

VYAZNIKOV, Nikolay Filippovich, kand. tekhn. nauk; POPANDOFULO
A.N., kand. tekhn. nauk; MIKHAYLOV-MIKHEYEV, P.B., red.;
SHILLING, V.A., red.izd-va; GVIRTS, V.L., tekhn. red.

[Modern high-speed steel and its heat treatment] Sovremennaya bystrorezhushchaya stal' i ee termicheskaya obrabotka. Leningrad, 1963. 21 p. (Leningradskiy dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriya: Metallovedenie i termicheskaya obrabotka, no.5)

(MIRA 16:12)

(Tool steel--Heat treatment)

S/137/62/000/001/147/237
A006/A101**AUTHORS:** Vyaznikov, N.F., Popandopulo, A.N.**TITLE:** The ratio of the carbon and vanadium content in high-speed steels**PERIODICAL:** Referativnyy zhurnal. Metallurgiya, no. 1, 1962, 39, abstract 11266
(V sb. "Stal", Moscow, Metallurgizdat, 1961, 469 - 477)

TEXT: In high-speed C-V steels, used in practice, the following relation between the C and V content is observed: $C = 0.7 + 0.2(V - 1)$. In this case, extended holding times are required for heating for quenching, to assure carbide dissolving and high red-hardness; holding time attains up to 10 sec/mm or, according to some recommendations, up to 20 sec/mm of the work piece thickness (diameter). This causes growth of austenite grains in the carbide and the separation of carbide along the grain boundaries, simultaneously reducing strength and ductility. Investigations were made with 20 heats with a large range of alloying element contents (0.9 - 1.8% C; 1.2 - 5.0% V) and it was established that the best technological properties, which make it possible to reduce holding down to 3 - 4 sec/mm, are attained at a C content raised by 0.2 - 0.3%, or by reducing V correspondingly to relation $C = 0.9 + 0.25(V - 1)$. Grade P18Φ3K8M (R18Φ3K8M)

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The ratio of the carbon ...

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steel (1.54% C, 3.18% V) when oil-quenched from 1,240°C and triple-annealed at 560°C, by 1 hour holding, shows high R_C (up to 70, during 4-hour tests at 650°C, R_C does not drop below 60. The steel structure is fine-grained and consists of non-acicular martensite, bainite and carbides. The steel is suitable for the machining of hard-to-deform alloys under impact cutting conditions. There are 7 references. ✓

Ye. Bukhman

[Abstracter's note: Complete translation]

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POPANDOPULO, A.N.

Dilatometric investigation of secondary martensite transformation in
high-speed cobalt steel. Metalloved. i term. obr. met. no.9:
8-14 S '63. (MIRA 16:10)

1. Leningradskiy politehnicheskiy Institut.

POPANDOPULO, A.N., inzh.; SNEGUR, I.Z.; inzh.

Medium tungsten cobalt-vanadium high-speed steel. Metalloved. i term. obr.
met. no.2:35-40.F '61. (MIRA 14:3)

1. Leningradskoy politekhnicheskoy institut.
(Tool steel) (Tungsten steel)

POPANDOPULO, A. N.

Mechanical properties of high-tungsten cobalt-vanadium high-speed steel. Analele metalurgie 15 no.4:102-109 O-D '61.

(Tungsten steel) (Cobalt) (Vanadium)

MEMORANDUM FOR THE DIRECTOR

Subject: [Illegible]

Date: 1/4/57

VYAZNIKOV, N.F.; YELISEYEVA, E.A.; POPANDOPULO, A.N.

Electric arc welding of rapid steel plates to cutter holders.
Trudy LPI no. 251:35 :39 '65 (MIRA 19:1)

S/121/62/000/008/002/002
D040/D113

AUTHORS: Amosov, I.S., Belov, A.V., Zlotnitskiy, B.V., and Popandopulo,
A.N.

TITLE: The cutting properties of cobalt-vanadium high-tungsten high-speed
steel

PERIODICAL: Stanki i instrument, no. 8, 1962, 33-35

TEXT: P 18C54K8M (R18F4K8M) steel, which already existed in 1958, contains
1.25-1.40% C, 4.4-5.0% Cr, 15.5-17% W, 3.2-3.8% V, 7.5-8.5% Co and 1.2-1.5% Mo.
The results are given of cutting tests conducted at the Nevskiy mashinostroitel'-
nyy zavod im. V.I.Lenina (Neva Machine-Building Plant im. V.I.Lenin), the
Leningradskiy metallicheskiy zavod im. XXII s"yezda KPSS (Leningrad Metal Plant
im. XXII s"yezd KPSS) and the Leningradskiy politekhnicheskiy institut im.
M.I.Kalinina (Leningrad Polytechnic Institute im. M.I.Kalinin). Cutting tools
made of R18F4K8M proved to be 2-6 times more durable than tools made of similar
standard steels, and can be used for milling austenitic steel. The cutting
speed range is 20-30 m/min, and the cutting properties depend to some extent

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VYAZNIKOV, N.F.; YERMAKOV, B.B.; POPANIKOV, A.B.

Cracking during the gas cutting of steel. Trudy LPI no.202:91-92
'59. (MIRA 12:12)

(Gas welding and cutting)

S/122/60/000/002/015/018
A161/A130

AUTHORS: Vyaznikov, N. F.; Knoroshavlyov, V. G.; - Candidates of Technical Sciences; Popandopulo, A. N., Engineer

TITLE: The heating of turbine blades in a salt bath

PERIODICAL: Vestnik mashinostroyeniya, no. 2, 1960, 71 - 72

TEXT: Heating in a salt bath is being used for heat treatment of steel but not for forging. One of the reasons is the salt film left on metal. But heating in a salt bath gives quick and even heating, the metal surface is not oxidized, and automatic accurate heat control is possible. These advantages are particularly important for turbine blades. Leningradskiy politekhnicheskii institut im. M. I. Kalinina (Leningrad Polytechnical Institute im. M. I. Kalinin) jointly with Nevskiy zavod im. V. I. Lenina (Neva Plant im. V. I. Lenin) have found means for removing the salt film after salt bath - by quick and brief immersion of the billet into cold water. The film instantaneously turned into a solid crust and separated leaving the metal surface perfectly free from salt. A worker of average skill easily completed the immersion in 2 - 3 sec, and the billets heated to 1,250°C cooled not more than 20 - 25°C. The experiment material were turbine blade billets

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The heating of turbine blades in a salt bath

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from heat resistant 2X13 (2Kh13), 15X11MΦ (15Kh11MF) and 9H726 (EI726) steel, 60 to 75 mm in diameter and 200 to 350 mm length, of the following chemical composition (Table 1):

(%)	C	Si	Mn	Cr	Ni	Mo	W	V	Nb
2Kh13	0.20	0.6	0.06	14.0	0.6	-	-	-	-
15Kh11MF	0.16	0.5	0.6	11.5	0.6	0.6	0.4	-	-
EI726	0.10	0.8	1.5	14.0	20.0	-	-	2.5	1.0

The billets were heated to 1,230 - 1,250°C in СП-2-35 (SP-2-35) salt bath, and in an electric furnace with silite heaters for comparison. The temperature of both the bath and the furnace was controlled with a platinum/platinum-rhodium thermocouple. Heating time in the furnace was 25 - 30 sec per 1 mm billet diameter, and in the salt bath only 10 - 12 sec/mm. To cut down the heating time further and to prevent moisture from getting into the salt bath, billets were preheated in a chamber furnace with 200 - 700° temperature. Billets preheated to 600° were heated finally in a salt bath, at 3 - 4 times faster rate than in the furnace. Heating to higher temperature in the furnace was avoided to prevent oxidization of metal. Salt of two different compositions was tried - a) 100% barium chloride, and b) 78% barium chloride + 22% sodium chloride. The second composition developed intense

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POPANDOPULO, A.N.

