

PETROVA, N. Ia.

"Retarding the Evaporation of Liquids",

Zhur. Prikl. Khim. No. 12, 1949. Len. Ivanovo Power Inst.

Len. V.I. Lenin, -cl/47-.

PETROVA, N. Ya., SHIKHER, M. G. and SHIKHER, A. G.

"Retarding the Evaporation of Liquids", Zhurnal Prikladnoy Khimii, Vol. 22, No. 9, 1949.

A Digest, W-12200, 25 Jul 1950

PETROVA, N. S.

PETROVA, N. S. — "Characteristic of the Disruption of Some Nervous Regulatory Mechanisms of Vascular Tonus in Hypertension Patients."
(Dissertations For Degrees In Science and Engineering
Defended At USSR Higher Educational Institutions)(30)
Medical Inst imeni V. M. Molotov, Chair of Hospital Therapy,
Sanitary Hygiene, and Pediatric Faculties, Tashkent, 1953

See KNIZHNAYA LETOPIS' No 30, 23 July 1955

* For the Degree of Candidate of Medical Sciences.

RIVKIN, Isaak Davydovich; ZAPOL'SKIY, Vyacheslav Petrovich; BOGDANOV,
Petr Andreyevich; SHOSTAK, A.G., redaktor; PARTSEVSKIY, B.N.,
redaktor izdatel'stva; PETROVA, N.S., tekhnicheskiy redaktor

[Sound measuring method of observing manifestations of mine pressure
in the workings of the Krivoy Rog Basin] Zvukometricheskii metod
nabliudeniia proiavlenii gornogo davleniia na shakhtakh Krivorozh-
skogo basseina. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoii
i tsvetnoi metallurgii, 1956. 188 p. (MIRA 9:8)

(Krivoy Rog--Subsidence (Earth movements))
(Mining engineering)

Petrova, M.V.

7. Thermocatalytic reaction of cyclohexane in the presence of aluminum silicate. V. S. Petrova, M. V. Petrova, *Doklady Akad. Nauk SSSR*, 1967, No. 21, Ser. Khim. Nauk, 15, 127-51, 1967.
Cyclohexane isomerizes to methylcyclopentane (II) when activated at 245-50° and 34 atm. in the presence of activated aluminum silicate. Reaction equl. is established when content of I reaches 37-40%. A very small amt. of paraffins is formed. The action of aluminum silicate under these conditions is analogous to the action of $AlCl_3$. V. S. AI.

5
1.6 4g
4.1 2.5 (2)
1.7 1.0
4E 3E

1.7

PETROVA, N. V., TELIWA, S. A., TRAKHENI, N. N., SHACHINA, A. I., SHAFER, S. I.,
LIANOVA, V. V. and LITINGOVA, A. F.

"The Epidemiology and Prophylaxis of Tick-borne Encephalitis in Molotovskaya
Oblast," an article presented at the "Interblast" Scientific-Practical Conference
of Medical Workers of the Urals, Siberia, and the Far East, Irasnoyarsk, 1-12
Dec 59.

Sum. No. 1047, 11 Aug 59

PETROVA, O.: IVANOV, D.

"Obtaining ferric-chromous catalyzer for oxidation of ammonia"

Tezhka Promishlenost. Sofia, Bulgaria. Vol. 8, no. 2, Feb. 1959

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59, Unclas

PETROVA, O.

She operate a machine. Znan.ta pratsia no.12:18
D '59. (MIRA 13:4)
(Kiev--Shoe industry)

PETROVA, G.

Metal of our time. Znan. ta pratsia no. 6:10-11 Je '60.

(MIRA 13:8)

(Aluminum)

PETROVA, O.

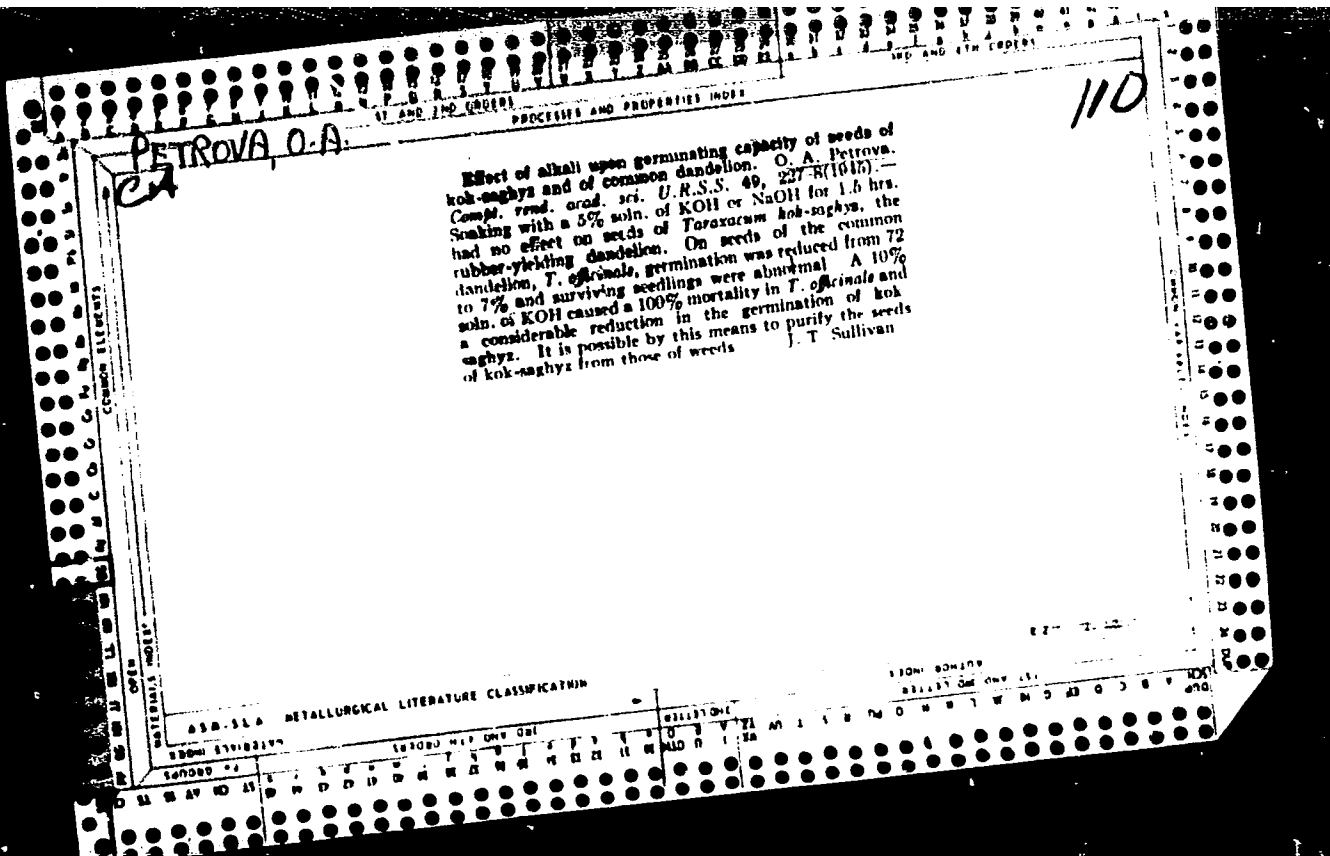
"New Working Norms In Beekeeping. p. 172" (KOOOPERATIVNO VEMEDELITE) Vol. [6], No. 5,
May 1951, Sofiya, Bulgaria.

SO: Monthly List of East European Accessions L.C. Vol. 2, No.11, Nov. 1953, Uncl.

PETROVA, O.

Surgeon invades the brain. Znan.ta pratsia no.9:22-24, S '61.
(MIRA 14:8)

(KIEV--BRAIN--SURGERY)



KLAR, G.V.; KYTMANOV, N.V.; PETROVA, O.A.

Structure and characteristics of biaxially compressed wood. Trudy
Inst. lesa i drev. 65:83-90 '63. (MIRA 16:10)

MYTSIK, P.A., inzh.; SEMIN, V.M., kand. tekhn. nauk; ...
inzh.; NIKOLAIKAYA, M.N., inzh.; ...
V.A., inzh.; TRAKHLOVICH, V.I.; ...

New developments in research. State no. 855. ...

PETROVA, O.A.

Polyploidy in the fescue grass *Festuca sulcata* Hack. in
connection with various growth conditions. Bot.zhur. 50
no.7:1004-1008 JI '65. (MIRA 18:11)

1. Khar'kovskiy gosudarstvennyy universitet.

CHININA, N.S.: NIKOL'SKAYA, M.N.; IMESTROVSKIY, N.Z.; PETROVA, O.A.

Electrolytic polishing of rectangular wires. Biul.tekh.-ekon.inform.-
Gos.nauch.-issl.inst.nauch. i tekhn.inform. no.4:15-17 '62.
(MIRA 15:7)

(Electrolytic polishing)

S/153/62/005/006/008/015
E021/E306

AUTHORS: Komkov, I.P., Divinskiy, A.F., Petrova, O.A. and
Belen'kiy, M.A.

