microscope EM-5 allows a bright and dark field illumination, stereoscopic investigations, microdiffraction images, dark field investigations of the diffraction reflexes, etc. On focusing, the image screen is observed through a binocular microscope with a 9fold magnification. The resolving power amounts to 20 Å. There are 3 figures and 3 Soviet references.

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NIKIFOROVA, V.D.

Geological structure and oil-bearing prospects of the middle part of the Lena-Aldan Depression. Avtoref. nauch. trud. VNIGRI no.17: 117-120 '56. (MIRA 11:6)
(Lena Valley--Petroleum geology)

NIKIFOROVA, V.D.; GAVRILOV, B.P.

Permian and Triassic sediments in the western Verkhoyansk Range. Trudy VNIGRI no. 130:125-157 '59. (MIRA 14:4)
(Verkhoyansk Range--Geology, Stratigraphic)

S/109/61/006/008/011/018
D207/D304

24.3300

AUTHORS: Vertsner, V.N., Nikiforova, V.G., Bogdanovskiy, G.A., Kozelkin, V.V., Shchetnev, Yu.F.

TITLE: Optical-electron-microscope ЭМ-6 (EM-6)

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 8, 1961, 1365 - 1369

TEXT: This paper was presented at the 3rd All Union Conference on electron microscopy, Leningrad, October 1960. This is a description of an electron microscope as based on the proposal of V.N. Vertsner. It is a simple instrument, the resolution of which is half-way between that of an optical and an electron microscope, and which has been called the optical (light)-electron microscope. The production type is designated ЭМ-6 (EM-6). It incorporates an electromagnetic objective, which produces a magnified electron picture of the sample on a high-resolution monocrystalline screen, the picture being subsequently observed by an optical microscope

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S/109/61/006/008/011/018
D207/D304

Optical-electron-microscope ...

of small magnification and photographed by a camera, type "Zenit C" (Zenit S). The source of electrons is the electron gun 1 (Fig. 2). The anode diaphragm is 1 mm in diameter and the cathode wire may be centered together with the modulating electrode, with respect to the anode. The focussing diaphragm 2 is directly behind the anode. The illumination system allows a narrow beam of electrons to reach the sample (about 10⁻⁶ μA) without additional lenses. The samples are introduced through the lock 3. The sample in a cylindrical holder is placed in the gap between the magnets, the holder being fixed at each end with rubber washers. The aperture diaphragm 4 is introduced into the gap behind the sample. The electron beam after passing through the sample reaches a second lens 5, whose magnification can be varied in three steps. The final electron image is formed at a monocrystalline screen 6, the side on which the beam impinges is covered by a thin layer of aluminum to prevent the charge built up. The screen is only 4 mm thick because of the properties of fluorite. The optical microscope 7 is fixed to the instrument by a hinge to facilitate access to the screen.

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Optical-electron-microscope .. S [illegible] D [illegible]

For photographs the best film is fluorographic film P[illegible] (RF-3) but other films having sensitivity of 180 [illegible] units of GOST (GOST) e.g. type A-2, may be used. The exposure times vary from 2 to 25 sec, depending on the sample density and overall magnification, which at an optical magnification of 40 can be 10,000, 5,000 or 2,000. The adjustment of the instrument consists of directing the electrons along the optical axis of the objective by adjusting the tilt of the gun and the axial adjustment of the two diaphragms. The vacuum system consists of a distributor, a small rotary pump VH-494 (VN-494) and a diffusion pump HBO (NVO-40) with air cooling. The silicone oil and the diffusion pump is type BKZh 94 (VKZh-94) and does not oxidize in air when heated. The power supply is from 220 V mains through a ferroresonant voltage stabilizer. HF, EHT supply is used. The HF oscillator utilizes a GY 50 (GU-50) tube, working at 60 Kc/s at an amplitude of 8.4 kV. This voltage is applied to a voltage multiplier where it reaches 35 kV. The optical electron microscope type EM-6 which is now being produced has a resolution of 150 Å for photography and 80-100 Å for visual obser-

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S/109/61/006/005/011/018
D207/D304

Optical-electron-microscope ...

vations. With very accurately manufactured magnet tips the resolution can be increased to 60 A. It is stated in conclusion that the simple construction and easy use of the instrument will make it widely adopted, to obtain magnifications between those of the optical and of the pure electron microscope. There are 6 figures and 3 references: 2 Soviet bloc and 1 non-Soviet bloc.