Mechanical properties of high-tungsten cobalt-vanadium rapid steel.
Izv.vys.ucheb.zav.; Chern. met. no.4:119-125 '61. (MIRA 14:4)

1. Leningradskiy politekhnicheskiy institut.
(Tool steel--Testing)

VYAZNIKOV, N.F., kand.tekhn.nauk; KHOROSHAYLOV, V.G., kand.tekhn.nauk,
POPANDOPULO, A.N., inzh.

Heating steel billets in salt baths for stamping. Vest.mash. 40
no.2:71-72 F '60. (MIRA 13:5)
(Machine-shop practice)

18.11.20

also 2908

S/129/61/000/002/008/014
E193/E483AUTHORS: Popandopulo, A.N., Engineer and Snegur, I.Z., EngineerTITLE: Cobalt Vanadium High-Speed Cutting Steel With a Medium Tungsten Content

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1961, No.2, pp.35-40

TEXT: The object of the investigation described in the present paper was to compare the relevant properties of steel P9Φ4K8M (R9F4K8M), containing 1.3% C, 4.27% Cr, 8.8% W, 3.65% V, 8.10% Co, 1.03% Mo, 0.14% Mn, 0.29% Si, 0.02% S and 0.015% P, with those of a standard high-speed cutting steel P18 (R18) and a high (18%) tungsten content steel. It was established in the course of the preliminary experiments that the optimum heat treatment of the steel studied consisted of pre-heating to 850°C, 1 min immersion in a barium chloride bath at 1200°C, and quenching in oil followed by three tempering operations (each of 1 h duration) at 560°C. The structure of steel after this treatment consisted of finely-acicular martensite and various carbides, its properties being: Rockwell (C) hardness equal 64 to 65; bending strength equal 235 kg/mm²; impact strength a_K equal 1.2 kgm/cm²;

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Cobalt-Vanadium High-Speed Cutting Steel With a Medium Tungsten Content

grain size equal 7 to 8 (in "ball".units); residual austenite content equal 3 to 4%; Kp_{60} equal 635°C ; Rockwell (C) hardness at 600°C equal 54 to 56. Since the steel under consideration was found to be sensitive to overheating, the effect of time at 1200°C (prior to quenching) on its properties was studied. The results are given in Fig.1, where Rockwell hardness (HRC) and impact strength (a_k , kgm/cm^2) are plotted against time (sec) at 1200°C ; curve 1 shows the variation of HRC of steel in the as-hardened condition, curves 2 and 3 relating, respectively, to HRC and a_k of specimens hardened and tempered (thrice for 1 h) at 560°C . Fig.2 shows how the time at 1200°C (prior to quenching) affected microhardness H_{μ} (kg/mm^2) of the steel at red heat (curve 1), H_{μ} measured inside the grains, or so-called "effective red-hardness" (curve 2) and Rockwell hardness (HRC). In the next series of experiments, it was established that the impact strength of tempered specimens can be increased (from 1.2 to 1.7 kgm/cm^2) by increasing the rate of cooling after tempering (i.e. by cooling in Card 2/7

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Cobalt-Vanadium High-Speed Cutting Steel With a Medium Tungsten Content

oil instead of air) and that internal stresses due to dispersion hardening, taking place during tempering at 560°C, can be relieved by a low-temperature (30 min at 300°C) tempering. Even better impact strength (about 2.0 kgm/cm²) can be attained by a treatment consisting of: 30 min at 720°C, followed by oil cooling plus quenching from 1200°C, plus tempering (thrice at 560°C for 1 h), followed by cooling in oil. The effect of sub-zero treatment on the properties of steel R9F4K8M is illustrated in Fig.3, showing HRC (top diagram), magnetic permeability μ , in gauss/oersted (middle diagram) and a_k (bottom diagram) of specimens quenched from 1200°C (first experimental point), quenched and held at -76°C for 2 h (second experimental point) and tempered once (third experimental point) and twice (fourth experimental point) after the sub-zero treatment; branches of curves numbered 1, 2 and 3 relate to specimens tempered at 450, 520 and 560°C respectively. In the next series of experiments, the comparative resistance to wear of steels R18, P9K5 (R9K5) and R9F4K8M was determined. To this end,

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specimens of steel X25H13T (Kh25N13T) were end-milled with cutters (cross-section 24 x 24 mm, $\varphi = 45^\circ$, $\varphi_1 = 10^\circ$, $\alpha = 8 - 12^\circ$, $\gamma = 15^\circ$, $r = 2$ mm) made of the steels examined, under the following conditions: $v = 23$ m/min, $s = 0.3$ mm/gear and $t = 2$ mm. The results, reproduced in Fig.5 where the degree of wear (mm) of the tool is plotted against machining time (min), indicated that steel R9F4K8M is twice as durable as steels R18 and R9K5. The results of other similar tests are given as follows:

Steel Code	End Boring of a Titanium alloy	Turning of Alloy ЭИ 617 (EI617)	End-Milling of steel Kh25N13T
27 Relative Wear Resistance in %			
P9Φ4K8M (R9F4K8M)	100	100	100
P9K10 (R9K10)	102	89	-
P18Φ2K8M (R18F2K8M)	106	133	160

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Cobalt-Vanadium High-Speed Cutting Steel With a Medium Tungsten Content

Finally, it was shown that the cutting characteristics of the steels studied are not affected by the sub-zero treatment. A slight increase in the resistance to wear can be attained by applying this treatment, but only if subsequent tempering is carried out at somewhat lower temperature (520°C). Although the cutting properties of steel R9F4K8M are not as good as those of the high (18%) tungsten content steel containing the same proportion of cobalt, this difference becomes significant only in machining very tough materials under conditions where the cutting tool is subjected to impact loads. There are 5 figures, 2 tables and 9 references: 8 Soviet and 1 non-Soviet.