TITLE: Elimination of pitting in bright nickel-plating
electrolytes

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Khimiya i
Khimicheskaya tekhnologiya, v. 5, no. 6, 1962,
951 - 955

TEXT: An attempt was made to eliminate pitting during bright
nickel-plating by additions of surface-active materials to the
electrolyte. Twelve phosphoro-organic compounds were prepared by
the interaction of various alcohols with phosphorous pentoxide.
Similar sulphur-organic compounds were also prepared by the inter-
action of secondary higher aliphatic alcohols with sulfuric acid.
Sodium salts of the compounds were made and tested as additives to
the electrolyte. It was shown that the sodium salts of mono- and
di-heptyl esters of phosphoric acid prevented pitting only in a
short interval of concentration of the order of 0.015 g/l. Pitting
occurred if the concentration was increased. Additions of
Card 1/2

Elimination of pitting

S/153/62/005/006/008/015
E021/E306

secondary alkyl sulfates of sodium prevented the occurrence of pitting. The surface tension of the bright nickel electrolyte, consisting of nickel sulfate 250-300, sodium chloride 10-15, boric acid 35, coumarine 1 and paratoluene sulfamide 2 g/l., was 70 dynes/cm. Addition of 0.1 g/l. sodium alkylsulfates decreased the surface tension to 30 dynes/cm. Addition of sodium alkylsulfates made possible the production of bright nickel coatings not requiring polishing and without pitting. It was recommended that a daily correction to the electrolyte of 0.1 ml./l. anti-pitting agent should be used to maintain stable working of the bath

ASSOCIATION: Kafedra organicheskoy khimii, Moskovskiy
tehnologicheskoy institut myasnoy i molochnoy
promyshlennosti i tsentral'nyy nauchno-issle-
dovatel'skiy institut vspomogatel'nykh i
zapasnykh detaley k tekstil'nomu oborudovaniyu
(Department of Organic Chemistry, Moscow Technological
Institute of the Meat and Milk Industry and Central
Scientific Research Institute of Accessories and Spare
Parts for Textile Equipment)

SUBMITTED: July 3, 1961
Card 2/2

KATSER, I.M., inzh., starshiy nauchnyy sotrudnik; PETROVA, O.A., kand.
tekhn.nauk

Protection of dyeing and finishing equipment against corrosion.
Tekst.prom. 21 no.11:65-68 N '61. (MIRA 14:11)

1. Tsentral'nyy nauchno-issledovatel'skiy institut vspomogatel'nykh
izdeliy i zapasnykh detaley k tekstil'nomu oborudovaniyu
(TSNIIMashdetal') (for Katser).
(Textile machinery--Corrosion)

BELEN'KIY, M.A., inzh.; LAYNER, V.I., doktor tekhn.nauk, prof.; PETROVA, O.A.,
kand.tekhn.nauk

Bright nickel plating with equalizing additions. Vest. mash. 41
no.6:37-41 Je '61. (MIRA 14:6)
(Nickel plating)

30644

S/081/61/000/020/057/089
B102/B147

1.1800

AUTHOR: Petrova, O. A.

TITLE: Nonporous chrome plating of stainless steels

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 20, 1961, 262, abstract
201181 (Nauchno-issled. tr. Tsent. in-t nauchno-tekhn. inform.
legk. prom-sti, sb. 7, 1960, 38 - 44)

TEXT: Conditions for producing nonscaling, dense Cr coatings on stainless steels were established. Firm adhesion between coating and basic metal is achieved by cathodic treatment of the metal prior to the initial chrome plating, which is carried out in the same electrolyte at $D_c = 5 \text{ a/dm}^2$ and 50°C within 5 min. Mechanical corrosion tests showed that maximum stability is displayed by X17M2 (Kh17N2) and 1X13 (1Kh13) steels with combined Cr coating: 1) milky Cr coating: 70°C , $D_c = 30 \text{ a/dm}^2$, thickness 20μ , yield with respect to current: 10 - 11%; 2) brilliant Cr coating: temperature 50°C , $D_c = 50 \text{ a/dm}^2$, thickness 30 - 50μ , yield with respect to current: 13%.

[Abstracter's note: Complete translation.]

Card 1/1

PETROVA, O. A. Cand Tech Sci -- (diss) "Combined chromium plating of steel as protection against corrosion and mechanical wear-and-tear." Mos, 1957. 8 pp 20 cm. (Min of Higher Education USSR. Mos Inst of Nonferrous Metals and Gold im M. I. Kalinin), 110 copies. (KL, 15-57, 106)

ZARETSKIY, Ye.M.; KATSER, I.M.; PETROVA, O.A.

Effect of corrosion inhibitors on corrosive and mechanical wear.
Dokl. AN SSSR 135 no.4:890-892 '60. (MIRA 13:11)

1. Nauchno-issledovatel'skiy institut vspomogatel'nykh izdeliy
i zapasnykh detaley k tekstil'nomu oborudovaniyu. Predstavleno
akademikom F.A.Rebinderom.

(Corrosion and anticorrosives)

S 1310

1087, 1160, 1164

2,262
S/122/61/000/006/004/011
D244/D301

AUTHORS: Belen'kiy, M.A., Engineer; Layner, V.I., Doctor of Technical Sciences, Professor; Petrova, O.A., Candidate of Technical Sciences

TITLE: Bright nickel plating with levelling additives

PERIODICAL: Vestnik mashinostroyeniya, no. 7, 1961, 37-41

TEXT: This article gives the results of research on the above problem conducted by the TsNIIMashdetal'. An electrolyte of the following composition was chosen: 250 to 3000 gm/l of nickel sulphate ($\text{NiSO}_4 \cdot 7\text{H}_2\text{O}$), 40 to 50 gm/l nickel chloride ($\text{NiCl}_2 \cdot 6\text{H}_2\text{O}$) and 35 gm/l of boric acid (H_3BO_3). Subsequently NiCl_2 was replaced by 10 to 15 gm/l of NaCl, since preliminary tests showed that this change does not affect the quality of the deposit or levelling action. The temperature was maintained at 50°C and current density was 4 to 6 A/dm² except when investigating the influence of these parameters. Coumarin (lactone of o-hydroxycinnamic

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23262

S/122/61/000/006/004/011

D244/D301

Bright nickel plating with...

acid, $C_9H_6O_2$) was tested as a levelling agent, for which ethyl alcohol or glacial acetic acid were used as solvents. As specimens, pieces of thin sheets of copper, brass and steel in flat and cylindrical shapes were used. As a criterion of levelling, the formula used by the Czechoslovak Institute for Metals Protection im. Akimov, was adopted. (Eq. 1). where h_1' and h_2' - depth of roughness before and after plating. X

$\frac{h_1' - h_2'}{h_1'} \cdot 100\%$. The effect of Coumarin concentration is illustrated, 0.1 gm/l giving maximum levelling. This concentration, however, does not ensure maximum brightness and in choosing the Coumarin content, a compromise between these two effects must be made. To remove internal stresses and the tendency to pitting of the deposit (caused by Coumarin) other additives must be also used. Higher temperature of the bath tends to reduce internal stresses, but the increase of concentrations of such ions as NH_4 , Na, Mg, Co etc. tends to increase them. According to A.G. Samartsev and Yu. V. Lyzlov (Ref. 7: Vnutrenniye napryazheniya v elektroliticheskikh osadkakh nikelya,

Card 2/5

Bright nickel plating with...

S/122/61/000/006/004/011
D244/9301

Trudy 1-y nauchno-tekhnicheskoy konferentsii po voprosam intensivizatsii proizvodstva i povysheniya kachestva gal'vanicheskikh pokrytiy, Kiyev - Odessa 1956), the increase of the pH value from 6 to 6.1 or 6.2 produces a sharp increase in internal stresses. Various organic additives influence current consumption and coumarin was tested in this respect. Even small amounts of coumarin were found to increase deposit hardness. To increase the brightness of the deposit and to reduce internal stresses, 2 gm/l of para-toluolsulphamide was added which had the best effect with 1.5 gm/l of coumarin (Fig. 5).

Fig. 5. Legend: Effect of coumarin content on the nickel deposit brightness 1 - current density of 4 A/dm². 2 - of 4 to 6 A/dm².

An electric method, worked out by G.K. Potanov and A.T. Sandzherovskiy (Ref. 10: ZhFKh, t.XXXII, vyp. 6, 1958), was used for measuring

Card 3/5

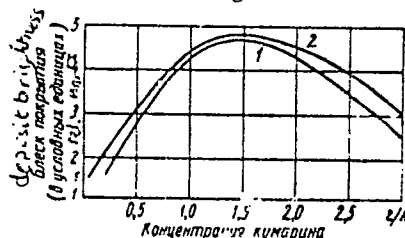


Рис. 5. Влияние содержания кумарина на блеск никелевых покрытий
1 - плотность тока 4 а/дм². 2 - 6 а/дм².