SUBMITTED: February 7, 1961

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VERTSNER, V.N.; IVANOV, M.G.; VORONA, Yu.M.; NIKIFOROVA, V.G.; VOROB'YEV, Yu.V.; KLYUKIN, V.Ye.

EM-7 electron microscope. Izv. AN SSSR. Ser. fiz. 27 no.9:1193-1195 S '63. (MIRA 16:9)

(Electron microscope)

NIKIFOROVA, V.I.; IL'INA, L.I.; KONSTANTINOV, A.P., kand.istor.nauk, nauchnyy red.; YEGOROVA, K.I., red.; POL'SKAYA, R.G., tekhn.red.

[Live and work the communist way; collected documents and materials on the brigades of communist labor in the industrial enterprises of Leningrad] Zhit' i rabotat' po-kommunisticheski; sbornik dokumentov i materialov o brigadakh kommunisticheskogo truda na predpriiatiiakh Leningrada. Leningrad, Lenizdat, 1960. 309 p. (MIRA 14:4)

1. Leningrad. Institut istorii partii.
(Leningrad--Efficiency, Industrial)

NIKIFOROVA, V.L.

Rate of drug resistance and its effect on the course of osteoarticular tuberculosis. Probl. tub. 42 no.[illegible] [illegible]. (MIRA 18:1)

1. Kazakhskiy nauchno-issledovatel'skiy institut tuberkuleza (direktor - A.A.Terlikbayev), Alma-Ata.

NIKIFOROVA, V.M., kand.tekhn.nauk

Impact of tank cars when rolling stock is set in motion in hump yards. Shor.LIIZHT no.160:66-81 '58. (MIRA 12:5)
(Tank cars) (Railroads--Hump yards)

YABLONSKIY, Aleksandr Aleksandrovich; NIKIFOROVA, Valentina Mikhaylovna; AYZENBERG, T.B., nauchnyy red.; OVSYANNIKOVA, Z.G., red.; GOROKHOVA, S.S., tekhn. red.

[Course in theoretical mechanics]Kurs teoreticheskoi mekhaniki. Moskva, Vysshaia shkola. Pt.1.[Statics, kinematics]Statika, kinematika. 1962. 430 p. (MIRA 16:2)
(Mechanics, Analytic)

NIKIFOROVA, V. M. and VEDENKIN, V. G.

"Corrosion of Metals Under Stress and Methods of Protection," Mashgiz, Moscow, 1950.

NIKIFOROVA, V. M., Engineer

"Investigations in the Field of Boiler Fragility." Sub 26 Feb 51, Central Sci Res Inst of Technology and Machine Building (TsNIITMASh)

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum No. 480, 9 May 55

NIKIFOROVA, V.M.

USSR

Causes of boiler failure. V. M. Nikiforova and S. G. Vetenkin. *Issledovanie Korrozii Metallov pod Napryazheniem, Moscow (Mashgiz) 1953, 21-46; Referat. Zhur., Khim., 1955, No. 23073.*—A no. of marine boilers damaged by corrosion and cracking was studied. In all cases but one the compn. and mech. properties of the steel were in accordance with the requirements. In the one case the S content was too high (0.09%). In another case decompn. of perlite and formation of cementite indicated overheating of the metal caused by a thick layer of scale. The cracks were intercryst. indicating alk. brittleness as well as intracryst. analogous to cracks formed by corrosion fatigue. Corrosion damage was both on the water side and fire side of the boiler. To prevent corrosion and cracking it is suggested to use a plate of greater corrosion resistance and improve the construction of the boiler to reduce straining and stresses. It is further recommended to deaerate the feed water and add to the boiler water corrosion and cracking retardants as well as to prevent scale formation.