ASSOCIATION: Leningradskiy politekhnicheskiy institut
(Leningrad Polytechnical Institute)

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Cobalt-Vanadium High-Speed Cutting Steel With a Medium Tungsten Content

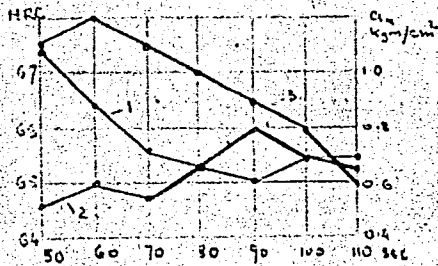
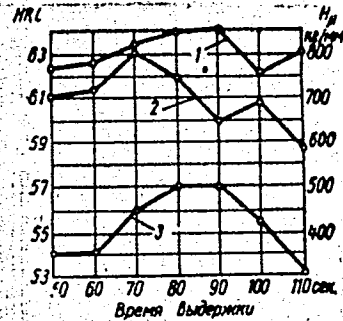


Fig. 1.



Фиг. 2. Влияние времени выдержки при окончательной нагреве на красностойкость (1), эффективную красностойкость (2) и горячую твердость (3).

Fig. 2.

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Popandopulo, A.N.

AUTHORS: Vyaznikov, N. F. and Popandopulo, A.N. 129-3-13/14

TITLE: On increasing the chemical stability of diffusion of chromated steel. (Povysheniye khimicheskoy stoykosti diffuzionno-khromirovannoy stali).

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1958, No.3, pp. 61-62 (USSR)

ABSTRACT: One of the drawbacks of chromating is the porosity of the diffusion layer, which is observed in some cases, and which brings about pitting corrosion of components operating inside aggressive media. At the Leningrad Polytechnical Institute (Leningradskiy Politekhnicheskiy Institut) experiments were carried out on increasing the chemical stability and the surface hardness of diffusion chromated layers by additional cementation by means of carburisation. Diffusion chromating was effected on low carbon steel "20" and armco iron specimens inside a "metalliser" consisting of 50% low carbon ferrochromium, 45% aluminium oxide and 5% ammonium muriate at 1200°C for a duration of eight hours. The carburisation was effected at 930°C for four hours in a carburiser produced by the Bondyuzhskiy Works. A reproduced micro-photo shows the micro-structure of the layer which was

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On increasing the chemical stability of diffusion of chromated steel.

chromated and then carburised as revealed by etching with a 10% solution of nitric acid and alcohol; at the surface of the chromium-cemented layer, a carbide crust of about 0.1 mm thickness, which is not affected by the etching, can be observed. The results of determining the hardness and the corrosion stability after chromating and chromium-cementation are entered in a table which gives the hardness and the chemical stability of carburised and non-carburised chromated specimens. Observation of the corrosion behaviour of chromated and chromated + carburised specimens in sea-water have shown that pitting corrosion can be observed after three days on chromated specimens, whilst no corrosion was observed even after ten days on specimens which were chromated and then case hardened. Formation of a layer of chromium carbides during case hardening of chromated specimens brings about an increase in the density of the chromated layer and an increase of its corrosion stability. This is attributed to the fact that during cementation of chromated specimens a compression takes place of the surface crust due to increase in volume during the carbide formation which

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On increasing the chemical stability of diffusion of chromated steel.

brings about welding of the pores in the temperature range of case hardening (930°C). Furthermore, during case hardening of chromated steel, the chromium concentration at the surface of the chromated layer increases owing to counter diffusion of atoms of chromium towards the diffusion front of the carbon and this also results in an increase of the chemical stability of chromated specimens.
There are 1 figure and 1 table.

(Note: Complete translation except for the figure caption and table).

ASSOCIATION: Leningrad Polytechnical Institute imeni M.I.Kalinin.
(Leningradskiy Politekhnikheskiy Institut imeni M. I. Kalinina).

AVAILABLE: Library of Congress.

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Popanda Pnl, A.N

Leningrad. Politehnicheskii Institut imeni N. I. Kalinaia Metallovedeniye (Physical Metallurgy) Moscow, Mashgis, 1959. 107 p. (Serials list: Trade, vpp. 202) 2,300 copies printed.

Sponsoring Agency: Ministerstvo vysshego obrazovaniya SSSR.

Reep, Ed.: V. S. Salinov, Doctor of Technical Sciences, Professor; M. I. G. A. Kashchenko, Professor; Tech. Ed.: L. V. Shcherbakov, Managing Ed. for Literature on the Design and Operation of Machinery (Leningrad Division, Mashgis); P. I. Felisov, Engineer.

PURPOSE: This collection of articles is intended for engineers, technicians, and research workers in the fields of physical metallurgy and the heat treatment of metals.

CONTENTS: The papers in this collection contain the results of experimental work dealing with the study of constitution diagrams of metal systems; the nature of solid solutions, aging of complex alloys, processes occurring during the heating and cooling of alloys, Card 1/8 and the thermotechnical treatment of steel.

Kazhibay, M. P., S. S. Yermakov, and N. E. Soldatova. Carburizing of Chrome Stainless Steel 87

Regimes are given for carburizing, quenching, and tempering, and results of a determination of the hardness and chemical stability of the case are given.

Yermakov, M. P., S. S. Yermakov, and A. E. Popandomilo. Cracks in the Gas Cutting of Steel 91

Results are given of a metallographic investigation of the cause of crack formation in the cut zone of case-hardened alloy steel cut with an oxyacetylene flame. Methods of controlling this problem are presented.

Yermakov, M. P., and S. S. Yermakov. Investigation of Steel for Drill Bits 93

Data are given on the testing of three types of case-hardened steel under conditions approximating those under which drill bits made of these steels operate. A method of heat treating these bits is outlined.

Mazurenko, G. I. Decomposition of Residual Austenite During the Tempering of Carbon Steel 99

This article and the one following give the results of an investigation of the dependence of magnetic saturation on tempering temperature in 17 cases of steels containing different carbon contents of 0.2 to 1.7 percent. It can be concluded from an analysis of the curves that the decomposition of residual austenite is independent of the carbon content and begins at 100°C.

Mazurenko, G. I., and M. V. Rozhdestvenskaya. Investigation of the Tempering of Steels by the Magnetic Method 102

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mechanical properties of three spring alloys, tin-phosphorus, beryllium-bronze, and German silver. The elastic limit and elastic aftereffect, little-studied characteristics, are assumed to be of basic importance. It is shown that heat treatment is decidedly helpful in improving the alloys with respect to these properties.

S/148/61/000/004/006/008
E193/E580

AUTHOR: Popandopulo, A.N.