23262

S/122/61/000/006/004/011
D244/D301

Bright nickel plating with...

internal stresses. This method depends on measuring the bending of the cathode under the stress in the deposit. To prevent pitting, surface active substances such as sodium lauryl sulphate (0.2 to 1.0 gm/l) or a wetting agent which reduces surface tension to 30 dyne/cm., can be added. On the basis of the investigations made, it can be concluded that:

1) Coumarin has a high levelling action but does not give a bright deposit and causes a marked increase of internal stress and pitting.
2) Paratoluolsulphamide in a bath containing coumarin produces a bright and tension free deposit. 3) Addition of D-10 (D-10, sodium alkyl sulphate) in the amount of 0.07 gm/l ensures absence of pitting. 4) For bright nickel plating with a good levelling action the following electrolyte composition (gm/l) is recommended: Nickel sulphate ($\text{NiSO}_4 \cdot 7\text{H}_2\text{O}$) 250-300; Sodium chloride (NaCl) 10-15; Boric acid (H_3BO_3) 35;

Coumarin 0.8-1.5; P-toluolsulphamide 2; Anti-pitting additive D-10 0.05-0.1; bath working conditions: temperature 50°C; pH = 4.3 to 5.3; current density 4 to 6 A/dm²; Rate of deposition 1 to 1.5 μ/min. There are 7 figures and 11 references: 7 Soviet-bloc and 4 non-Soviet-bloc.

Card 4/5

2 250

Bright nickel plating with...

S 122761 00070067004/011
D214 D301

The references to the English-language publications read as follows.
Ref. 4. S.A. Watson, J. Edwards, Electroplating and Metallizing
vol. 10, no. 5, 1957, p. 136. Ref. 8. J.B. Kushner, Techn. Prog. 45th
Annual Convnt. Amer. Electroplaters Soc. (Cincinnati, Ohio, 1958)
Newark, 1958, 28-32, 158-161. Ref. 9. D.J. Fishlock, Product Finishing,
Vol. 11, 1958, no. 3, 4, 5. Ref. 11. L.B. Souter, Plating, 1958,
45, no. 9.

X

Card 375

S/020/60/135/004/029/037
B004/B056

AUTHORS: Zaretskiy, Ye.M., Katsner, I.M., and Petrova, O.A.
TITLE: Effect of Corrosion Inhibitors Upon Corrosive and Mechanical Wear
PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 4, pp. 890 - 892

TEXT: The wear of steel under conditions where corrosive and mechanical effect are of the same order of magnitude is discussed in the present paper. This case occurs on wet spinning of flax. It was the aim of the present work to reduce corrosive and mechanical wear caused by Moscow tap water in 4 x 13 type nitrided steel by means of corrosion inhibitors. Experiments were made at 40°C in a X2M (Kh2M) device, in which a disk of high-speed steel revolved in an electrolyte and formed a hole in the specimen. Speed was 600 rpm in all experiments at a load of 2.25 kg. First, the effect of cathodic and anodic polarization was examined. A Platinum foil served as second electrode. Results are compiled in Fig. 1. Fig. 2 shows the result of the action of anodic and cathodic inhibitors. Addition of sodium hexametaphosphate reduced wear by 25%. The authors thank . . .
Card 1/3

Effect of Corrosion Inhibitors Upon
Corrosive and Mechanical Wear

S/020/60/135/004/029/037
B004/B056

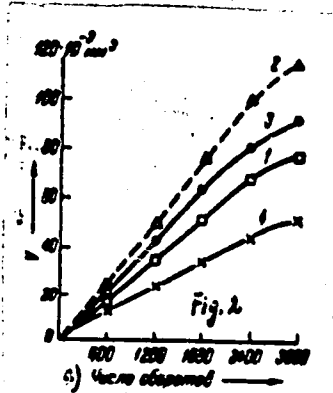
M.A.Babichev for his advice. There are 2 figures and 9 refer-
ences: 8 Soviet and 1 US.

ASSOCIATION: Nauchno-issledovatel'skiy institut vspomogatel'nykh izdeliy
i zapasovykh detaley k tekstil'nomu oborudovaniyu (Scientif-
ic Research Institute of Accessories and Spare Parts of
Textile Equipment)

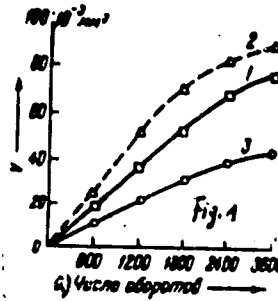
PRESENTED: June 24, 1960 by P.A.Rebinder, Academician

SUBMITTED: June 1, 1960

Card 2/3



S/020/60/135/004/029/037
B004/B056



Legend to Fig. 1. 1: without polarization; 2: with anodic polarization, $D_a = -1 \text{ ma/cm}^2$; 3: with cathodic polarization, $D_c = 0.1 \text{ ma/cm}^2$; a) rpm; V = wear in mm^3 .

Legend to Fig. 2. 1: without addition; 2: with 500 mg/l sodium nitrite; 3: with 500 mg/l water glass; 4: with 200 mg/l sodium hexametaphosphate; a) rpm; V = wear in mm^3 .

Card 3/3

PETROVA, O.A.; NIKOL'SKAYA, M.H.

Using inhibitors for preventing corrosion of steel parts. *Biul.tekh.*
-ekon.inform. no.9:69-71 '60. (MIRA 13:10)
(Inhibition (Chemistry)) (Corrosion and anticorrosives)

PETROVA, G. A.

36330 Khimicheskiy metod ochistki semyan kok-saryz t semyan nezauchukonnykh
oduv-anchikov. Priroda, 1949, No. 11-12, 56-58

SO: Letopis' Zhurnal'nykh Statey, No. 40, 1949

PETROVA, O.A.

Differences in seeds of dandelion species. Biul.Glav.bot.sada
no.23:78-82 '55. (MIRA 9:7)

1. Botanicheskiy sad Khar'kovskogo gosudarstvennogo universiteta
imeni A.M.Gor'kogo.
(Dandelions)

137-58-6-12143

Translation from *Relativnyy zhurnal, Metallurgiya* (USSR)

AUTHOR Petrova, G. A.

TITLE Wear-resistant and Corrosion-resistant Coating With Combined Two-layer Chromium. [Iznosostoykiye i korrozionnostoykiye kombinirovannym (dvukhsloynym) khromom]

PERIODICAL *Vestn. teoriya i praktika elektrolit. khromirovaniya*. Moscow. AN SSSR, 1957, pp 97-107

ABSTRACT Work was done on the determination of the feasibility of using a two layer deposit of Cr as a protective coating for the grooved cylinders of wet flax-spinning machines. A method of combined chrome plating (C) consisting of applying a double-layer coating is proposed. The first layer, 20 μ thick, is deposited as a dull C (70°C, cathode cd 30 amp/dm²), the second layer, 50 μ thick, is deposited as a bright C (50°, cathode cd 55 amp/dm²). The combined Cr deposition ensures wear and corrosion resistance for the surface of the grooved cylinders.

Card 1/1 Chromium plating--Applications

L.A.

PETAOVA, D.A.

LEVIN, A.I.

PS(O) P. PHASE I BOOK EXPLOITATION 80V/1969

Akademiya nauk SSSR. Institut fizicheskoy khimii

Teoriya i praktika elektroliticheskogo khromirovaniya (Theory and Practice of Electrolytic Chromium Plating) Moscow, Izd-vo AN SSSR, 1957. 231 p. 5,000 copies printed.

Resp. Eds.: Vagrovaya, A.T., Professor, N.F. Kuzryatov, Professor, and N.A. Shluger, Candidate of Technical Sciences; Ed. of Publishing House: Yegorov, N.O.; Tech. Ed.: Pavlovskiy, A.A.

PURPOSE: This book is for engineers, industrial workers, members of scientific research institutions and teachers concerned with modern methods of electroplating and the manufacture of corrosion-resistant metallic instruments.

COVERAGE: The collection contains sixteen reports and the texts of several discussions presented before the March 1955 Conference on the Theory and Practice of Chromium Plating, sponsored jointly by the Institute of Physical Chemistry, AN USSR, and the Moscow Scientific, Engineering and Technical Society for Instrument Making. The reports reflect the conference's aim of a wide exchange of opinion on problems of chromium electrodeposition and offer solutions

C-28 1/4

Yegorov, N.O. Wear- and Corrosion-resistant Coatings by Combined (Two-Layer) Chromium Plating

PETROVA, O. A.

Distr: 4820/4843

Wear- and corrosion-resistant coating by composite chromium plating O. A. Petrova. *Teoriya i Prakt. Mekh. i Khim. Obrab. Met. Nauk. S.S.S.R.* 1957, 97-107. A method was developed and adopted on cont. scale for composite 1st layer Cr plating. In this method a white film 20 μm thickness, having low porosity but mechanically resistant, is first deposited at 7 and 30 amp/cm² for 10-15 min covered by a bright Cr plated film 60 μm thickness deposited at 20 and 24 amp/cm² for 10-15 min.

2
2

PETROVA, O. A.

"A Chemical Method of Separating Toxic Seeds from Non-Carcinogenic Dandelion
Seeds," Priroda, No.11, 1949

APPROVED FOR RELEASE: 06/15/2000

CIA-RDP86-00513R001240610001-6"

PETROVA, O. A.

Phytotoxic properties of some dandelion seeds
sadn no.01:69-71 '55. (MIRA 6:12)

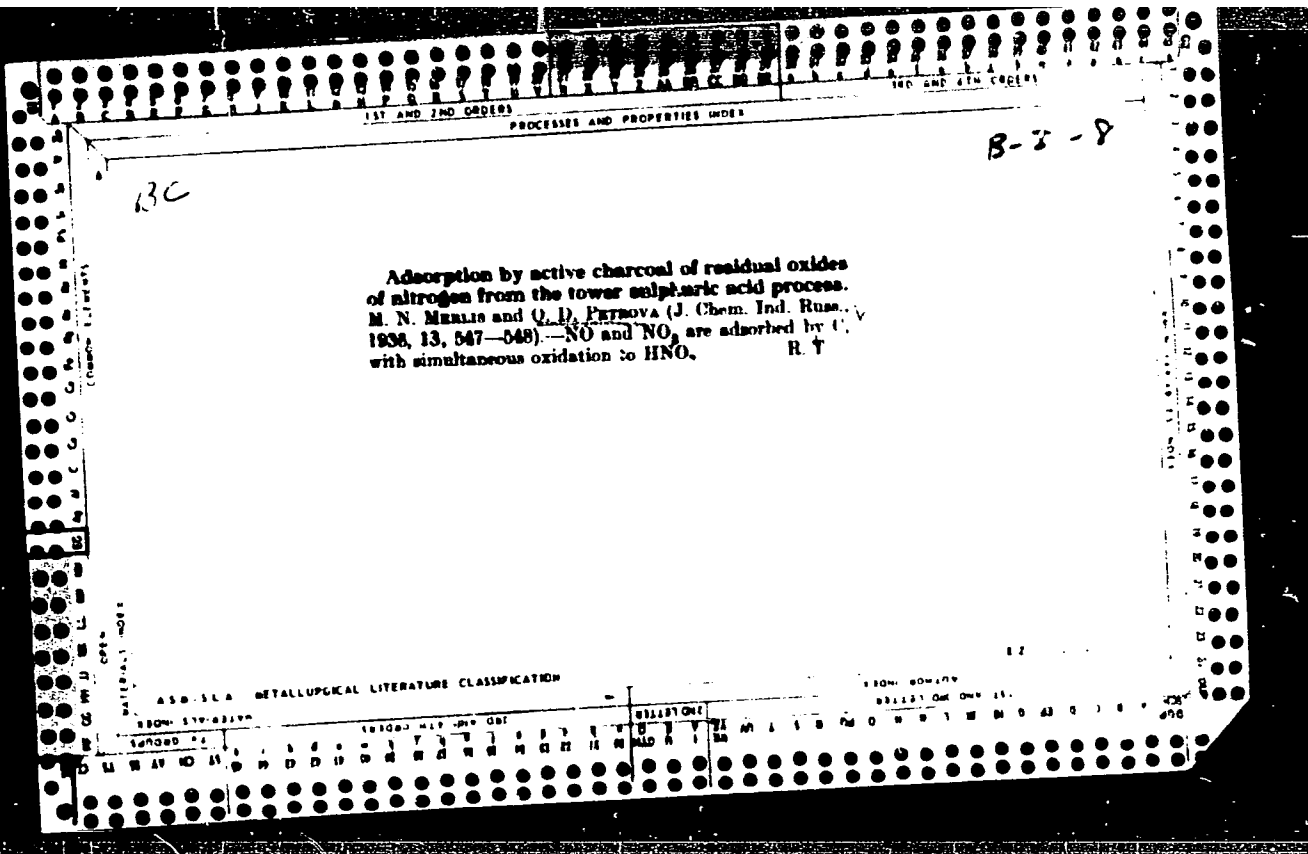
1. Botanicheskiy sad Khar'kovskogo gosudarstvennogo universiteta
Imeni A.M.Gor'kogo.

(Phytotoxicity of Plants, Ornamental)

KOL'TSOVA, V. , inzh.; Prinsipalni uchastiye; PETROVA, O.D. rabotnitsa;
DONUCHA EVA, Ye.Ya., rabotnitsa

Use of metalized (palatine-type) dyes for dyeing wool felt cones.
Nauch.-issl. trudy TSNIIShersti no.17:94-96 '62. (MIRA 17:12)

1. Shchelkovskaya fetrovaya fabrika (for Petrova, Dokuchayeva).



PROCESSES AND PROPERTIES INDEX

7

ca

Micro method for separate determination of nitric oxide and nitrogen dioxide in tower gases of sulfuric acid production. M. N. Meris and O. D. Petrova. *Zhurnal Khim. Prom.* 5, 290-1 (1936); cf. C. A. 30, 1187.

For the detn. of NO and NO₂ of higher concns. in the tower gases, the previous method was modified by the use of 4 Lange tubes and 10 cc. each of the α -C₁₂H₁₁NH₂ and sulfanilic acid solns. instead of 1 tube and 2 cc. of the solns. For the sep. detn. of NO and NO₂, N₂O₅ is absorbed in the 1st tube contg. H₂SO₄ (d. 1.84) and NO in the 3 tubes contg. H₂O acid. with O₂ and the α -C₁₂H₁₁NH₂ and sulfanilic acid solns.; the azo dye formed is detd. colorimetrically. Thus it is possible to det. the total contents of N oxides and NO. The 2 results give the contents of HNO₃ in mg. in 1 l. of gas. The difference gives N₂O₅ in gas. From the contents of N₂O₅ and NO the relation of NO and NO₂ in the gas is easily detd.

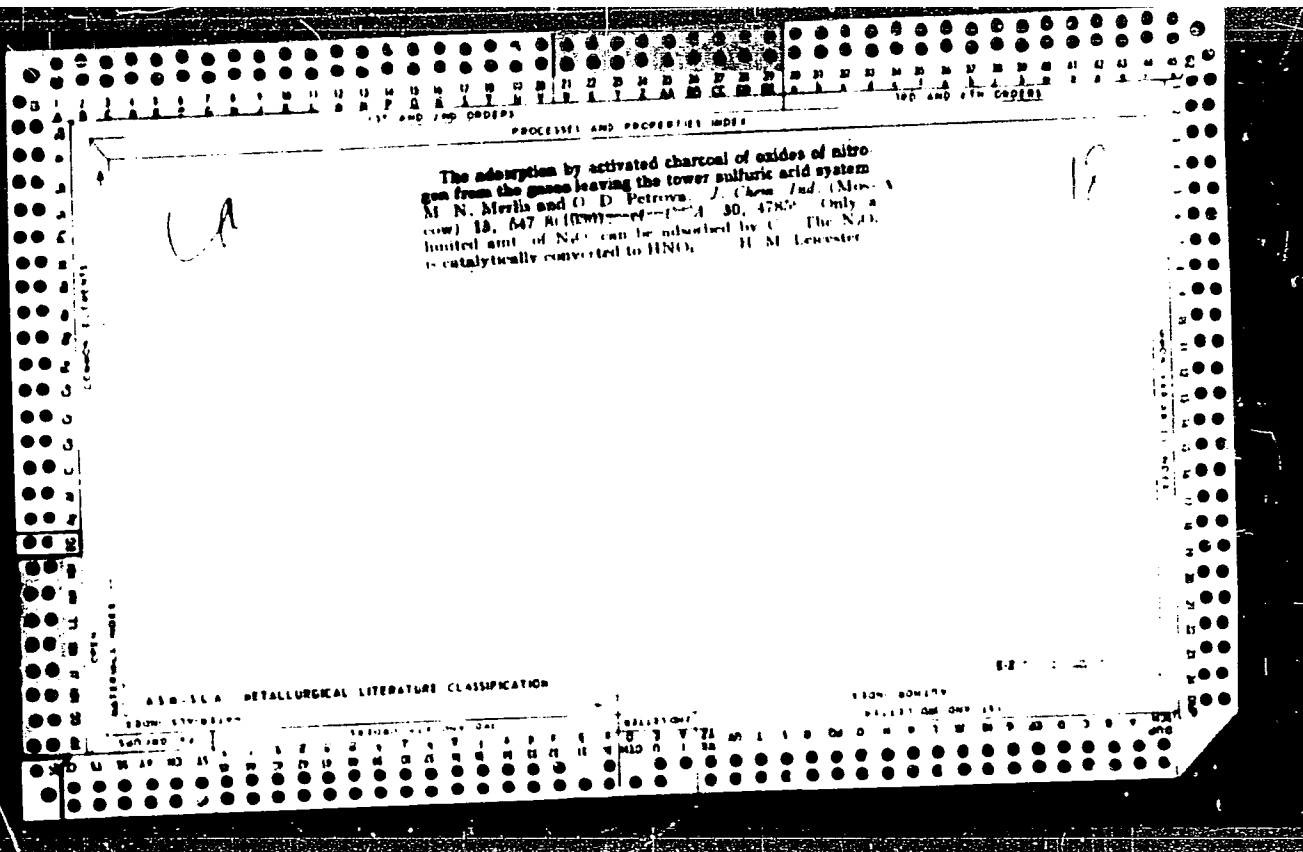
Chas Blanc

METALLURGICAL LITERATURE CLASSIFICATION

KOLTOVA, A.V., incl.; Kholmanskaya pastupa: PETROVA, O.D.; PERKUNOVA,
V.N.

Monotone dyeing of felt cones manufactured from wool and viscose
fibers. Nauch.-issl.trudy ANIIShersti no.16:161-165 '61.
(MIRA 16:1.

1. Shchelkovskaya fetrovaya fabrika (for Petrova).
2. Zavidovskaya fetrovaya fabrika (for Petrova).



PROCESSES AND PROPERTIES INDEX

18

Rapid method of determining nitrogen oxides in tower gases of sulfuric acid production. M. N. Merlis and O. D. Petrova. *Zashchita Lab.* 4, 908 9 (1935). For the detn. of NO and NO₂ in the tower gases of H₂SO₄ manuf., NO is oxidized to NO₂ with H₂O satd. with O₂ in the presence of α -C₁₀H₇NH₂ (I) and sulfanilic acid (II). The color intensity of the soln. of the azo dye formed is compared with that of an aq. mixt. of I and II of the same concns. titrated with a standard soln. of NaNO₂. Since only half the combined NO_x reacts in the diazotization ($2NO_2 + H_2O = HN_2O_3 + HNO_3$), the results of detn. must be multiplied by 2. Fill a 10-bulb Lunge tube with 75 cc. H₂O satd. with O₂ and introduce 1 cc. of the I soln. (0.1 g. I, 6 cc. of 80% AcOH and 94 cc. H₂O), 1 cc. of 1% I₂ and 10 drops of 80% AcOH. Pass into the tube 500 cc. of the gas sample from an aspirator. Discharge the soln. with the dye into a flask, wash the tube, heat the united soln. to 70-80°, and dil. the soln. to 300 cc. Mix 280 cc. of hot H₂O, 1 cc. of the I soln., 1 cc. of II soln. and 10 drops of AcOH, titrate the soln. at 70-80° with NaNO₂ to the same color intensity as the first soln. and calc.

Chas. Blanc

METALLURGICAL LITERATURE CLASSIFICATION

FROM SOURCE

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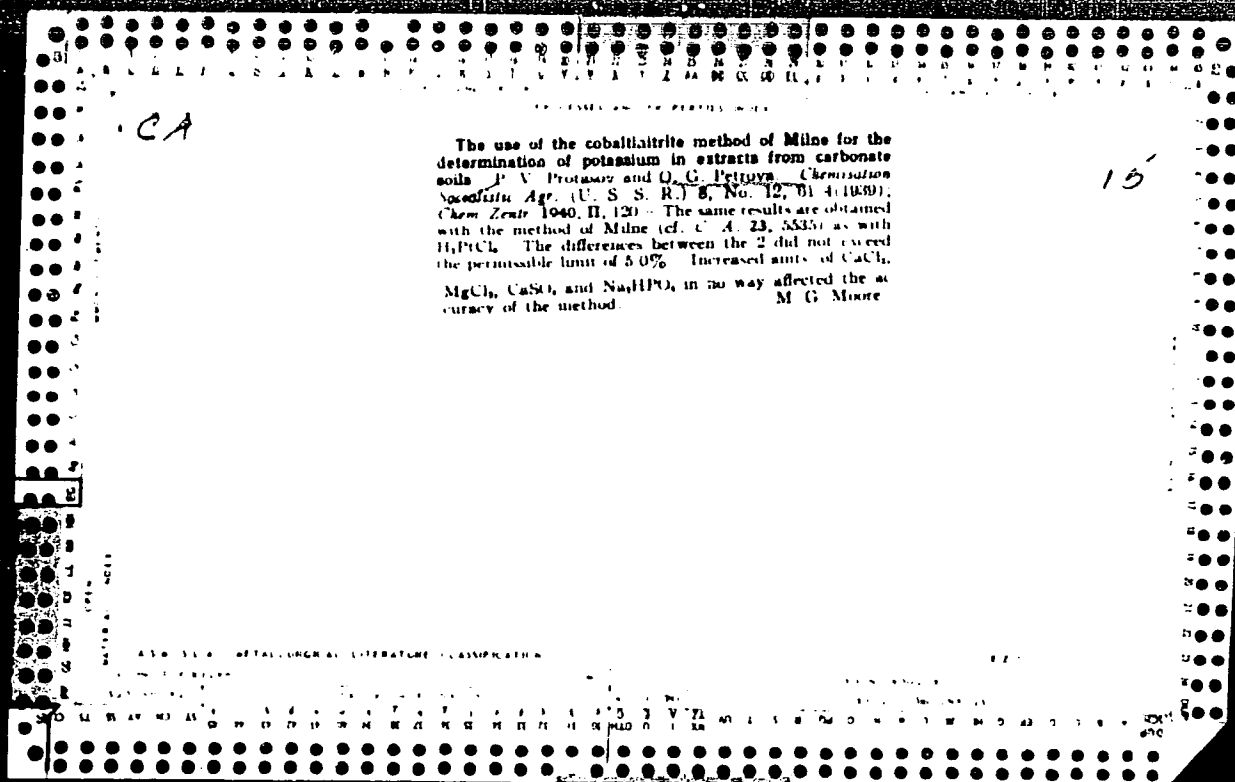
PROCEDURES AND PROPERTIES INDEX

7

cd

Utilization of the Milne cobaltinitrite method for determining potassium in extracts from carbonate soils P. A. Protasov and O. G. Petrova *Chemization, Soviet Agr. (U. S. S. R.)* 1939, No. 12, p. 1, *Khim. Referat. Zhur* 1940, No. 5, 71 2, of C. 4. 34, 76-77. The Milne-cobaltinitrite method for detg. K was compared with the chloroplatinate method with pure KCl solns. as well as with $(NH_4)_2CO_3$ exts. from soils. The Milne method gave slightly lower results. The presence of $MgSO_4$, $CaSO_4$, NaH_2PO_4 , and $CaCl_2$ does not interfere. Evap. the ext. contg. 3-25 mg. of KCl on a water bath to dryness in a porcelain dish and heat carefully to remove NH_3 . Moisten the residue with 1-2 drops of concd. HNO_3 and heat slightly, repeating the operation until the residue becomes colorless. Add 1 cc. of concd. HCl , evap., heat and cool in a desiccator contg. no dehydrant. To the dry residue add 10 cc. of satd. $NaCl$ soln., 1 cc. of 10% $CoCl_2$ soln. and 15 cc. of 10% $NaNO_2$ soln. Evaporate the contents of the dish on a water bath to a paste-like consistency, cool and treat with 10 cc. of 1% $NaOH$. Add 10-15 cc. of water, filter through a glass filtering crucible, and rinse the dish 5-6 times with 2-3% Na_2SO_4 soln. (the total vol. of the wash water should be 25 cc.). Transfer the ppt. with the filter to a 100-cc. beaker contg. 25 cc. of a hot mixt. of $KMnO_4$ and H_2SO_4 , 0.05 N $KMnO_4$ 15 cc. and H_2SO_4 10 cc. (1.3). After 10 min. add a known amt. of 0.5 N $H_2C_2O_4$ contg. 30 cc. of H_2SO_4 per l., heat the soln. until decolorized completely and titrate the excess $H_2C_2O_4$ with the same 0.05 N $KMnO_4$ soln. (One ml. of 0.05 N $KMnO_4$ = 0.3444 mg. of K. W. R. H.)

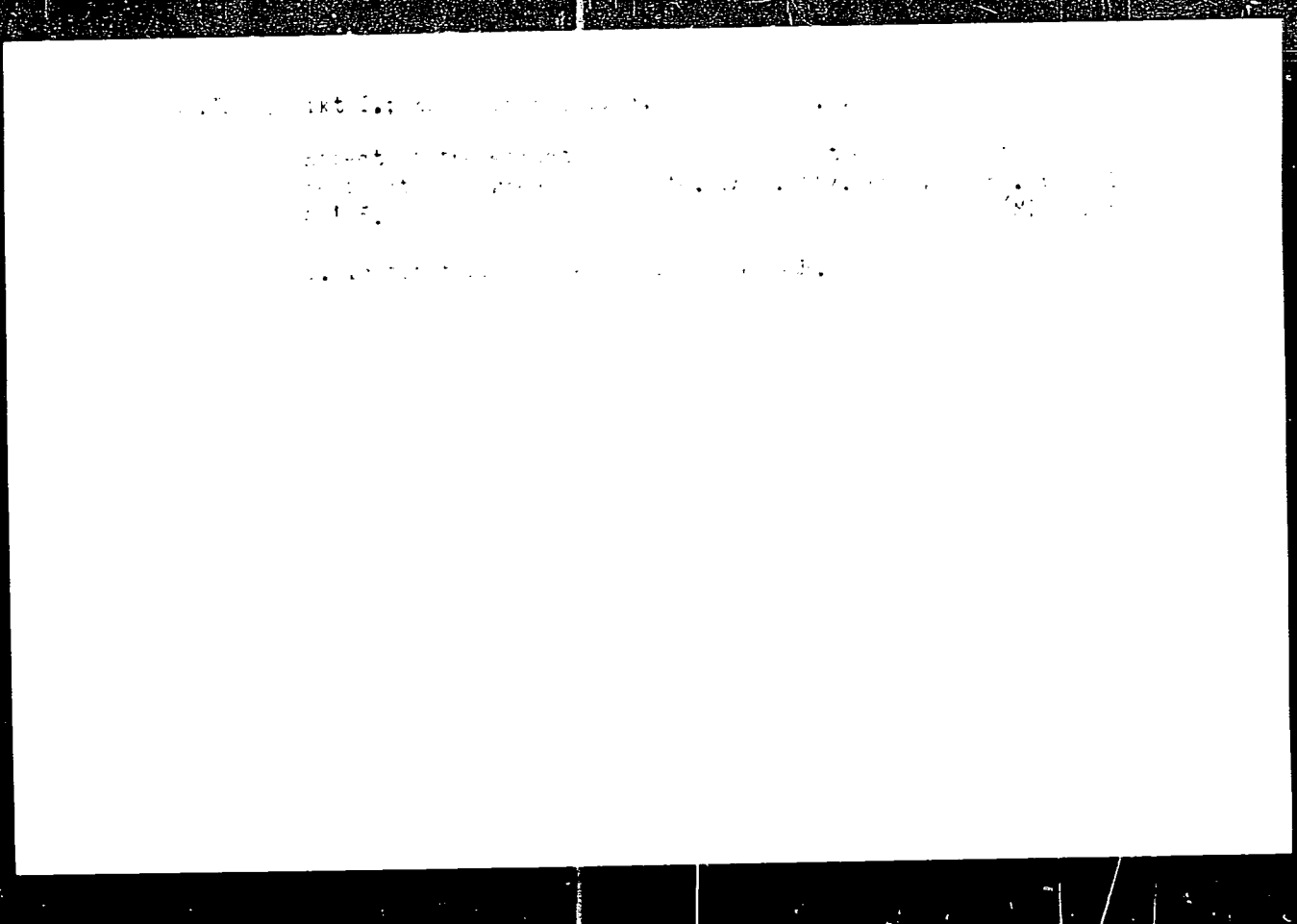
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The second part of the document is a memorandum which provides a summary of the information received from the source.

The third part of the document is a list of references which are used to support the information provided in the memorandum.



ACC NO: 100-100000

DOC ID: 0000: UR:0920 66 171.004/0907/0910

Author: [unclear], [unclear], [unclear]; [unclear], N. I. (Corresponding),
[unclear], [unclear]; [unclear], I. T.; [unclear], O. H.

Institution: Institute of Chemical Chemistry, AN S.S.R. (Institut fizicheskoy khimii
AN S.S.S.R.)

TITLE: Conversion of n-hexane over alumina-chromia-potassia catalyst in
a nuclear reactor

SOURCE: AN S.S.R. Doklady, v. 171, no. 4, 1966, 907-910

TOPIC TAGS: gamma irradiation, neutron irradiation, catalyst,
dehydrogenation, chemical energy conversion, hexane

SUB CODE: 07

ABSTRACT: A study was made of the behavior of alumina-chromia-potassia
catalyst under the action of ionizing radiation. It was previously reported
that in the dehydrogenation of methylcyclohexane to telvene in the presence
of alumina-chromia catalyst promoted with potassia and cerium oxide,
preliminary irradiation of the catalyst increases its catalytic activity. In
the present work, a catalyst was chosen having a composition of 99.7 mole
percent alumina, 5.6 mole percent chromia, and 3.7 percent potassia. It
was used in the conversion of N-hexane. The catalyst samples were irradiated
Card 1/2 UDC: 542.97

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ACC NR: A17010710

in a nuclear reactor with slow neutrons and gamma rays. The experimental data show that irradiation of the catalyst results in significant increases in the yield of benzene. With repeated use of the catalyst, the benzene yield remained at a level corresponding to that of the unirradiated catalyst. Irradiation also appeared to affect the selectivity of the catalyst. The authors thank Ye. A. Timofeyev for providing the catalyst. (Orig. art. has: 3 tables. /S.R.S: 40,351/

Card 2/2

7513
 EFFECT OF IONIZING RADIATIONS ON THE FERTILITY OF MICE AND THE VIABILITY OF THEIR PROGENY. N. I. Nuzhdin, N. I. Shapiro, O. N. Petrova, and O. N. Kitaeva. p. 14-23 in Meetings of the Division of Biological Sciences, Branch of the Academy of Sciences of the U.S.S.R. on the Peaceful Use of Atomic Energy, July 1-5, 1955. Moscow, Publishing House of the Academy of Sciences of the U.S.S.R., 1955. 239p. (In Russian)

Roentgen irradiation of male mice (200r and 400r doses) decreases their mating capacity and the litter numbers of those crossed with non-irradiated females. The latter is due to the high mortality of the embryo at various stages of embryogenesis. Among the progeny of the irradiated males there occur a great number of still births. One to three months after irradiation the fertility of the males is restored. The mice originating from ova inseminated with sperm developing from the regenerated germ cells do not differ from the control ones as regard their viability. The

post-embryonic development of the progeny of the irradiated males does not exhibit any deviations from the norm. The number of litters from males of the first generation originating from the irradiated males is markedly decreased as compared with the control. It was found that the hereditary character of sterility is caused by roentgen irradiation. A single total roentgen irradiation of female mice disturbs the course of the oestral cycle as manifested in a decrease in frequency of the oestral and pro-oestral stages and an increase in that of meta- and dioestrus. The degree of disturbance depends on the dose and length of the post-irradiation period. The minimum effective dose of a single roentgen irradiation is about 50r. The disturbance in the course of the cycles sets in after a certain latent period (one to two months) depending on the dose. Within a six-month period following irradiation (doses 50, 100, 200 and 400r) the disturbance in the oestral cycle was found to be irreversible. The disturbance in the oestral cycle as caused by roentgen irradiation is similar in character in mice of the A and C₅₇-black strain as well as in multipara and virgin females of strain A. A single total exposure of the females to 15 and 25r doses, although not affecting the course of the oestral cycle, decreases their fertility. Chronic exposure to small doses of gamma rays likewise evokes disturbances in the course of the oestral cycle in C₅₇-black females. (auth)

PEIROVA, O. N.

1478. Sterilizing activity of ionizing radiation in mammals. I. Effect of X-rays on fertility of male mice. 17. I. Nuzdin, N. I. Shapiro, and O. N. Petrova. II. Effect of X-rays and of gamma radiation on the oestrous cycle in female mice. N. I. Nuzdin, N. I. Shapiro, O. N. Petrova, and G. N. Kijeva. III. Nature of the sterility produced by the action of X-rays. N. I. Nuzdin, N. I. Shapiro, O. N. Petrova, and I. A. Nachay. *Radiobiology, Acad. Sci. U.S.S.R.*, 1955, 33:112, 113-149, 150-159; *Russk. Zh. Biol.*, 1950, Abstr. Nos. 51,480, 51,481, 51,482. I. A single dose of Röntgen rays 200-400 r causes sterilisation, accompanied by various signs of radiation illness and a lowering of body weight. Fertility depends on the dose, and on the time of crossing the animals with unirradiated females. The lowest fertility was seen on crossing one month after radiation, and was 16.7%, compared with 84.8% in the controls. Fertility was almost normal in crossing either immediately or after 3 months of radiation. Investigation of the testes of the radiated animals showed a sharp disturbance of spermatogenesis due to damage to the germ cells in the early stages of spermatogenesis, and to a temporary interruption of spermatogenesis on account of loss of capacity of the cells for division. Within a month after radiation recovery of spermatogenesis started and continued for 3 months. The spermatozoid stage is the most sensitive, but the spermatozooids already formed do not undergo damage. Post embryonic development of the males of the first generation is not different from normal animals.

II. With a single dose 15-25 r, the oestrous cycle in mice of strain A was not disturbed but with doses of 50, 100, 200, and 400 r changes took place in the time relations of the cycle; the frequency of pro-oestrous and oestrous was lowered, and there was a lengthening of di-oestrous and met-oestrous. The disturbance of the normal cycle begins with the second month after radiation. The absence of change in the oestrous cycle in mice radiated with small doses 15-25 r is not an indication of normal fertility; the number of

3

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SHAPIRO, M.I., NUZDIN, N.I. AND ...

10-30 days before radiation was successful in prolonging the period of protective activity, although in some cases protection was present in a weaker form but the protection had fully disappeared within 30 days. With repeated injections of 0.2-20 mg. of diethylstilbestrol 10 days before radiation no reduction in the defensive reaction was observed in the second injection, which showed the absence of acquired tolerance of the organism to diethylstilbestrol and the possibility of prolonging its defensive effect by repeated injections. The combination of subcut. injection of 0.5 mg. diethylstilbestrol with 3 mg. of pregnenol or with 1 mg. progesterone showed that the presence of these substances did not reduce the defensive activity. (Russian)

D. H. SMYTH

2/2

ARSEN'YEVA, M.A.; BEL'GOVSKIY, M.L.; DELONE, N.L.; PETROVA, O.M.; KHVOSTOVA,
V.V.; SHAPIRO, H.I.

Radiation genetics. Itogi nauki.Biol.nauki no.1:329-378 '57.
(RADIATION--PHYSIOLOGICAL EFFECT) (GENETICS) (MIRA 11:3)

PETROVA, O. N.

Dissertation defended at the Institute of Animal Morphology imeni
A. N. Severtsov for the academic degree of Candidate of Biological Sciences:

"Effect of X-ray Irradiation of the Fertility of Females of Several Species
of Mammals."

Vestnik Akad Nauk, No. 4, 1963, pp. 119-145

12630
3/747/82/000/000/011/025
D296/0307

Author: [illegible], [illegible], [illegible], [illegible], Petrova, O. N. and [illegible]
Title: The influence of x and gamma radiation upon the oestrus of [illegible]
Journal: [illegible], Moscow, 124-V5 No. 338R, 1962, 153-179

Abstract: [illegible] and [illegible] breeding methods as well as [illegible] of the oestrus have been extensively used to study the [illegible] and technical shortcomings of previous studies. The authors [illegible] the fertility of female mice, by following up the oestrus [illegible] and [illegible] oestrous mice, taken daily in the first three months, [illegible] of the cycle were established qualitatively and quantitatively on the basis of the relative proportion of the 3 main [illegible]

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... irradiated, as the
 ... nevertheless indirect effect
 ... also re-
 ... irradiated females had been
 ... to x rays was found
 ... frequency in the group
 ... the proportion of pro-oestrus and oes-
 ... met-oestrus
 ... on the degree of these
 ... the time since
 ... the oestrus di-
 ... after ex-
 ... 12-25 r. After ex-
 ... during which
 ... cycles
 ... shorter after exposure to
 ... observation (6 months). Nulli-
 ... strains
 ... rays, even in

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0296/0307

... influence of X ...

... very close to the maximum permissible dose, led to si-
gnificant changes after a latency period of 12 months (0.4 r daily -
total dose 4.8 r) up to 15 months (0.2 r daily - total dose 3.0 r
- total dose 30.4 r). 0.05 r daily had no effect upon
the rat. There are 15 figures and 12 tables.

ASSOCIATION: Institut Genetiki AN SSSR (Institute of Genetics, AS
USSR), and Institut Biologicheskoy fiziki AN SSSR,
USSR (Institute of Biological Physics, AS USSR,
Moscow)

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5/147/52/000/000/013/025
0235/0307

Author: Shapiro, N. I., Kazhdin, N. I. and Petrova, O. N.
Title: The influence of x rays upon the survival rate and fertility of Guinea pigs

Source: Radiatsionnaya genetika; Sbornik rabot. Uda. 5102. Nauk AN SSSR. Moscow, Isa-vo AN SSSR, 1962, 211-235

Summary: As a contribution to the comparative radiobiology of mammals the authors studied the lethal effects of x rays upon Guinea pigs and the sterility caused by irradiation in female Guinea pigs. 250 animals were exposed to total body radiation with x rays at doses ranging from 100 to 2000 r at a rate of 42 - 50 r/min. Males proved to be much more radiosensitive: the minimum lethal dose for males was 500 r compared to 1000 r for females. The respective values for 50/50 were 235 and 365 r. The males responded more rapidly and lost more weight. This marked sexual difference has not been previously described for any other mammalia

Card 1/2

The influence of x rays ...

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to study the sterility of ...
 the authors investigated the ...
 using the ...
 in female ...
 of the ...
 effect of irradiation ...
 histological ...
 through ...
 ovaries, ...
 every tenth ...
 number of ...
 at a ...
 since the ...
 effect upon ...
 epithelium to ...
 the weight of the ovaries ...
 number of follicles counted. This ...
 follicles, hence the weight is no ...
 of sterility ...
 caused by irradiation. According to their own investigation ...

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Page 2/3

The influence of X rays ...

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0296/D307

In the literature, 4 mammalian species can be arranged in the following (decreasing) order with regard to their radiosensitivity: mouse > rat > guinea pig. There are 6 figures and 5 tables.

ASSOCIATION: Institut biologicheskoy fiziki i Institut genetiki AN SSSR, Moskva (Institute of Biological Physics and Institute of Genetics, AS USSR, Moscow)

Slide 3/3

42693

S/747/62/000/000/014/025
D296/D307

AUTHOR: Petrova, O. S.

TITLE: Radiosensitivity of the ovaries of golden hamsters

SOURCE: Radiatsionnaya genetika; Sbornik rabot. Otd. biol. nauk AN SSSR. Moscow, Izd-vo AN SSSR, 1962, 236-246

Recent reports underline the species difference in the response of ovaries to ionizing radiation: 50 r are sufficient to cause irreversible damage to the ovaries of mice, whereas guinea pigs cannot be sterilized by radiation as they perish with radiation sickness before the high doses used destroy their ovaries. Female golden hamsters (*Cricetus auratus*) were exposed to total body irradiation with x rays, in doses between 200 and 800 r. In 37 animals surviving the exposure, the ovaries could be investigated. Radiosensitivity of the ovaries was judged by the changes in the estrous cycle, which was observed with the aid of unstained vaginal smears, taken daily. The ovaries were also investigated histologically 10 months after exposure: serial sections were made through

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radioactivity of the ...

the ovary when the number of follicles was counted in every tenth section. It was found that a single exposure to 200 - 400 r leads to ovarian atrophy; 500 r proved to be the absolute minimum lethal dose. Initially the atrophy lasted longer, but soon there changed ovarian morphology. Histological investigation revealed a decrease in the number of follicles, proportional to the dose except the first animals occurred after exposure to 200 r, and in animals exposed to 500 r all follicles had disappeared. There was a clear quantitative correlation between the severity of the ovarian atrophy and the number of follicles counted in the various individual animals. The res. to show that golden hamsters occupy an intermediate position between mice and guinea pigs with regard to the radioresistance of their ovaries. There are 4 figures and 2 tables.

Association: Institut Genetiki, AN SSSR, Moskva (Institute of Genetics, AN SSSR, Moscow)

3/147/62

40538

S/670 62 000 026 001 001

1016 1216

AUTHOR Petrova, O. N.

TITLE

The role of the local and distant effects of total body X-irradiation in injuring mice ovaries

SOURCE

Akademiya nauk SSSR, Institut genetiki, Trudy, no. 26, 1962, 180-188

TEXT Radiation injury of mammalian tissues and organs by total body X-irradiation may be due to a direct effect of X-rays on the given tissue or organ or to indirect effects resulting from damage of other organs or appearance of radiotoxins. The role of the local and distant effects in radiation injury of the sexual glands of mammals has not yet been clearly established. The elucidation of this problem may greatly help in understanding the mechanism of action of total body irradiation on the sexual system. 122 sexually mature line A female mice, weighing 19-26 g each were divided into 4 groups. One group was subjected to total body irradiation with a dose of 100 r (conditions: 160-170 Kv, 5-6 mA, filters: 0.5 mm Cu + 0.75 mm Al; focal distance 60 cm, dose rate 6.4-6.7 r/min) which was not lethal but caused irreversible sterilization. The 2nd group was subjected to local irradiation of the ovaries (irradiated area 30 x 18 mm). In the 3rd group only the heads were irradiated, while the 4th group was not irradiated at all. The estrual cycle of the animals was investigated by daily examining vaginal smears for the first 3 months and during the 6th and 9th months after irradiation. In addition, 3 and 6 months after irradiation all the mice were checked for fertility by placing

Card 1 2

The role of the local and distant effect of

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1016/1216

them in the same cage with non-irradiated males for 2 weeks and recording the size of each litter and the number of stillborn progeny. The results have shown that the injury caused by total body X irradiation of mice with a non-lethal sterilizing dose (100 r) is due to local damage of the ovaries. There are 4 figures and 3 tables.

ASSOCIATION: Institut genetiki AN SSSR (Institute of genetics AS USSR)

Card 2 2

RIK, G.R.; PETROVA, O.N.; MISYUK, L.A.; PLATONOVA, L.V.

Study of the shift in isotope make-up of the elements Sr, Rb,
Ca, K and Li in their assimilation from the nutrient medium by
plants. Biofizika 6 no.6:740-744 '61. (MIRA 15:1)

1. Agrofizicheskiy nauchno-issledovatel'skiy institut Vsesoyuznoy
akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina, Leningrad.
(PLANTS_ASSIMILATION) (ISOTOPES)

NECHAYEV, I.A.; PETROVA, O.N.; CHUDINOVSKAYA, G.A.

Survival rate of golden hamsters following whole-body X irradiation
and its change due to the effect of β -mercaptoethylamine. Trudy
Inst. gen. no.28:410-420 '61. (MIRA 14:11)
(RADIATION PROTECTION) (MERCAPTO COMPOUNDS)
(X RAYS--PHYSIOLOGICAL EFFECT)

PETROVA, O.N.

Role played by the local and indirect effect of total-body X
irradiation in ovarian injuries in mice. Dokl. AN SSSR 123
no.6:1018-1021 D '58. (MIRA 12:1)

1. Institut genetiki AN SSSR. Predstavleno akademikom T.D.
Lyseenko.

(X RAYS--PHYSIOLOGICAL EFFECT) (OVARIES)

(3)

WORK:

Petrova, O. N.

SG7/20-127-6-17/50

TITLE: The Role of the Local and Distant Effects of a Total X-Ray Irradiation in the Case of Injuries to the Ovaries of Mice (Rol' mestnogo i distantsionnogo deystviya obshchego rentgenovskogo oblucheniya v povrezhdenii yaichnikov myshy)

ORIGINAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 6, pp 1613-1617 (USSR)

ABSTRACT: The authoress investigated the "estral" cycle and the fecundity of female mice in dependence on whether the ovaries were irradiated locally or together with other organs of the body. Simultaneously, the effect produced upon the ovaries by an irradiation of the head was investigated. 122 pubescent female mice of line A weighing 18 - 20 g were examined. The animals were subdivided into the following groups: 1) Animals subjected to total X-ray irradiation. 2) Animals in which the ovarian region was irradiated locally. 3) Animals in which the head was irradiated. 4) Test animals which were not irradiated at all. The experiments carried out are described in chart. The fecundity of the animals was investigated 3 and 6 months after irradiation. For this purpose, the irradiated female mice were

Card 1/3

The Role of the Local and Distant Effects of a Total X-Ray Irradiation in the Case of Injuries to the Ovaries of Mice

Sci (96-11)-1113-11

kept together with non-irradiated male animals for 1 week, the number of young mice produced in each individual litter and the number of stillbirths was recorded. According to the results thus obtained, irradiation of ovaries in the case of total as well as of local application disturbs the estrous cycle. Deviations from the rule are observed already after 3 months. These disturbances manifest themselves with great distinctness with an increasing time interval from the time of irradiation onwards. The "estrus" cycle is disturbed in a similar manner in the case of locally and totally irradiated animals. In the case of mice in which only the ovaries are irradiated the duration of the "estrus" cycle is different, a little from that of control animals. According to data concerning the number of fertile females, the average number of young animals in a litter, and the percentage of stillbirths, a total or local irradiation of the ovaries produces effects already three months after irradiation.

Part 2/3

The Role of the Local and Distant Effects of a Total X-ray Irradiation in the Case of Injuries to the Ovaries of Mice SOV/24-103-6-17,00

The mechanisms of this damage caused by total and local irradiation are very similar to one another. The authoress thanks N. I. Ruzhkin, Corresponding Member of the Academy of Sciences, USSR, and Professor N. I. Shapiro for their advice and assistance. There are 3 tables and 3 references, 2 of which are Soviet.

ASSOCIATION: Institut Genetiki i Evolyutsionnoy Biologii (Institute of Genetics of the Academy of Sciences, USSR)

PRESENTED: August 13, 1956, by T. D. Lysenko, Academician

SUBMITTED: August 11, 1956

Card 3/3

SHAPIRO, N.I., MUZHEDIN, K.I., PETROVA, O.N.

Effect of X irradiation on the viability and fertility of guinea pigs [with summary in English]. Zhur.ob.Bio. 19 no.4:249-264
Jl-Ag '58 (MIRA 11:7)

1. Institut biofiziki i Institut genetiki AN SSSR.
(X RAYS--PHYSIOLOGICAL EFFECT)
(GUINEA PIGS)

PETROVA, O. P., (Grad Stud)

Dissertation: "Development of Methods for Determining the Mechanical Properties of Rocks by Impressing a Die." Cand Tech Sci, Moscow Order of the Labor Red Banner Petroleum Institute I. M. Gubkin, 29 Jun 54. (Vechernyaya Moskva, Moscow, 18 Jun 54)

SO: SUM 318, 23 Dec 1954

AID P - 3620

Subject : USSR/Mining

Card 1/1 Pub. 78 - 4/20

Authors : Shreyner, L. A., V. P. Yakushev, O. P. Petrova and A. T. Portnova

Title : Classification of rocks according to their mechanical characteristics

Periodical : Neft. khoz., v. 33, #10, 15-23, 0 1955

Abstract : The author makes an analysis of the purely mechanical characteristics of rocks that are important for proper use of drilling equipment in penetrating the formations. An apparatus is described which was used to determine the compressive strength, resilience, plasticity and breaking point of brittle, plastic-brittle, and non-brittle rocks. Some data of those tests are given. 4 references, 1949-1955.

Institution : None

Submitted : No date

CHRYNER, L.A.; PETROVA, O.P.

Determination of plastic properties of rocks. Dokl. AN SSSR 96 no.3:511-513
My '54. (MLRA 7:6)

1. Institut nefti Akademii nauk SSSR. (Rocks) (Plasticity)
Predstavleno akademikom S.A.Khristianovichem.

SHEYNER, L.A.; YAKUSHEV, V.P.; PETROVA, O.P.; PORTNOVA, A.T.

Classification of rocks according to mechanical properties.
Nefl.khos.33 no.10:15-23 0 '55. (MIRA 9:1)
(Rocks--Analysis) (Boring)

SIEZINGER, I.I.; KONENKOV, K.S.; PETROVA, O.P.

Apparatus for determining the mechanical properties of rocks.
Zav.lab. 24 no.10:1270-1271 '58. (MIRA 11:11)

1. Institut nefti AN SSSR.
(Rocks) (Testing machines)

SHREYNER, Leonid Aleksandrovich; PETROVA, Ol'ga Pavlovna; YAKUSHEV, Vasilii Petrovich; PORTNOVA, Anna Timofeyevna; SADILENKO, Konstantin Mikhaylovich; KLOCHKO, Nikolay Aleksandrovich; PAVLOVA, Nina Nikolayevna; BALANDIN, Pavel Stepanovich; SRIVAK, Aleksandr Ivanovich; KOVALEVA, A.A., vedushchiy red.; POLOSINA, A.S., tekhn. red.

[Mechanical and abrasive properties of rock] Mekhanicheskie i abrazivnye svoistva gornykh porod. Pod obshchei red. L.A. Shreiner. Moskva, Gos. nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry, 1958. 200 p. (MIRA 11:8)

(Rocks)

SOV. 1974-10-11

AUTHORS: Shadrin, I. I., et al. R. S., Pskov, C. P.

TITLE: An apparatus for the measurement of the deformation rate of a sample (Prilozhenie k metodike izmereniya skhvatki vzrastaniya)

PERIODICAL: Zashchita i obratnoye stroeniye, 1974, Vol. 24, No. 10, pp. 170-171 USSR.

ABSTRACT: At the present time, the most widely used apparatus for the measurement of the deformation rate of a sample is the Konstruktorskoye tsentrulnoye upravleniye (Construction Bureau of Pskovskiy Mekhanizmy) an apparatus that device is for the determination of the deformation rate. At the present time, the extent of the deformation of the sample is measured. An automatic recording of the rate is made by the apparatus. A may be seen from a program given the apparatus consists of three main parts: the loading device, the electrical circuit for the deformation measurement, and a small stage for fixing the sample. From a program of the deformation of a sample as a function of time it may be seen that the rate of a stepwise displacement of the iron the recording is sufficient accurate. The apparatus described may also be used for testing other non-metallic materials (rubber, plastic, etc.). There are 2 figures.

Card 1/2

SCV/32-24-10-4170

An Apparatus for Determining the Mechanical Properties of Rock.

ASSOCIATION: Institut nefti Akademii Nauk SSSR (Institute of Petroleum,
AS USSR)

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PHASE I BOOK EXPLOITATION 976

Shreyner, Leonid Aleksandrovich, Petrova, Ol'ga Pavlovna, Makushin, Vasilii Petrovich, Portnova, Anna Timofeyevna, Sadilenko, Konstantin Mikhaylovich, Klochko, Nikolay Aleksandrovich, Pavlova, Nina Nikolaevna, Balandin, Pavel Stepanovich, Spivak, Aleksandr Ivanovich.

Mekhanicheskiye i abrazivnyye svoystva gornyykh porod (Mechanical and Abrasive Properties of Rocks) Moscow, Gostoptekhizdat, 1958. 400 p. 3,000 copies printed.

Gen. Ed.: Shreyner, L.A., Professor; Executive Ed.: Kovaleva, A.A.,
Tech Ed.: Polosina, A.S.

PURPOSE: The book is intended for scientists, engineers and technicians engaged in drilling operations in the petroleum and mining industries.

COVERAGE: The book describes methods of evaluating the mechanical properties of rocks by means of the stamp-pressing technique. This method makes it possible to determine simultaneously the hardness, plasticity

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ticity, and elastic modulus of rocks. Rocks of different mineralogical composition and structure are described and classified by their abrasive properties. Basic factors in the relationship of wear on the mineralogical composition, load, and speed of rotation are shown. A classification table of sedimentary rocks is also given. The information provided in the book should promote the better use and design of drilling instruments, and operational procedures in different geologic media. Professor V.V. Zaleskiy is cited as having made important contributions to this field. There are 64 diagrams, 70 tables, and 39 bibliographic references, of which 28 are Soviet, 3 German and 8 English.

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MEMORANDUM FOR THE DIRECTOR

Subject: [Illegible text]

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