M. Hosch

RYABCHENKOV, A.V., doktor khimicheskikh nauk; NIKIFOROVA, V.M., kandidat tekhnicheskikh nauk.

Testing machines for and methods of testing the long-term corrosion resistance of steel. [Trudy] TSNIITMASH no.77:41-49 '55.(MLRA 9:7)
(Steel alloys--Testing)

NIKIFOROVA, V.M., kandidat tekhnicheskikh nauk.

Rapid method for determining the cracking tendency of metals following corrosion. [Trudy] TSNIITMASH no.77:50-57 '55. (MLRA 9:7)
(Steel alloys--Corrosion)

NIKIFOROVA, V.M., kandidat tekhnicheskikh nauk; RYABCHENKO, A.V., doktor khimicheskikh nauk; REZHETKINA, N.A., inzhener.

Investigating the resistance of steel to corrosion cracking in saturated hydrogen sulfide solutions. [Trudy] TSNIITMASH no.77: 58-78 '55. (MLRA 9:7)
(Steel alloys--Corrosion)

NIKIFOROVA, V.M., kandidat tekhnicheskikh nauk; RESHETKINA, N.A., inzhener.

Investigating the EIAlT steel for corrosion cracking in hydrogen sulfide solutions. [Trudy] TSNIITMASH no.77:79-102 '55.(MLRA 9:7)
(Steel alloys--Corrosion)

RYABCHENKOV, A.V., dekter khimicheskikh nauk, professor; NIKIFOROVA, V.M., Kandidat tekhnicheskikh nauk.

Mechanics of corrosion cracking of austenitic steels. Metalloved. i obr.met. no.8:2-11 Ag '56. (MLRA 9:10)

1. TSentral'nyy Nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya.
(Steel--Corrosion)

NIKIFOROVA, V.M., kand. tekhn. nauk; REBHETKINA, N.A., inzh.

Investigation of corrosion cracking of steam turbine disks. Energomashinostroenie 3 no.10:19-22 O '57. (MIRA 10:12)
(Steel--Metallography) (Steam turbine disks)

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AUTHORS: Nikiforova, V.M., Candidate of Technical Sciences, and Reshetkina, N.A., Ing. (TsNIITMASh).

TITLE: Corrosion stability of metals in a petroleum gas medium containing H_2S. (Korrozionnaya stoykost' metallov v srede neftyanogo gaza, soderzhashchego serovodorod).

PERIODICAL: "Metallovedenie i Obrabotka Metallov" (Metallurgy and Metal Treatment), 1957, No.5, pp.55-62 (U.S.S.R.)

ABSTRACT: The aim of the work described in this paper was to find materials which are corrosion resistant, do not develop corrosion cracks and are suitable for manufacturing equipment operating in a petroleum gas medium which also contains H_2S. The corrosion stability of a number of metals with various protective coatings was investigated in petroleum gas and also the ability of some steels to withstand simultaneously the chemical effects of the medium containing H_2S and of tensile stresses. The influence was investigated of the composition of the air-H_2S mixture on the corrosion of the metal under a film of moisture and it was found that the corrosion speed is highest for a 1 to 2% H_2S content in the air; the thereby forming film of corrosion products does not possess protective properties. The corrosion stability was investigated in a petroleum gas containing between 0.1 and 8% H_2S under laboratory conditions as well as under operating conditions. The laboratory investigations

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Corrosion stability of metals in a petroleum gas medium containing H_2S. (Cont.)