TITLE: Mechanical properties of a cobalt vanadium high-speed cutting steel with a high tungsten content

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, no. 4, 1961, pp. 119-125

TEXT: The object of the present investigation was to study the effect of various heat treatments on the transverse bending strength, impact strength, and impact fatigue strength of a high-speed cutting steel $\text{P18}\Phi\text{4K8M}$ (R18F4K8M), containing 1.25-1.4% C, 4.4-5% Cr, 15.5-17% W, 3.2-3.8% V, 7.5-8.5% Co and 1.2-1.5% Mo. The impact tests were carried out on unnotched bars, pure bending impact load (30 kg cm) was used in fatigue tests on 12 mm diameter cylindrical specimens. The results can be summarized as follows:
1) After annealing at 850°C, the mechanical properties can be improved by a supplementary treatment, consisting of heating for 1 hour at 720°C followed by oil-quenching. This treatment causes an insignificant decrease in hardness (from 277 to 269 Brinell) and a small increase in bending strength, $\sigma_{0.2}$ (from 150 to 156 kg/mm²), but considerably improves the impact strength, a_k
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(from 2.0 to 5.6 kg/cm²). 2) The supplementary treatment is beneficial also in cases when the steel is subsequently hardened and tempered. Steel, hardened (by quenching from 1240°C) and given three tempering treatments (each of 1 hour duration) at 560°C, has $\sigma_{bend} = 184 \text{ kg/mm}^2$ and $a_k = 0.95 \text{ kgm/cm}^2$, the corresponding figures for specimens preliminarily tempered at 720°C being 188 kg/mm² and 1.3 kgm/cm². 3) The steel R18F4K8M is prone to temper brittleness both in the annealed and hardened condition. To avoid this brittleness (closely associated with precipitation hardening), components should be oil-quenched from the tempering temperature. The effect of cooling rate after tempering is shown in Fig.2; specimens were annealed at 850°C, oil-quenched from 1210, 1240 and 1270°C, and tempered twice for 1 hour at 560°C and once for 2 hours at 600°C. The blocks in each of the three groups relate (from left to right) to specimens cooled after tempering in the furnace, in air, and in oil; the height of the hatched blocks gives σ_{bend} (kg/mm², left-hand scale), that of the plain blocks a_k (kgm/cm², right-hand scale). It will be seen that the optimum combination of properties ($\sigma_{bend} = 250 \text{ kg/mm}^2$)

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Mechanical properties of a ...

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and $a_k = 1.4 \text{ kgm/cm}^2$) was attained in specimens quenched from 1240°C and cooled in oil after tempering. 4) The cutting properties can be improved by a supplementary tempering at $400\text{-}500^\circ\text{C}$ which removes the internal stresses caused by precipitation hardening during the high-temperature tempering. 5) Temper brittleness is reversible, as demonstrated by experiments. Specimens quenched from 1270°C , tempered three times for 1 hour at 560°C , and then subjected to one of the following treatments gave a_k (kgm/cm^2) values as shown in brackets: temper for 1 h at 600°C , furnace cool (0.5); temper for 1 h at 600°C , oil-quench (0.8); temper for 1 h at 600°C , furnace cool + temper for 15 min at 600°C , oil-quench (0.9); temper for 1 h at 600°C , oil-quench + temper for 15 min at 600°C , furnace cool (0.58); temper for 1 h at 600°C , oil-quench + temper for 15 min, furnace-cool + temper for 15 min at 600°C , oil-quench (0.86). 6) In the impact fatigue tests, the number of loading cycles causing the fracture of specimens quenched from 1240°C and subjected to one of the following tempering treatments varied as shown in brackets: tempering thrice at 560°C (8×10^4); tempering thrice at 560°C + a short tempering treatment at 450°C (2.2×10^5); tempering twice at 560°C + 2 h tempering at

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Mechanical properties of a ...

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600°C (2.8×10^5). It will be seen that there is no definite relationship between the impact strength and impact fatigue strength of the steel studied. Supplementary tempering at 450°C brings about an increase in both these properties; 2 h tempering at 600°C does not affect the impact strength, but considerably improves the impact fatigue characteristics. 7) Sub-zero treatment (holding for 3 h at -76°C after the conventional hardening operation) increases the impact strength of the steel studied, but only if followed by tempering with rapid cooling, or by supplementary tempering at 400-450°C, or by tempering at temperatures lower than those normally employed. There are 7 figures and 10 references: 9 Soviet and 1 non-Soviet. The English-language reference reads as follows: Ref.9: W.E. Bancroft, W.W.Wight. Metal Progress, v.53, 1948, No.4.

ASSOCIATION: Leningradskiy politekhnicheskii institut
(Leningrad Polytechnical Institute)

SUBMITTED: December 16, 1959

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POPANDOPULO, A. N., inzh.

Rapid cobalt-vanadium steel with a high tungsten content. Izv.
vys.ucheb.zav.; chern.met. 2 no.5:83-89 My '59.
(MIRA 12:9)

1. Leningradskiy politekhnicheskoy institut. Rekomendovano kafedroy
metallografii i termicheskoy obrabotki Leningradskogo politekhnicheskogo
instituta.

(Cobalt-vanadium-tungsten alloys--Heat treatment)
(Tool steel)

L 21117-65 EPF(n)-2/EWT(m)/EMP(b)/EWA(d)/EMP(t) Pu-4 IJP(c) MJW/JD/JG
ACCESSION NR: AR5000605 S/0137/64/000/008/I077/I077

SOURCE: Ref. zh. Metallurgiya. Sv. t., Abs. 81484

AUTHOR: Vyaznikov, N. F.; Popandopulo, A. N.; Seregina, T. P.

TITLE: New molybdenum-tungsten high speed steels, 6

CITED SOURCE: Sb. Legirovaniye staley. Kiyev, Gostekhnizdat USSR, 1963, 181-189

TOPIC TAGS: molybdenum² containing alloy, tungsten² containing alloy, high speed steel, cutting tool/ steel R6F2M5, steel R6F2K8M5, steel R6F2K14M5, steel 1Kh18N9T, steel R18

TRANSLATION: Results are given of a study of the physical, mechanical, and cutting properties of three types of high speed Mo-W steels, R6F2M5, R6F2K8M5, and R6F2K14M5. Results of tests of the service lives of cutters made of these steels in machining steel 1Kh18N9T at an economically feasible cutting speed show that they surpass steel R18 in service life: R6F2M5 by 2 times, R6F2K8M5 by 3 times, and R6F2K14M5 by 3.5 times.

Card 1/1 SUB CODE: MM ENCL: 00

L 18321-55 EWT(m)/EPF(n)-2/EWA(d)/T/EWP(t)/EWP(b) Pu-4 IJP(c)/ASD(m)-3 MJW/
ACCESSION NR: AR4047532 JD/JG S/0277/64/000/008/0007/0007

SOURCE: Ref. zh. Mashinostr. mat., konstr. i rsshchet detal. mash.
Otd. vy*p., Abs. 8.48.41

AUTHOR: Vyaznikov, N. F.; Popandopulo, A. N.; Seredina, T. P.

TITLE: New molybdenum tungsten fast cutting steels

CITED SOURCE: Sb. Legirovaniye staley. Kiyev, Gostekhizdat, USSR,
1963, 181-189

TOPIC TAGS: Mo, W, molybdenum steel, tungsten steel, cutting tool,
metalworking/ steel R18, steel R6F2M5, steel R6F2K8M5, steel
R6F2K14M5

TRANSLATION: Results are reported of an investigation of the
physico-mechanical and cutting properties of three types of
molybdenum tungsten steels: R6F2M5, R6F2K8M5, and R6F2K14M5.
Results of tests on the life of cutters made of these steels used in
working austenitic steel 1Kh18N9T at an economically feasible cutting
speed show that these steels have lives superior to steel R18:

Card 1/2

L 18321-65

ACCESSION NR: AR4047532

R6F2M5 by 2 times, R6F2K8M5 by 3 times, and R6F2K14M5 by 3.5 times.

High Speed Steel 8

SUB CODE: MM

ENCL: 00

Card 2/2

POPANDOPULO, D.N.

KORNYUSHIN, L.K.; POPANDOPULO, D.N.; SILAYEV, A.P., spetsial'nyy redaktor;
TROFIMOV, A.V., tekhnicheskiiy redaktor

[Patternmaking; work experience of stakhanovite ship repairmen]
Izgotovlenie modelei; opyt stakhanovtsev sudoremonta. Moskva,
Izd-vo "Morskoi transport," 1952. 83 p. [Microfilm] (MLRA 7:10)
(Patternmaking)

(N) L 4012-66 EWT(d)/EWT(l)/EWP(v)/EWP(k)/EWP(h)/EWP(l)/EMA(h)/ETC(m) WJ/GH

ACCESSION NR: AP5024408

UR/0286/65/000/015/0088/0088

AUTHORS: Popandopulo, G. K.; Zudova, L. A.; Shenderovich, I. M.; Volkova, O. A.

TITLE: Attachment for water level recorders. Class 42, No. 173430

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 88

TOPIC TAGS: liquid level instrument, remote control system

ABSTRACT: This Author Certificate presents an attachment for water level recorders, containing an electric current source, a device for obtaining heteropolar electric signals obtained as a result of a change in the monitored level, and a double lead communication line. To increase the reliability of remote control, the limiting resistance of the electric current source is shunted by a normally open contact unit which closes at a predetermined level (see Fig. 1 on the Enclosure). Orig. art. has: 1 diagram.

ASSOCIATION: Nauchno-issledovatel'skiy institut gidrometeorologicheskogo priborostroyeniya (Scientific Research Institute of Hydrometeorological Instrument Manufacturing)

Card 1/3

UDC: 681.128.6:621-519

L 4012-66

ACCESSION NR: AP5024408

SUBMITTED: 30Aug63

ENCL: 01

SUB CODE: IE

NO REF SOV: 000

OTHER: 000

Card 2/3

POPANDOPULO, G.V.

Treatment of pulmonary tuberculosis by intratracheobronchial administration of streptomycin. Zhur. ush., nos. 1 gorl. bol. 20 no.5:71 S-0 '60. (MIRA 14:6)

1. Iz L'vovskogo mezhoblastnogo tuberkuleznogo gospitalya dlya invlaidov Otechestvennoy voyny, (TUBERCULOSIS) (STREPTOMYCIN)

POPANDOPULO, I.I.

YEVSTRATOV, Boris Vasil'yevich, geroy Sotsialisticheskogo Truda; NIKITIN, V.N.; POPANDOPULO, I.I.; TERESHCHENKO, N.I., redaktor; VESKOVA, Ye.I., tekhnicheskii redaktor; PAVLOVA, M.M., tekhnicheskii redaktor.

[The state farm in the struggle for profitable operation; practices of the "TSilinskii" State Grain Farm] Sovkhoz v bor'be za rentabel'nost'; opyt TSelinskogo ordena Lenina zernovogo sovkhoza. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1956. 134 p. (MLRA 10:6)

(State farms)

POPANDOPULO, G.F.

Automatic system for feeding slurry to rotary kilns equipped with electromagnetic feeders. TSeiment 27 no.1:25-26 Ja-F '61.

(MIRA 14:2)

1. Zavod "Proletariy."
(Cement kilns)

(Automatic control)

ACC NR: AT5022094

UR/2778/65/000/014/0003/0009

AUTHOR: Popandopulo, G.K. ⁵⁵

TITLE: Remote recorder of sea currents, GM-27

SOURCE: Leningrad. Nauchno-issledovatel'skiy institut gidrometeorologicheskogo priborostroyeniya. Trudy, no.14, 1965, 3-9

TOPIC TAGS: oceanographic instrument, ocean current, ocean dynamics

ABSTRACT: ^{12.55} The remote recorder of ocean current ¹⁰ parameters, GM-27, ²⁶ developed by the NIIGMP, is intended to solve problems of remote measurement and recording of current velocity vector vs. depth. The aim was to develop instrumentation combining adequate precision with operational suitability. The system consists of a submersible sensors and transmitter package (weight - 10 kg.), and a shipborne recorder (20 kg.), connected by a five-conductor cable. It records, at a set depth, the current velocity (3 - to 360 cm/sec), and current azimuth (0 - 360 degrees). It can also compute and record the average azimuth of the current. The water velocity sensor is a vertical axis impeller, the azimuth sensor - a rudder vane, measured against an inner magnetic compass card. A magnetic coupling picks up the impeller RPM inside the sealed instrument body, where photoelectric conversion to discrete electric impulses and transmission to the recorder occurs. The recorder is a 3 min. limit run step motor. Azimuth is sensed photoelectrically by an internal seeker step motor transmitting its search impulses to the synchronized recording shipborne step motor. Depth is registered by a reel counter.

Card 1/2

ACC NR: AT5022094

Results of operational tests indicate a precision of plus or minus (2 cm/sec plus 3% of the measured magnitude). Azimuth precision is within p/m 10 degrees. A valuable feature of the remote recording system is the absence of errors due to cable torsion. The orig. art. has: 2 figures and 2 tables.

ASSOCIATION: NIIGMP

SUBMITTED: 00

ENCL.: 00

SUB CODE: 08

NO REF SOV: 000

OTHER: 000

(18)

HW
Card 2/2

POPANDOPULO, M.K.

Improving the production of wood chemicals. *Gidroliz. i lesokhim.*
prom. 18 no.6:19-20 '65. (MIRA 18:9)

1. Kambileyevskiy khimicheskij zavod.

POPANDOPULO, M.K.

Improving the esterification of acetic acid. *Gidroliz. i lesokhim.*
prom. 16 no.8:25-26 '63. (MIRA 17:1)

1. Kambileyevskiy khimicheskiy zavod.

S/0184/64/000/001/0009/0011

ACCESSION NR: AP4025736

AUTHORS: Popandopulo, Yu. G. (Engineer); Samarin, A. A. (Engineer); Starkova, M. G. (Engineer)

TITLE: Installation for the regeneration of hydrogen

SOURCE: Khimicheskoye mashinostroyeniye, no. 1, 1964, 9-11

TOPIC TAGS: hydrogen, hydrogen regeneration, nichrome catalyst, silica gel, drying unit, heating unit, reduction furnace, cooling unit

ABSTRACT: NIIkhimash has developed an installation for the regeneration of hydrogen from reduction ovens of tungsten and molybdenum recovery plants. The estimated capacity of the unit was 200 m³/hr hydrogen with a residual moisture content of 0.15 gm/m³, which corresponds to a dew point of -40C. The hydrogen from the reduction ovens is passed through a contact apparatus containing nichrome catalyst to bring the oxygen content down to 10-5%. It is then mixed with hydrogen from the system's leak traps. From there hydrogen moves to a cooler where most of the moisture is condensed at 12-14C and is subsequently pumped by a rotary blower to an electric oven where it is heated to 300C. The final step consists in

Card 1/2

ACCESSION NR: AP4025736

passing the hydrogen through two drums of 0.75m³ capacity, filled with silica gel. The first drum contains hydrous silica gel, while the second, separated from the first by a cooling device, is filled with anhydrous silica gel. During passage through the first drum the hot hydrogen removes the moisture from the silica gel and deposits it in the condenser. The capacity of this installation under working conditions was 420-450 m³/hr, the oxygen content of the inflowing hydrogen averaged 0.4%, and the moisture content of the regenerated hydrogen amounted to 1-2%. Orig. art. has: 6 figures and 1 table.