were carried out on a test set-up as shown in Fig.1, p.56, with town gas to which 8 vol.% of H_2S was added. The results of the laboratory tests are plotted in four graphs of Fig.2 and entered in Table 1, p.58. The results of tests under operating conditions obtained for test durations of about 2500 hours are summarised in Table 2, p.59. The tendency of the metal to develop corrosion cracking was also investigated and the results are plotted in Fig.3, p.60 and entered in Table 3, p.61. The corrosion stability of materials inside a petroleum gas depends to a considerable extent on the H_2S and the moisture contents. In view of the 100% relative humidity and the high content of H_2S, the laboratory tests were considerably more stringent than normal operating tests in which the relative humidity and the H_2S contents are lower. Of the investigated materials silicon cast iron had the highest corrosion resistance, chromium cast iron and also cast iron containing 9% Al have a higher strength than grey iron and can be classified to the fourth Ball of the scale of corrosion stability. Chromating of cast iron and steel increases appreciably their corrosion resistance, whilst Zn coating and alitizing do not give positive results. In the cold worked state the steel 1X18H9T (0.11% C, 1.20% Mn, 0.42% Si, 17.9% Cr, 10.06% Ni, 0.50% Ti, 0.021% S and 0.02% P) is suitable

Card

Corrosion stability of metals in a petroleum gas medium containing H_2S (Cont.)

for manufacturing springs in spite of the fact that it has a certain tendency to develop corrosion cracking. 3 figures and 3 tables. 6 Russian, 2 American references.

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NIKIFORORA, V M

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AUTHORS: Ryabchenkov, A.V., Dr. of Chemical Sciences Prof., Nikiforova, V. M., Candidate of Technical Sciences, Nezvanova, N. V. and Samuylenkova, V.D., Engineers.

TITLE: Experience of the Czechoslovak industry in protecting equipment exported to countries with tropical climates. (Opyt Chekhoslovatskoy promyshlennosti po zashchite oborudovaniya, eksportiruyemogo v strany s tropicheskim klimatom).

PERIODICAL: "Metallovedenie i Obrabotka Metallov" (Metallurgy and Metal Treatment), 1957, No.6, pp.59-63 (U.S.S.R.)

ABSTRACT: The authors of this paper became acquainted with Czech practice in a number of Czechoslovak works. In Czechoslovakia the corrosion conditions are subdivided into the following four groups: very favourable (closed dry spaces); favourable (spaces in which atmospheric conditions act periodically); average conditions and difficult corrosion conditions (industrial atmosphere of seaside regions). Equipment intended for tropical climates is treated as being subjected to the most severe conditions of corrosion. Czech practice is described as regards protective painting, electro-plating (3-layer Cu-Ni-Cr plating, cadmium plating followed by chromating, zinc plating followed by chromating and in some cases by coating with lacquer), copper-plating, nickel-plating,

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Experience of the Czechoslovak industry in protecting equipment exported to countries with tropical climates. (Cont.)

chromating, cadmium-zinc plating, anodising of aluminium and its alloys, conservation and packing. Fundamentally the materials and technology do not differ greatly from those used for goods supplied to countries with temperate climates. The main differences are: the enamel is made one to two layers thicker; in the case of varnishing electrical equipment and machine tools, coating enamels are used which contain fungicide additions; oil bases are used having a high content of minium; in the case of synthetic enamels, enamels with aluminium powder as pigments are used and extreme care is taken to produce a good surface quality prior to coating. Highly qualified personnel is used for the painting and surface treatment work. For tropical conditions coatings consisting of copper-nickel-chromium layers of a total layer thickness of about 30 to 45 μ are widely used; cadmium coating (8 to 15 μ) with subsequent chromating is used for springs; zinc coating (8 to 35 μ) with subsequent chromating is used predominantly for small fixing components which after fitting are varnished. Vaselines with various

Experience of the Czechoslovak industry in protecting equipment exported to countries with tropical climates. (Cont.)

additions are used for conservation purposes. For protecting ferrous metals during storage and transportation a volatile inhibitor, dicyclohexo-aminonitride, is used.