ASSOCIATION: NIIkhimmash

SUBMITTED: 00

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: IE, CH

NO REF SOV: 000

OTHER: 000

Card 2/2

POPANDOPULO, Yu.G., inzh.

Evaporator with "pipe in pipe" heating surface. Khim. i nef. mashinostr. no.3:4-7 S '64. (MIRA 17:12)

POPANDOPULO, Yu.G., inzh.; STARKOVA, M.G., inzh.

Separation of secondary steam in evaporation apparatus. Khim.
mashinostr. no.4:17-19 J1-Ag '63. (MIRA 16:9)
(Evaporating appliances)

POPANDOPULO, Yu.G., inzh.; SAMARIN, A.A., inzh.; STARKOVA, M.G., inzh.

Apparatus for the regeneration of hydrogen. Khim.mashinostr.
no.1:9-11 Ja-F '64. (MIRA 17:4)

POPAN DOPULO, Yu.G., inzh.; NECHAYEVA, N.A., inzh.

Apparatus with a natural circulation for dissolving salts.
Khim.mash. no.2:40-41 Mr '62. (MIRA 15:3)
(Chemical apparatus)

POPANDOPULO, S.G., ordinator.

Dacryocystorhinostomy according to clinical materials for the past 12 years (1941-1952). Trudy AN Tadzh. SSR 40:119-124 '55. (MLRA 9:10)

1. Iz kafedry glaznykh bolezney (zav. prof. L.F. Paradoxov; deceased) Stalinabadskogo gosudarstvennogo meditsinskogo insituta imeni Abuali ibn-Sino (dir. chl. -korr. Akademii nauk Tadzhikskoy SS, Ya.A. Rakhimov).

(LACRYMAL ORGANS—SURGERY)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44									
1017 AND 250 007881 PROCESSES AND PROPERTIES INDEX 3RD AND 4TH COPIES									
P. PANDELO, V. G. CA									
<p style="text-align: center;">Apparatus for carbonation of lime suspensions. V. G. Pandeolo. U.S.P. 2,581,111, Feb. 28, 1948. The apparatus consists of a plate distn. column. Through its axis runs a shaft on which bubble caps are rigidly mounted. The bubble caps carry rakes which serve to stir the lime water on each particular plate. M. Hoch</p>									
A.S.T.M. METALLURGICAL LITERATURE CLASSIFICATION 6-27-57-20-20-2									
1017 AND 250 007881 1017 AND 250 007881 1017 AND 250 007881 1017 AND 250 007881									

POPARA, Milena

Correlation between the general plan of building a postal,
telegraph, and telephone network, and the general program
of postal, telegraph, and telephone development. PTT
Zajed 6 no. 2:37-42 '64.

POPARA, Milena

It is necessary to have a bigger choice of postal values.
PTT Zajed 4 no.2:21-24 Mr-Ap '62.

POPARA, Nedeljko

Social managment in the Yugoslav Postal, Telegraph, and
Telephone Services. PTT Zajed 5 no.2:34-39 Mr-Ap '63.

POPATENKO, V.

"On the Physiological Role of Adsorption of Enzymes by Living Plant Tissues,"

Biokhim., 11, No. 5, 1946.

Mbr. Inst. Biochem. Acad, Sci Dept. Biol. Sci., -1946-

POPATSENKO, Kh.I., inzh.

Basic calculations for suspended pipelines. Stroi.truboprov.
6 no.11:9-10 N '61. (MIRA 1584)

1. Ukhtinskaya proyektno-izyskatel'skaya kontora, g. Ukhta.
(Pipelines)

POPAZOV, D. I. *

35382 Voprosy Sozdaniya Gosudarstvennykh Lesnykh Polos V Usloviyakh Sudnoy Step'i
I Polupustyni. Les I Step', 1949, No. 5, S. 52-56

SO: Letopis' Zhurnal'nykh Statey Vol. 34, Moskva, 1949

* 1 PETROV, A. K.

ПОПАЗОВ, Д. И.

Soils - Astrakhan Province

Forest vegetation conditions of Astrakhan province and creation of deep leafy forests of economic significance. 'Les i step' 4, No. 6, 1952.

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

2

14-57-7-14966

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 7,
p 125 (USSR)

AUTHORS: Popazov, D. I., Bugakov, P. S.

TITLE: Peculiarities of Soil Formation in the Northwestern
Caspian Plain (Nekotoryye osobennosti pochvoobrazo-
vaniya v usloviyakh severo-zapadnoy chasti Prikaspiy-
skoy nizmennosti)

PERIODICAL: Dokl. Mosk. s.-kh. akad. im. K. A. Timiryazeva, 1956,
Vol 1, Nr 26, pp 60-66

ABSTRACT: The southern lake-and-estuary depressed part of the
Caspian Plain and the ancient Volga terrace which
adjoins it exhibit a specific combination of soil
forming processes in which steppes develop over re-
ceding turf. The steppe development process is
active in the lower parts of the relief where grasses
grow during the moist periods of springs and autumns.

Card 1/2

POPAZOV, D.I.

USSR/Soil Science. General Problems.

I-1

Abs Jour: Referat Zh-Biol., No 6, 25 March, 1957, 22419

Author : Popazov, D.I.

Inst :

Title : Genesis of Lime Accumulations in Different Soils.

Orig Pub: Dokl. Mosk. s.-kh. akad. im. K.A. Timiriazeva, 1956, No 22,
276-283

Abstract: Analyses of the total composition, water soluble and organic substances, contained in carbonate formations "zhuravchikakh" taken from loamy chernozem soil of the Orlov oblast' and from gray forest argillaceous soil of the Yaroslav oblast' revealed a striking similarity in their qualitative and quantitative compositions. It is noted that "zhuravchiki" were formed under the influence of soil-formative processes. The formation of "zhuravchiki" in different soils, evidently, has similar characteristics.

Card : 1/1

-4-

USSR/Soil Science - Soil Genesis and Geography

J

Abs Jour : Ref Zhur Biol., No 1, 1959, 1322

Author : Popazov, D.I.

Inst : Moscow Agricultural Academy im. K.A. Timiryazev

Title : Some Mechanisms in the Development of Solonetz,
Solonchak, and Soloth Soils.

Orig Pub : Dokl. Mosk. s.-kh. akad. im. K.A. Timiryazeva, 1956,
vyp. 25, 230-236

Abstract : Consideration is given to the physical and chemical
(K.K. Gedroits) and biological (V.R. Williams) theories
of solonetz, solonchak processes of soil formation and
solodizatio of the soil. Soils of the droughty regions
are characterized to different degrees by the manifested
solonetz, solonchak, and solodized conditions of the soil.
Prevalence of one of these processes indicated only that

Card 1/2

USSR/Soil Science - General Problems.

J.

Abs Jour : Ref Zhur - Biol., No 15, 1958, 67859

Author : Bushinskiy, V.P., Popazov, D.I.

Inst : Timiryazev Agricultural Academy.

Title : Agrobiological Soil Science in the Timiryazev Academy.

Orig Pub : Izv. Timiryazevsk. s.-kh. akad., 1957, No 4, 77-90.

Abstract : A review of the work accomplished in the soil science department of the Timiryazev Agricultural Academy for the period 1917-1957. Short descriptions are given of the basic scientific works of members of the department.

Card 1/1

POPAZOV, D.I., kand.sel'skokhozyaystvennykh nauk

Importance of combining deep, regular, and surface tillage.
Izv. TSKhA no.4:77-88 '58. (MIRA 11:10)
(Tillage)

POPAZOV, D. I., kand. sel'skokhozyaystvennykh nauk

Comments on the article "Single soil formation process." Izv.
TSKhA no.2:225-229 '59. (MIRA 12:8)
(Soil formation)

POPAZOV, D.I., kand. sel'skokhoz. nauk, dotsent; GORELKOV, D.I., aspirant

Characteristics of soils in the beech belt on the northern
slope of the Stara Planina mountain range. Izv. TSKHA no.2:
72-84 '63. (MIRA 16:10)

POPAZOV, D. I., Doc AGR SCI, "SOIL FORMATION PROCESS
 AND FERTILITY OF SOILS. (ON THE ^{example} ORDER OF CERTAIN NATURAL
 OBLASTS OF ^{the} USSR)." MOSCOW, 1961. (~~INT~~ [SCI RES INST] OF
^{Agriculture} ~~FARMING~~ OF THE ~~ASKUN~~ [ACAD OF AGR SCI] BSSR). (KL, 3-61,
 224).

ABS. JOUR. : RZhBiol., No. 3 1959, No. 10655
 AUTHOR : Popazov, D. I., Bugakov, P. S.
 INST. : Moscow Agricultural Academy named K. A. Timiryazev
 TITLE : Some Characteristics of Soil Formation in the Conditions
 of Northwestern Part of Prikaspiyskaya Depression.
 ORIG. PUB. : Dokl. Mosk. s.-kh. akad. im. K. A. Timiryazeva,
 1956, 1, No. 26, 60-66
 ABSTRACT : The characteristics of the biological cycle of matter in
 the soils of light-chesnut subzone are examined. The annual
 falling-off of the plant root mass on light-chesnut
 soils is 7-9 times greater than that of the above-ground
 mass. Alkali earth bases predominate over the bases in
 the composition of ash of wormwood (Artemisia)-fescue
 grass (Festuca sulcata) association growing on dark col-
 ored soils of the sinks. Reverse proportion is observed
 in the composition of the ash of black wormwood growing
 on Solonchaks soils. The amount of ash elements on Solonchaks

COUNTRY :
CATEGORY : J
RES. JOUR. : RZhBiol., No. 1959, No. 10655
AUTHOR :
INST. :
TITLE :
ORIG. PUB. :
ABSTRACT : soils, drawn into the minor biological cycle from the above-ground mass of black wormwood comprises 49 centners per hectare and that of the roots 2890 centners. The amount of ash elements on dark colored soils of wormwood (Artemisia)-fescue grass (Festuca sulcata) association comprises 707 and 13,559 centners per hectare respectively. The principal role in the cycle of substances belongs to the roots of herbaceous plants. -- S. A. Nikitin
CARD: 2/2

USSR, Soil Science - Soil Genesis and Geography. J

Abs Jour : Ref Zhur Biol., No 19, 1958, 86712

Author : Popazov, D.I.

Inst : Moscow Agric. Acad. im. K.A. Timiryazev

Title : Certain Data on the Chemical Composition of Manganese
Iron Concretions of Turf-Podzolic and Solodized Soils

Orig Pub : Dokl. Mosk. s.-kh. akad. im. K.A. Timiryazeva, 1957, vyp.
29, 208-213

Abstract : Data are given on the chemical composition of samples of
ortstein grains of turf-podzolic soils of Moskovskaya
Oblast' and bean plants of soloths of the Western Kazakhs-
tanskaya and Stalingradskaya Oblasts. These new formations
consist chiefly of SiO_2 , Fe_2O_3 , Al_2O_3 , Mn_2O_3 . The sum of
these substances forms 95 to 98% of the gross composition.
Medium reactions in new formations are weakly acid.

Card 1/2

- 15 -

POPBACHEVA, A.P.; POPEKHINA, P.S.

Changes with age in the amino acid content of swine embryos [with summary in English]. Ukr.biokhim.zhur. 29 no.1:96-100 '57. (MLRA 10:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhivotnovodstva, Moskva.

(SWINE--PHYSIOLOGY) (AMINO ACIDS) (FETUS)

MAKAROV, G.N.; KAZINIK, Ye.M.; POPCHENKO, R.A.; SEMENOV, A.S.; YERKIN,
L.I.; RYVKIN, I.Yu.; PRIVALOV, V.Ye.; MUSTAFIN, F.A.; KUZNETSOV,
P.V.; ZOROKHOVICH, G.Ya.

Coking of the coal charge in an oven with a rotating ring floor.
Koks i khim. no.11:34-41 '62. (MIRA 15:12)

1. Moskovskiy khimiko-tekhnologicheskij institut im. D.I. Mendeleeva (for Makarov, Kazinik, Popchenko, Semenov).
2. Vostochnyy uglekhimicheskij institut (for Yerkin, Ryvkin, Privalov).
3. Nizhne-Tagil'skiy metallurgicheskij Kombinat (Mustafin, Kuznetsov, Zorokhovich).
(Coke)

POPCHENKO, S., kand.tekhn.nauk; LEONOV, B., inzh.

Experience with the use of cold asphalt waterproofing. Zhil. stroi.
no. 3:7-9 Mr '61. (MIRA 14:4)

(Waterproofing)

GLEBOV, P.D., prof., doktor tekhn.nauk; POPCHENKO, S.N., kand. tekhn.nauk

Impregnation of chalk with organic binders. Izv.VNIIG 49:
114-136 '53. (MIRA 12:5)
(Chalk) (Hydraulic engineering)

USSR/Chemical Technology. Chemical Products and Their Application -- Silicates.
Glass. Ceramics. Binders, I-9

USSR/Chemical Technology. Chemical Products and Their Application -- Silicates.
Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 5344

Author: Glebov, P. D., Popchenko, S. N.