AVAILABLE:

Card 3/3

[illegible]

AUTHOR: Ryabchenkov, A. V., [illegible], Abramova, V.F.

TITLE: [illegible] -Electro- [illegible] for the investigation of the Corrosion of Steel U. [illegible]

SOURCE: Zavodskaya [illegible], [illegible] (USSR)

An apparatus [illegible] investigations of [illegible] of the electric [illegible]. In [illegible] various [illegible] of the sample; [illegible] the sample [illegible] the electric [illegible] recorded [illegible] were [illegible] used. [illegible] ЭИ - [illegible] steel ЭИ [illegible] ed. [illegible] theory of [illegible]

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The Micro-Electro-Chemical Method for the Investigation of the Corrosion of Metals under Stress [illegible]-2-1 [illegible]

[illegible] structure [illegible]; [illegible] case, for example, [illegible] have [illegible] electrode potentials in relation to ferrite and in the system operate as cathodes. With the samples of cast iron 1 -1.-5[illegible] the [illegible] that was proved that δ ferrite forms the cathode in the microcorrosion [illegible] the late-δ ferrite. In order to obtain a comparison between samples under stress and those not under stress the potential differences between two samples, one under stress and one not under stress, were measured. For this purpose a special stand was developed. From the [illegible] that there is a potential difference which [illegible] the increase of the stress applied, and that this [illegible] proportional to the content of the [illegible] les [illegible] steel ЭИ [illegible] a special tendency for intercrystalline corrosion was observed. The potential difference between the grain bodies and the grain boundaries leads to [illegible] corrosion [illegible]-crack corrosion. [illegible] to the [illegible] phenomenon

Card [illegible]

The Micr- **Electro -** [illegible] Corrosion of metals under stress.

[illegible] of crack corrosion. [illegible] references, [illegible] of which are Russ.

A SOCIATION: Central Scientific Research Institute for Technology and Machine Building (Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya)

AVAILA LE: Library of Congress

1. Metals-Corrosion 2. Corrosion research-USSR

Card [illegible]

Vik, Fokeev A, V. M.

18(7) PHASE I BOOK EXPLOITATION SOV/2296

Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya

Korroziya i zashchita metallov v mashinostroyenii (Corrosion and Protection of Metals in the Machine-building Industry) Moscow, Mashgiz, 1959. 347 p. (Series: Its: [Sbornik] kn. 92) 3,500 copies printed.

Ed.: A. V. Ryabchenkov, Doctor of Chemical Sciences, Professor; Ed. of Publishing House: A. I. Sirotin, Engineer; Tech. Ed.: B. I. Model'; Managing Ed. for Literature on Heavy Machine Building (Mashgiz): S. Ya. Golovin, Engineer.

PURPOSE: This collection of articles is intended for designers, technologists, and industrial and research workers concerned with corrosion and corrosion protection of metals.

COVERAGE: This collection of articles deals with problems of corrosion and metal protection under investigation at TsNIITMASh during the past two years. The articles discuss stress corrosion, intergranular corrosion, scale and heat resistance of austenitic steels in gaseous media, protective coating, fretting corrosion, and resistance of metals to cavitation. No personalities are

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mentioned. References follow each article.

TABLE OF CONTENTS:

PART IV. INVESTIGATIONS OF FRETTING CORROSION AND CAVITATION

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5(1), 18(7)

SOV/64-59-1-13/24

AUTHORS: Nikiforova, V. M., Reshetkina, N. A., Smurov, V. S.

TITLE: A Study of Corrosion in Carbon Disulphide Retorts (Izucheniye korrozii serouglerodnykh retort)

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 1, pp 79-84 (USSR)

ABSTRACT: Carbon disulphide (I) which is much used in the manufacture of synthetic fibers is produced by direct synthesis from sulphur and coal (850-900°) in thick-walled retorts made of sulphurous cast iron or of steel 25L. As up to now there is no clear explanation for the fast destruction of these retorts, the present investigation concerned the kind of destruction in the gasification channels after an operation period of 106 to 216 days. The observations made as well as the chemical analyses (Table 1) lead to the statement that the principal causes of the short life of these retorts are to be found in a double-sided - outside and inside - intense corrosion on one hand, and in a variation of the metal structure caused by temperature changes on the other hand. Investigations of different metal samples were carried out. The samples of a silicic cast iron were obtained from the TsNIIT where parallel experiments on the technological and mechanical

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A Study of Corrosion in Carbon Disulphide Retorts

properties of these steels were carried out by P. S. Durasov (deceased) and N. N. Aleksandrov. The individual metal samples were left in the retorts during the reaction for 60, 94 and 212 hours, and then the corrosion was determined by measuring the loss in weight. After the 212-hour test all metal samples would have to be assigned to group VI ("non-resistant") according to GOST 5272-50 except for the makhroti alloy (chromium-manganese steel) which belongs to group V. According to the absolute rate of corrosion, the metal samples can be divided into 4 groups: Most resistant are makhroti and fekhral (chrome aluminum steel). The second group includes the chrome steels Kh6S, Kh6M, Kh12YuS, Kh17, Kh25, Kh25T (Cr = 6 - 25%), the corrosion resistance proportionally increasing with the chromium content. The third group comprises the poorly alloyed steels 30KhGS, 40KhN, 40KhNM, 35KhN2M and the steel 25L which is poor in carbon. The fourth group shows a particularly weak corrosion resistance, i.e. the highly alloyed chrome nickel steels 16-13-3T, EI-257, EI-405 and 1Kh18N9T. The corrosion resistance of cast iron proved to be higher than that of the major part of steels. Particularly resistant are the silicic cast-iron types(Si 4.59-5.61%). Tables of the

A Study of Corrosion in Carbon Disulphide Retorts

steels and cast-iron types with indication of their chemical composition are given (Tables 1, 2). Further experiments were made in the heating chamber (outside corrosion of retorts), and it was found that at temperature 980° and at 1200° the corrosion resistance of the steel and cast-iron types (Tables 5, 6) was low. The steels fekhral, Kh25, Kh25T and Kh17 were most resistant at 1200°. Among the cast-iron types, a cast-iron with 28% Cr offered the best results. A table of the chemical and spectrum analyses of the corrosion products after the tests in the retort is given (Table 4); it shows that a saturation of the metal surface with sulphur and carbon takes place. The analysis of the products of combustion of the generator gas in the heating chamber was carried out by the Soyuzteplostroy, and 2-4% oxygen were determined instead of the 0.2% permitted according to T.U. There are 6 tables and 4 references, 1 of which is Soviet.

RYABCHENKOV, A.V., doktor khim. nauk, prof.; NIKIFOROVA, V.M., kand. tekhn. nauk; ABRAMOVA, V.F., inzh.

Methods of microelectrochemical analysis of corrosion of stressed metals. Trudy TSNIITMASH 92:5-18 '59. (MIRA 12:8)
(Microchemistry) (Corrosion and anticorrosives)

RYABCHENKOV, A.V., doktor khim. nauk, prof.; NIKIFOROVA, V.M., kand. tekhn. nauk

Role of electrochemical factors in corrosion cracking of austenitic steels. Trudy TSNIITMASH 92:19-41 '59.
(MIRA 12:8)

(Steel--Corrosion)

NIKIFOROVA, V.M., kand. tekhn. nauk; BESHETKINA, N.A., inzh.

Studying the nature and causes of cracking of steam-turbine disks. Trudy TSNIITMASH 92:73-82 '59. (MIRA 12:8)
(Steel--Corrosion)
(Disks, Rotating--Testing)