Institution: None

Title: Filling of Joints in Hydraulic Works Structures with a Cold Asphalt
Cement

Original

Publication: Gidrotekhn. str-vo, 1956, No 6, 18-22

Abstract: Description of the properties, production technology and use of cold
asphalt cements made with bitumen emulsion pastes, which are pro-
posed for filling joints in hydraulic works structures, in lieu of
the presently utilized hydroinsulating materials, asphalt plates,
etc.

Card 1/1

POPCHANKO, S.N., kand. tekhn. nauk; LEONOV, B.V., inzh.

Using machinery in cold laying of waterproof bitumastic coatings.
Mekh. stroi. 15 no.4:17-19 Ap '58. (MIRA 11:5)
(Bitumen)

GLEBOV, Petr Dmitriyevich; IL'YASHEV, Grigoriy Mikhaylovich; POPCHENKO, Sergey Nikolayevich; GIRSHKAN, I.A., red.

[Forming impervious curtains by injecting bituminous emulsions]
Ustroistvo protivofil'tratsionnykh zaves nagnetaniem bitumnykh
emul'sii. Moskva, Gos.energ.izd-vo, 1959. 44 p. (MIRA 13:3)
(Bituminous materials) (Soil percolation)

POPCHENKO, S.N., kand. tekhn. nauk; EYDINOV, Yu.S., inzh., red.

[Waterproofing and roofs of cold asphalt mastic; according to materials of the All-Union Scientific Research Institute for Hydraulic Engineering] Gidroizoliatsiia i krovlia iz kholodnykh asfal'tovykh mastik; po materialam Vsesoiuznogo nauchno-issledovatel'skogo instituta gidrotekhniki im. B.E.Vdeneeva. Moskva, Gosstroizdat, 1962. 31 p. (MIRA 17:6)

1. Akademiya stroitel'stva i arkhitektury SSSR. Nauchno-issledovatel'skiy institut organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu. 2. Rukovoditel' laboratorii gidroizolyatsii Nauchno-issledovatel'skogo instituta gidrotekhniki im. B.Ye.Vedeneyeva (for Popchenko).

POPCHENKO, Sergey Nikolayevich; LEONOV, Boris Vasil'yevich;
YEFREMOV, Stanislav Georgiyevich; STARITSKIY, P.G.,
red.

[New developments in the construction of nonrolled roofing of cold asphalt mastic] Novoe v stroitel'stve bezru-
lonnykh krovvel' iz kholodnykh asfal'tovykh mastik. Le-
ningrad, 1964. 21 p. (MIRA 18:1)

POPCHENKO, Sergey Nikolayevich, kand. tekhn. nauk; NECHAYEV, G.A.,
inzh., nauchn. red.; ROTENBERG, A.S., red.izd-va;
CHERKASSKAYA, F.T., tekhn.red.

[Cold asphalt waterproofing]Kholodnaia asfal'tovaya gidro-
izoliatsiia. Leningrad, Gosstroizdat, 1963. 235 p.
(MIRA 17:2)

POFCHENKO, Sergey Nikolayevich, kand.tekhn.nauk; GLEBOV, P.D.,
doktor tekhn. nauk, prof., zasl. deyatel' nauki i tekhniki
RSFSR, red.; GIRSHKAN, I.A., otv. red.; SETKO, L.G., tekhn.
red.

[Album of the designs of strain seams of hydraulic struc-
tures] Al'bom proektov deformatsionnykh shvov gidrotekhnicheskikh sooruzhenii. Moskva, Gosenergoizdat, 1961. 109 p.
(MIRA 17:4)

POPCHENKO, Sergey Nikolayevich, kand. tekhn.nauk; NECHAYEV, G.A.,
inzh., nauchnyy red.; ROTENBERG, A.S., red.izd-va;
CHERKASSKAYA, F.T., tekhn.red.

[Cold asphalt waterproofing] Kholodnaia asfal'tovaya gidro-
izoliatsiia. Leningrad, Gosstroizdat, 1963. 235 p.

(MIRA 16:5)

(Waterproofing) (Asphalt)

POPCHENKO, S.N., kand.tekhn.nauk; LEONOV, B.V., inzh.; YEFREMOV, S.G., inzh.

Cold asphalt coatings for reinforced concrete roofs. From.
stroi. 40 no.5:26-30 '62. (MIRA 15:5)
(Asphalt)
(Roofing, Concrete)

POPCHENKO, S.N., kand.tekhn.nauk; POKROVSKIY, N.S.

Quality of pavement bitumen must be improved. Avt.dor. 2^o no.12:
14-15 D '61. (MIRA 14:12)

(Bitumen)

POPCHENKO, S.M., kand. tekhn. nauk

Waterproofing structures of thermal power plants. Prom. stroi.
39 no. 2:26-30 '61. (MIRA 14:2)
(Waterproofing) (Electric power plants)

POPCHENKO, Sergey Nikolayevich, kand. tekhn.nauk; STARITSKIY, Mikhail
Grigor'yevich, kand. tekhn. nauk; GLEBOV, P.D., doktor tekhn.
nauk, profi, red.; ZHEBROVSKIY, A.N., red.; SOBOLEVA, Ye.M., tekhn.red.

[Asphalt waterproofing of concrete and reinforced concrete
structures]Asfal'tovye gidroizoliatsii betonnykh i zhelezo-
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(PERIODONTIUM, diseases,

*exper., cerebral decortication in animals prod. neural dystrophy & periodontal insuff.)

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(RESUSCITATION

after exper. death in dogs with denervated carotid sinus)

(DEATH

exper. death o dogs, resuscitation, in eff. of denervation of carotid sinus)

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(TUBERCULOSIS, experimental,
pathogen. role of CNS)

(CENTRAL NERVOUS SYSTEM, in various diseases,
exper. tuberc., pathogen. role)

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(TUBERCULOSIS, exper.
pathogen., role of CNS)
(CENTRAL NERVOUS SYSTEM, in various dis.
role in pathogen. of exper. tuberc.)

COUNTRY : Bulgaria
CATEGORY : H-17
ABS. JOUR. : *AKhim.*, No. 1959, No. 87576
AUTHOR : Popdimitrov, K.
INST. : Scientific Research Institute of Pharmacy
TITLE : Production of Nucleic Acid for the Preparation
"Nuklevazan".
ORIG. PUB. : *Tr. N.-i. in-t farmatsiya*, 1957, 1, 147-149
ABSTRACT : In industrial-scale production of nucleic acid from bakers' yeast, for the preparation "Nuklevazan" which exhibits a hypotensive action, a siphon-centrifuge has been used in the step of separation of extract from yeast hydrolysate. Separation of inert materials from the thickened extract was effected by mixing the latter with 50% alcohol in alkaline medium (pH 8); this leaves the Na-salt of nucleic acid in solution, while the precipitate of proteins is separated by centrifuging and is discarded. Preservation of the finished preparation is effected by adding to it 20% alcohol (95°) and 5% glycerol.
From author's summary.

CARD: