PA 31/49T7

USSR/Medicine - Blood, Coagulation
Medicine - Cancer, Diagnosis
Aug 48

"Comparative Evaluation of the Strength of Blood Clot, Stability of Colloidal Content of the Blood, and Erythrocyte Sedimentation Reaction," L. N. Popova, Asst, Propaedeutic Surg Clinic, Voronezh Med Inst, 6½ pp

"Klin Med" Vol XXVI, No 8

Investigation of strength of blood clot can aid in differential diagnoses of gastric ulcer and cancer. Strength of clot averages 7 - 8 gm for ulcerous lesions, and 20 - 30 gm for gastric cancer. This

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USSR/Medicine - Blood, Coagulation (Contd)
Aug 48

test, during certain pathological conditions, is more accurate than the erythrocyte sedimentation reaction.

31/49T7

POPOVA, L. N. ASST.

POPOVA, L.N., kandidat meditsinskikh nauk (Voronezh)

Morphological changes in certain organs during experimental cholemia. Klin.med. 33 no.12:81 D '55. (MLRA 9:5)

1. Iz propedevticheskoykhirurgicheskoy kliniki (zav. kafedroy professor A.M.Gurevich) Voronezhskogo meditsinskogo instituta.
(BILOUS DISEASES AND BILIOUSNESS)
(LIVER--DISEASES)
(THERAPEUTICS, EXPERIMENTAL)

POPOVA, L.P.

Resistance of a blood clot to tearing as a prognostic factor in radical surgery for cancer. Lab.delo 3 no.3:21-23 My-Je '57. (MLRA 10:9)

1. Iz propedevticheskoy khirurgicheskoy kliniki (zav. - prof. K.N. Kochev) Voronezhskogo meditsinskogo instituta
(CANCER) (BLOOD--EXAMINATION) (OPERATIONS, SURGICAL)

POPOVA, L.M., kand.med.nauk (Voronezh, ul. Chaykovskogo, d.4. kv.37)

Functional disorders and pathomorphology of the liver in cholemia [with summary in English]. Vest.khir. 80 no.5:26-34 My '58 (MIRA 11:7)

1. Iz propedevticheskoy khirurgicheskoy kliniki (ispolnyayushchiy obyazannosti zav. - dots. B.I. Novikov) Voronezhskogo meditsinskogo instituta.

(BILE,
cholemia, liver funct. & pathomorphol. changes (Rus))
(BLOOD,
same (Rus))
(LIVER,
funct. & pathomorphol. in cholemia (Rus))

TIKOTSKAYA, K.M.; POPOVA, L.N.

Effect of rutin preparations on the excretion of phenol substances in urine. Biul.eksp.biol.i med. 53 no.6:36-39 Je '62.
(MIRA 15:10)

1. Iz otdela vitaminov C i P (zav. - prof. N.S.Yarusova) Nauchno-issledovatel'skogo instituta vitaminologii (dir. - deystvitel'nyy chlen AMN SSSR B.A.Lavrov) Ministerstva zdravookhraneniya SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR B.A.Lavrovym.
(RUTIN) (PHENOLS IN THE BODY)

TIKOTSKAYA, K.M.; POPOVA, L.N.

Determination of rutin in some biological specimens. Vop. pit. 22 no.4:71-76 Jl-Ag '63. (MIRA 17:10)

1. Iz otdela vitaminov C i P (rukovoditel' - prof. N.S. Yarusova) Gosudarstvennogo nauchno-issledovatel'skogo instituta vitaminologii Ministerstva zdravookhraniniya SSSR, Moskva.

POPOVA, L.N., kand.med.nauk

Changes in the pancreas and spleen in cholemia. Vest.khir. no.9: 64-70 '61. (MIRA 15:3)

1. Iz kliniki obshchey khirurgii (zav. - doktor med.nauk B.I. Novikov) Voronezhskogo meditsinskogo instituta. Adres avtora: Voronezh, Studenskaya ul., d.10, Meditsinskiy instituta, kafedra obshchey khirurgii.
(BILE) (PANCREAS) (SPLEEN) (BLOOD—DISEASES)

ASMAYEV, P.G. [deceased]; POPOVA, L.P.

Amount and composition of tobacco smoke during the solid - liquid phase. Izv. vys. ucheb. zav.; pishch. tekh. no.4:51-57 '61.
(MIRA 14:8)

1. Krasnodarskiy institut pishchevoy promyshlennosti, kafedra tekhnologii tabaka.
(Tobacco--Analysis and chemistry)

27855
S/535/61/000/132/001/012
E030/E484

11.0132
11.1210

AUTHOR: Popova, L.P., Candidate of Physico-Mathematical Sciences

TITLE: Fuels for aviation turbine engines

SOURCE: Moscow. Aviatsionnyy institut. Trudy. no.132.1961.5-14. Teplofizicheskiye svoystva nekotorykh aviatsionnykh topliv v zhidkom i gazoobraznom sostoyanii.

TEXT: A brief description is given, together with complete lists of specifications, of post-war Soviet jet fuels with names of nearest corresponding Western fuels. After describing the merits of different hydrocarbon-types, a specification of a new improved fuel, T-5, is given. Early Soviet jet engines, up to 1949, used a type of aviation gasoline B-70 (B-70). Thereafter a straight-run kerosene from standard blends of Baku crudes was developed, T-1, as defined in specification ГОСТ 4138-49 (GOST 4138-49); it contained up to 60% naphthenes, 22 to 25% paraffins and 17 to 19% aromatics. However, not all jet engines could work on this fuel and several lighter fuels from Eastern crudes were developed including ТС-1 (TS-1), ГОСТ 7149-54 (GOST 7149-54), containing up to 60% paraffins, having a lower density, viscosity and boiling range; a fuel of similar chemical composition, but with a wider cut, was also developed, T-2, ГОСТ 8410-57 (GOST 8410-57). Complete

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Fuels for aviation turbine ...

specifications are given. Of the American grades, JP-1 is close to T-1, and JP-3 to T-2, both the latter being higher sulphur. Normal paraffins (200 to 300°C) have unsatisfactorily high freezing point, rising with molecular weight. Isoparaffins, especially when strongly branched, have much lower freezing point than n-paraffins but higher viscosities. Unsaturated hydrocarbons analogous to these paraffins have similar properties, apart from lesser thermal stability and greater gum formation. Aromatics are generally superior to these, also having greater calorific value but are relatively unstable thermally and lead to sludging. Naphthenes are best all round, apart from calorific value, being a compromise between paraffin-type and aromatics. Extensive specifications test data are given to substantiate these statements for all hydrocarbon types. From these comparisons, an optimum hydrocarbon composition was postulated and the resulting new fuel, T-5, ГОСТ 9145-59 (GOST 9145-59) is as follows: density above 0.945, IBP 195°, 2% point at 200, 15% at 225, 98% at 315°, residue not exceeding 2%. Kinematic viscosity below 5 cs at 20°C and 60 cs at -40°C, calorific values above 10250 kcal/kg, acid value below 1.0 mg KOH in 100 ml fuel, cloud point below -60°C, aromatic content below 22%, thermally stable, and less than 0.1% sulphur. There are 11 tables and 2 Soviet references.

Card 2/2

SHAPIRO, I.I.; FEDOTOV, F.G. Prinimali uchastiye: PEGUSHEV, M.Ye.; GRIGOR'YEVA, O.I.; POPOVA, L.P.; GONCHAROV, M.Ya.; VOLNISTOVA, L.V.; SOROKINA, G.Ye., tekhn.red.

[General machinery industry time norms for establishing norms for milling machine operations; small-lot and piece production] Obshchemashinostroitel'nye normativy vremeni dlia tekhnicheskogo normirovaniia rabot na frezernykh stankakh; melkoseriinoe i edinichnoe proizvodstvo. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 142 p. (MIRA 14:4)

1. Moscow. TSentral'noye byuro promyshlennykh normativov po trudu. 2. Zaveduyushchiy otdelom mashinostroyeniya TSentral'nogo byuro promyshlennykh normativov po trudu pri Nauchno-issledovatel'skom institute truda (for Shapiro).
(Metalwork--Production standards)

POPOVA, L.P., kand.filosof.nauk

Lenin's criticism of idealism. Nauka i zhizn' 27 no.6:43-49 Je '60. (MIRA 13:7)

(Idealism)
(Lenin, Vladimir Il'ich, 1870-1924)

POPOVA, L.P.

Problem of calculating arch deformations accounting for work of the arch's superstructure. Trudy Khab.IIT no.7:130-133 '54.(MLRA 8:1)
(Arches) (Structures, Theory of)

POPOVA, L. P.

USSR/Chemistry Reaction processes

Card : 1/1 Pub. 151 - 27/35

Authors : Perekalin, V. V., and Popova, L. P.

Title : Destruction of carbon-carbon bonds under the effect of diazo-compounds. Part 1.- Reaction of some ternary amines of the triphenylmethane series with diazo-compounds

Periodical : Zhur. ob. khim. 24, Ed. 7, 1226 - 1232, July 1954

Abstract : The reaction of ternary triphenylmethane amines with diazo-compounds and the splitting of carbon-carbon bonds between the methane carbon atoms were investigated. The attachment of one of the cleavage products (dimethylaniline radical) to the diazo-compound, with consequent formation of an azo-dye and the separation of the second product (benzaldehyde, 4-methylaminobenzaldehyde, formic acid) in free form, were determined analytically. The effect of the amine structure and activity of the diazo-compound, on the bond cleavage, is explained. Fourteen German, 4 USSR and 2 USA references. Tables.

Institution : The Gertsen Pedagogical Institute, Leningrad

Submitted : September 29, 1953

USSR/Chemistry Reaction processes

Card : 1/1 Pub. 151 - 28/35

Authors : Perekalin, V. V., Popova, L. P., and Abramovich, T. I.

Title : Destruction of carbon-carbon bonds under the effect of diazo-compounds. Part 2.- Reaction of some ternary amines of the diphenylmethane series with diazo-compounds

Periodical : Zhur. ob. khim. 24, Ed. 7, 1233 - 1238, July 1954

Abstract : The cause for the splitting of the carbon-carbon bonds between the methane carbon atom and the carbon atoms of benzene nuclei, which takes place during the reaction of ternary diphenylmethane amines with diazo-compounds, is elucidated. The effect of the H-atom displacement by the hydroxyl group in the methane radical, and conversion of the carbinol radical to a carbonyl radical on the splitting of the carbon-carbon bonds, is explained. Three USSR, 4 German, and 1 Italian reference. Table.

Institution : The Gertsen Pedagogical Institute, Leningrad

Submitted : September 29, 1953

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

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 1689

Author: Kisel, I. I., and Popova, L. P.

Institution: Belorussian Polytechnical Institute

Title: A Cement Produced from the Peat Cinders from Minsk Steam Heat Electric Power Stations

Original Periodical: Sb. nauch. rabot. Belorus. politekhn. in-t, 1956, No 55, 98-102

Abstract: It has been established experimentally that a cement for grade 50 construction mortars can be produced from grade 300 portland cement (25-30% by weight) and screened peat cinders from the Minsk steam heat electric power stations (particle size -0.6 mm). The cinders are ground in a ball mill until no residue is left on a No 0085 sieve (100%).

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POPOVA, L.P., inzh. (Rostov-na-Donu).

Designing arches for deformations taking into consideration the work of supported structures. Issl. po teor. sooruzh. no.7:253-268 '57. (MLRA 10:9)

(Arches) (Graphic statics)

KISEL', I.I.; POPOVA, L.P.

Binding material from peat slag of Minsk thermal electric power plants. Sbor.nauch.rab.Bel.politekh.inst. no.55:98-102 '56. (MLRA 10:7)

(Peat) (Binding materials)

FILIN-KOLDAKOV, B.V.; POPOVA, L.P.

Determination of acids from tobacco smoke by potentiometric titration in a nonaqueous medium. Izv.vys.ucheb.zav.;pishch.tekh.no.5: 165-169 '60. (MIRA 13:12)

1. Krasnodarskiy institut pishchevoy promyshlennosti. Kafedra fizicheskoy i kolloidnoy khimii i Kafedra tekhnologii tabaka.
(Tobacco--Analysis and chemistry) (Acids)

15-57-1-710

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 1, p 112 (USSR)

AUTHORS: Kisel', I. I., Popova, L. P.

TITLE: Cementing Material From Peat Clinker From the Minsk Heat and Electrical Power Plant (Vyazhushchiy material iz torfyanykh shlakov minskikh TETs)

PERIODICAL: Sb. nauch. rabot. Belorus. politekhn. in-t, 1956, Nr 55, pp 98-102.

ABSTRACT: Peat clinker has proved to be suitable for the manufacture of cementing material. The clinker has been separated to determine its grain size distribution (see Table 1). The chemical composition of the clinker is given (in percent) in Table 2. Portland cement, brand 300, was used as the activating component in the experiments. To obtain the binding material, ground-up clinker was mixed with 20, 25, and 30 percent of activating portland cement and was carefully mixed in a ball mill. The peat here studied possesses hydraulic

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POPOVA, L. P., Cand Tech Sci -- "Composition of the solid-liquid phase of ~~the tobacco~~ products of tobacco combustion and distillation products depending upon ~~the~~ methods of its processing." Krasnodar, 1961. (Min of Higher and Sec Spec Ed RSFSR. Krasnodar Inst of Food Industry) (KL, 8-61, 247)

POPOVA, L.P.

Composition of smoke from tobacco prepared by different methods of drying. Izv.vys.ucheb.zav.;pishch.tekh. no.4:35-39 '60.
(MIRA 13:11)

1. Krasnodarskiy institut pishchevoy promyshlennosti. Kafedra tekhnologii tabaka.
(Tobacco)

POPOVA, L.P.

Diagnostic significance of intracutaneous injection of specific vaccine in diffuse sclerosis and acute diffuse encephalomyelitis. Zhur.nevr.i psikh. 54 no.3:260-262 Mr '54. (MLRA 7:4)

1. Nevrologicheskaya klinika Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta im. M.F.Vladimirskogo.
(Sclerosis, Multiple) (Encephalomyelitis) (Vaccination)

POPOVA, L.P., mladshiy nauchnyy sotrudnik (Moskva, ul. Yermolovoy, d.24 kv.23)
BAZHENOVA, A.A., starshiy nauchnyy sotrudnik

Clinical and roentgenological observations in Sprengel's disease.
Vest.rent. i rad. 34 no.4:32-36 Jl-Ag '59. (MIRA 12:12)

1. Iz kliniki nervnykh bolezney (zav. - prof. N.A. Popova) i rentgenologicheskogo otdela (zav. - kand.med.nauk V.I. Petrov) Moskovskogo oblastnogo nauchno-issledovatel'skogo instituta imeni M.F. Vladimirskogo (dir. P.M. Leonenko).
(SCAPULA abnorm.)

[redacted]

Some problems of anesthesia and resuscitation care of children in the surgical treatment of osteoarticular tuberculosis. Probl. tub. no.2:52-55 '66. (MIRA 19:12)

1. Stavropol'skiy kraevoy detskiy kostno-tuberkuleznyy sanatoriy (glavnyy vrach L.D.Sarkisova), Pyatigorsk.

POTAK, Ya.M., kand.tekhn.nauk; SACHKOV, V.V., inzh.; POPOVA, L.S., inzh.

High-strength stainless steel of the transition austenite-martensite class. Metalloved. i term. obr. met. no. 5:24-30 My '60. (MIRA 13:12)
(Steel, Stainless) (Metals, Effect of temperature on)

S/135/60/000/005/003/009
A115/A029

AUTHORS: Popova, L.S., Engineer; Lashko, N.F., Candidate of Technical Sciences

TITLE: Hardening in the Heat-Influenced Welding Zone of Structural Martensite Steels

PERIODICAL: Svarochnoye proizvodstvo, 1960, No. 5, pp. 11 - 15

TEXT: The structural martensite steels are processed for 150 kg/mm^2. Immediately after welding, the solidity limits of weldments decrease to 50 - 75%. In the zone of thermal influence of a weldment a section is found in which the process of disintegration is caused by destruction of martensite substance, i.e., of oversaturated alloying elements and by coagulation of carbide phases. The location of the destructed part depends on the method of welding. In structural martensite steels, a carbide phase of the type of cementite Me_3 is formed containing Mn, Cr, Mo, W, V, Ti and Nb. The rate of cementite coagulation depends on the possibility of distribution of the alloying elements between the solid solution and the isolation phases. Therefore, the rate of cementite growth is higher with chrome steels than with molybdenum or vanadium steels. Higher

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A115/A029

Hardening in the Heat-Influenced Welding Zone of Structural Martensite Steels

strength in the zone of thermal influence can be achieved by alloying the steel with Me_7C_3, Me_2C, MeC and $Me_{23}C_6$. The best effect of strengthening steel by the cementite phase Me_3C can be obtained at 100 - 300°C depending on the alloying elements. The best strength of structural martensite steels is retained with Me_7C_3 carbides at temperatures of up to 500°C depending on alloys and thermal treatment or by carbides Me_2C or MeC at 500 - 650°C. To investigate the disintegration of solid solutions in the zone of thermal influence of welding, two series of alloyed steels containing 0.20 - 0.30% C have been used (Table 1). In the first series (No. 278N, 320, 464), depending on chemical composition, one-phase disintegration with subsequent formation of Me_3C and corresponding carbide phases $(Cr, Fe)_7C_3$; W_2C, VC was obtained and in the second series of steels (No. 265, 273, 277, 187, 278), depending on chemical composition and the zone of thermal influence, one-phase, two-phase and three-phase disintegration of the solid solution has been produced. The average content of alloying elements is 0.25% C, 2% Cr, 1% W, 1% Ni, 0.25% Va. Steels were smelted in an induction furnace, and one of the alloying elements: C, Cr, W, V was added. The bars were pressed to 4-mm plates, heated to 890°C, cooled in oil for 15 min with

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subsequent tempering at 200°C for 1 hour; arc-welded manually with УОНИ-13/85 (UONI-13/85) electrodes. Results of mechanical tests of weldments and basic metal are given in Tables 2 and 3. Tables 4 and 5 show results of chemical and X-ray inspections. The smallest increase in firmness after two-phase treatment has been noted in the cases, where only vanadium was used as alloying substance (solution No. 464). A considerable part of vanadium is bound in the form of primary vanadium carbides VC. These do not dissolve, even if heated up to 1,300°C and do not participate in strengthening the steel. Vanadium binds a large part of carbon and the share of martensite strengthening is decreasing. In steels alloyed with tungsten the solidity of weldments increased from 64 to 83.3 kg/mm^2. In case of chrome, the solidity of weldments was strengthened up to 80 - 85 kg/mm^2. Significant improvements were achieved at welding steels alloyed with tungsten and chromium - (100 - 105 kg/mm^2). There are 5 Soviet references.

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L 15211-66 EWT(m)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b)/EWA(h) JD/HW

ACC NR: AP6002910 SOURCE CODE: UR/0286/65/000/024/0073/0073

INVENTOR: Sachkov, V. V.; Potak, Ya. M.; Lavrov, V. I.; Popova, L. S.; Grashchenkov, P. M.

ORG: none

TITLE: Stainless steel. Class 40, No. 177081

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 73

TOPIC TAGS: steel, stainless steel, chromium containing steel, nickel containing steel, manganese containing steel

ABSTRACT: This Author Certificate introduces a stainless steel with improved mechanical properties that contains 0.05—0.09% carbon, 1% max manganese, 0.7% max silicon, 15.5—17.5% chromium, and 5.0—8.0% nickel. [AZ]

SUB CODE: 11/ SUBM DATE: 01Jun63/ ATD PRESS: 4190

Card 1/1 UDC: 669.15'24'26—194

09333

S/129/60/000/05/007/023
E193/E283

18.1130

AUTHORS: Potak, Ya. M., Candidate of Technical Sciences, and Sachkov, V. V., and Popova, L. S., Engineers

TITLE: High Strength Stainless Steels of the Intermediate Austenitic-Martensitic Type

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1960, Nr 5, pp 24-30 (USSR)

ABSTRACT: New types of stainless steels, characterized by an intermediate austenitic-martensitic structure, have been developed recently in the USA (steels 17-7RN, AM350, AM355, 17-7Mo) and Gt Britain (steel FV-520). Similar steels have been developed in the USSR and the properties of two steels of this type (SN2 and SN3) are discussed in the present article. The chemical composition of these steels is given in Table 1. The relative position of these steels in the system of austenitic and martensitic steels is illustrated schematically in Fig 1, where the 0.2% proof stress ($\sigma_{0.2}$, kg/mm^2) is plotted against the alloying elements content (increasing C, N, Ni, Cr, Mo, and decreasing Al); the three curves relate to material subjected to the following heat treatments: 1 - quenching; 2 - quenching and sub-zero treatment; 3 - quenching, sub-zero

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is both strong and ductile. The martensitic transformation takes place also during plastic deformation (rolling, drawing, forming, etc) of the intermediate steels; the intensity of the transformation depends on the temperature; at temperatures higher than N_d, the martensitic transformation does not occur. With increasing content of alloying elements that lower the temperature of the martensitic transformation (C, N, Ni, Cr, Mo, Mn), the character of steel changes from martensitic to austenitic. This is illustrated by data reproduced in Fig 2, where the mechanical properties σ_b (UTS kg/mm^2) and $\sigma_{0.2}$ (0.2% proof stress, kg/mm^2) of steel SN2, are plotted against the nickel content (the content of other alloying additions is given in the caption); the curves were constructed for specimens subjected to the following heat treatments: 1 - quenching from 1050°C; 2 - quenching from 1050°C, 2 h treatment at -70°C; 3 - as in (2) and then tempered at 500°C for 1 h; 4 - quenching from

Card 3/12 760°C and tempering for 1 h at 500°C. It will be seen IX

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that steels, containing 6.68 to 7.4% Ni, are martensitic, those with 8.76 to 9.57% Ni are austenitic; of course, the proportion of nickel, necessary to impart to a steel the intermediate properties, may change for a material with a different content of other alloying additions. The effect of titanium and aluminium content on the mechanical properties of steels containing 0.05% C, 0.3% Si, 0.7% Mn, 16.0% Cr, and 6.8% Ni in the former case, and 0.06% C, 0.25% Si, 0.82% Mn, 16.1% Cr, and 6.6% Ni, in the latter case, is illustrated in Fig 3, where $\sigma_{0.2}$ and σ_b are plotted against the Ti (graph a) and Al (graph b) content (%); curves 1 and 2 relate to steels 1 - quenched from 1050°C and 2 - quenched from 1050°C and tempered at 500°C for 1 h. It will be seen that increasing the content of aluminium, which raises the martensitic point of steels, results in changing the steel structure to martensitic, and accelerates

Card 4/12 the tempering tension. Introduction of titanium, which

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forms carbides that are not easily soluble, decreases the carbon content in austenite and so raises the martensitic point; the rate of tempering is also accelerated by addition of titanium. Steels with certain alloying elements may contain delta-ferrite, in which case the limits of the alloying elements content within which a steel will retain its intermediate character, become wider. This is illustrated by comparing curves in Fig 2 (for steel SN2, not containing delta-ferrite) with those given in Fig 4 (for steel SN3 which contains 20 to 25% delta-ferrite), where σ_b and $\sigma_{0.2}$ are plotted against the Ni (graph a) and Mo (graph b) content, the content of other alloying elements being given in the caption; curves 1 and 2 relate to material 1 - quenched from 1050°C and 2 - quenched from 1050°C, treated at -70°C for 2 h, and tempered at 450°C. It has been found that, in the presence of delta-ferrite, the content of not only nickel, but also molybdenum and carbon in the steel can be considerably varied without affecting

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its intermediate character; no plausible explanation of this effect has yet been found. The position of the martensitic point of steels of the intermediate type can be appreciably changed by varying the quenching temperature, as a result of which the position of austenite changes owing to dissolution or precipitation of carbides. This is illustrated by data, reproduced in Fig 5, where σ_b and $\sigma_{0.2}$ of an experimental steel containing 0.11% C, 15.0% Cr, 8.2% Ni, 0.6% Ti, 0.26% Al (graph a) and steel SN3, containing 0.09% C, 16.9% Cr, 4.8% Ni, 3.25% Mo, 0.51% Mn (graph b) are plotted against the quenching temperature (°C); the various curves relate to material 1 - as quenched, and 2 - quenched, treated at -70°C for 2 h, and tempered at 500°C (graph a) or 450°C (graph b). It will be seen that although the intermediate steel SN3, containing 17% Cr and 3.5% Mo, has a very high strength after

Card 6/12 air-quenching from 950°C, followed by sub-zero treatment,

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some melts of this steel did not harden when quenched from temperatures higher than 1050°C. This is explained by the fact that after the chromium and molybdenum carbides have been dissolved, austenite becomes so stable that no martensitic transformation occurs during the sub-zero treatment. Titanium-bearing steels may change from martensitic to intermediate type if the quenching temperature is raised to 1050°C (Fig 5), so as to dissolve titanium-bearing carbides; further increase in the quenching temperature leads to the formation of almost fully austenitic structure and brings about a decrease in the yield point and a slight increase in the UTS. Strength of steels of the intermediate type increase considerably during plastic deformation, the increase in the yield point being more rapid than that in the UTS. This is illustrated by data, reproduced in Fig 6, where $\sigma_{0.2}$ and σ_b (kg/mm^2, left-hand scale), proportion of martensite α, and elongation δ (%, right-hand scale), are plotted against the degree (%) of

High Strength Stainless Steels of the Intermediate Austenitic-Martensitic Type

plastic deformation by cold rolling; the curves, constructed for steel SN2, relate to material 1 - after deformation, and 2 - after deformation followed by tempering for 1 h at 480°C. It is pointed out, in this connection that whereas tempering of cold-worked steel increases its UTS only in the case of a high degree of deformation, the yield point increases even in lightly deformed material. Not only strength, but also elongation of cold-worked, intermediate steels, is increased by tempering; a decrease in ductility after tempering is observed only in heavily deformed steels of this type. The optimum results are obtained by tempering at 450 to 500°C; this is shown in Fig 7, where α (%)m $\sigma_{0.2}$ σ_b, and δ of steel SN2 are plotted against the tempering temperature for material tempered for 1 h after cold deformation (graph a) and after quenching, followed by a 2 h treatment at -70°C (graph b). The sub-zero treatment as a method of increasing strength of

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High Strength Stainless Steels of the Intermediate Austenitic-Martensitic Type

steels, was first suggested in USSR by Gulyayev (Ref 6); beside cold-working, this treatment is one of the basic methods of hardening steels of the intermediate type. The effectiveness of this treatment depends largely on whether the given steel is more austenitic or martensitic in character, and on the extent to which carbides are dissolved in austenite. This is illustrated by data, reproduced in Fig 8, where the left-hand graph shows the variation of $\sigma_{0.2}$ as a function of the temperature of the sub-zero treatment of 2 h duration, the right-hand graph showing the variation of $\sigma_{0.2}$ as a function of time (10, 30 min, 1, 2 h) at -70°C; curves 1 to 4 relate to steel containing 8.76%, 7.35%, 7.75% and 7.4% Ni, respectively. The sub-zero treatment yields optimum results when carried out at -70°C, its effectiveness decreasing at lower temperatures. The martensitic transformation during the sub-zero treatment takes place isothermally; the rate of transformation during the first 1 to 2 h can be slowed down by preliminary

High Strength Stainless Steels of the Intermediate Austenitic-Martensitic Type

stabilizing treatment which can be carried out by one of four different methods: (1) heating to 150 to 550°C; (2) cold deformation of 1 to 10% (the lower the degree of deformation the better); (3) slow cooling to the temperature of the sub-zero treatment; (4) cooling the steel to -30°C before subjecting it to the sub-zero treatment proper. Steels SN2 and SN3 can be fabricated in the form of soft, half-hard, and hard strip and sheet, as well as in the form of rods, forgings, wires and extruded sections. Steel SN2 should not be hot-worked above 1200°C; owing to the possibility of the presence of some delta-ferrite in steel SN3, its maximum hot-working temperature is about 1050°C; the lower limit of the hot working range for both steels is 800°C. Typical mechanical properties of steels SN2 and SN3 are given in Table 2 under the following headings: type of the product [rods; plates (strip); rod; plate (strip); ditto]; condition and heat treatment

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69333

S/129/60/000/05/007/023
E193/E283

High Strength Stainless Steels of the Intermediate Austenitic-Martensitic Type

(quenching from 1050°C; ditto quenching from 975°C, SN2, or 930°C, SN3, followed by 2 h treatment at -70°C and tempering at 425°C, SN2, or 450°C SN3; ditto, but steel SN2 quenched from 950°C; cold-rolled, half-hard; ditto followed by tempering); σ_b, $\sigma_{0.2}$, δ, impact strength a_k, kgm/cm^2, of steel SN2 and SN3. Owing to its high Cr (17%) and Mo (3%) contents, and the presence of delta-ferrite, steel SN3 is more corrosion-resistant than steel SN2. Both steels can be easily welded, steel SN3 being used in both cases as the welding rod; no heat treatment after welding is necessary. The article is concluded by a list of several recommended heat treatment procedures for steels SN2 and SN3. (1) To improve machineability: heating to 750°C, cooling to 20°C, and re-heating to 650°C; the structure produced by this treatment consists of martensite with some residual austenite and carbides, precipitated at the grain boundaries. (2) Quenching, preliminary to the sub-zero treatment: rods and forgings of steel SN2 are quenched

Card 11/12

L 58972-65 EWT(l)/EWP(m)/EPR/EWA(d)/FCS(k)/EWA(h)/EWA(c) Pi-4 WW
ACCESSION NR: AP5019226 UR/0056/65/049/001/0135/0147

AUTHOR: Kormer, S. B.; Sinitsyn, M. V.; Kirillov, G. A.; Popova, L. T. 46 B

TITLE: Experimental determination of the light absorption coefficient in shock-compressed NaCl. The absorption and conduction mechanism

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 1, 1965, 135-147

TOPIC TAGS: absorption, absorption coefficient, high pressure, shock wave, shock compression

ABSTRACT: The absorption coefficients α for visible light in shock-compressed NaCl are measured experimentally. At a pressure of 465 kbars and a temperature of 2550K, $\alpha = 1.5$ cm^{-1}. With increasing pressure and temperature α increases, and for P = 790 kbars and T = 4850K, α = 10—12 cm^{-1}. The values of α at 4780 Å and 6250 Å are close to each other. The absorption coefficients found were about 100 times greater than those observed under normal conditions. A consideration of the experimental data and possible mechanisms of light absorption leads to the conclusion that in shock-compressed NaCl absorption and conductivity are associated with free electrons. The free electron concentration and mobility are deduced from the coefficient of absorption and from the conductivity in shock-compressed NaCl. A

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L 53932-65
ACCESSION NR: AP5019226

mechanism is suggested according to which NaCl, which initially is a dielectric, is transformed by the shock wave front into a semiconducting state with donor levels. The concentration of the donors generated by the shock wave front during plastic deformation reaches 10^{-3}. Free carriers in the conduction band are generated as a result of thermal excitation of electrons from the donor levels. Orig. art. has: 13 formulas and 3 figures. [CS]

ASSOCIATION: none

SUBMITTED: 20Feb65 ENCL: 00 SUB CODE: OP, SS

NO REF SOV: 014 OTHER: 020 ATD PRESS: 4051

Card 2/2

POPOVA, L.T.

Korsakoff syndrome in brain tumors injuring subcortical structures and archaeocortex formations. Zhur. nevr. i psikh. 64 no.10:1515-1520 '64. (MIRA 17:11)

1. Klinika nervnykh bolezney (direktor - prof. V.V. Mikheyev) I Moskovskogo ordena Lenina meditsinskogo instituta i Institut neyrokhirurgii im. Burdenko (direktor - prof. B.G. Yegorov) AMN SSSR, Moskva.

KORMER, S.B.; URLIN, V.D.; POPOVA, L.T.

Application of the interpolation equation of state to describe experimental data on the impact compression of metals. Fiz.tver. tela 3 no.7:2131-2040 Jl '61. (MIRA 14:8)
(Equation of state) (Metals--Cold working)

25699
S/181/61/003/007/021/023
B104/B203

1.1210

AUTHORS: Kormer, S. B., Urlin, V. D., and Popova, L. T.

TITLE: The interpolation equation of state and its application in the description of experimental data on the shock compression of metals

PERIODICAL: Fizika tverdogo tela, v. 3, no. 7, 1961, 2131 - 2140

TEXT: It was shown that the equation of state with elastic curves in the simple form of F. D. Murnaghen (Am. J. Math., 59, 235, 1937) and Lenard-Jones (M. Born and Huang K'un, Dinamicheskaya teoriya kristallicheskikh reshetok (Dynamic theory of crystal lattices), I, IL, M., 1958; R. Fürth, Proc. Roy. Soc., A183, no. 992, 87, 1944) does not permit a description of experimental data on shock compression of metals in a wide pressure range with an accuracy close to that of the experimental data. The authors suggest an interpolation equation for an elastic curve in the form of a series of $\delta^{1/3}$, and a method of finding the unknown parameters contained therein. The resulting equation permits the elastic curve to be described with sufficient accuracy as a function of pressure in the range

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The interpolation...

of 10^{14} - 10^{15} dyne/cm^2 after making one correction on the shock abiabatic. The equation of state with electron components (L. V. Al'tshuler et al., ZhETF, 38, no. 3, 790, 1960) and the resulting elastic curve describes the shock adiabatic in a pressure range of up to $5 \cdot 10^{12}$ dyne/cm^2 with an accuracy of ±3%. The equations of state considering the electron terms read as follows:

$$p = p_x(\delta) + \gamma(\delta) c_v \rho_k \delta \left(T - T_0 + \frac{E_0}{c_v}\right) + \frac{\rho_k}{4} \beta_k \delta^{1/3} T^2, \quad (2),$$

$$E = E_x(\delta) + c_v \left(T - T_0 + \frac{E_0}{c_v}\right) + \frac{\beta_k}{2} \delta^{-1/3} T^2, \quad (3)$$

In a pressure range of 0 - 10^{15} dyne/cm^2 at T = 0°K, $p_x = \sum_{i=1}^{n} a_i \delta^{i/3+1}$ (1), where $\delta = \rho/\rho_k$, $E_x = \int_1^{\delta} p_x d\delta/\rho_k \delta^2$ the inner energy at T = 0°K, E_0 the inner energy under normal conditions (p=0, T=T_0=300°K), β_k is the coefficient of the electron heat conductivity at $\rho = \rho_k$, and

$$\gamma = \frac{1}{3} + \frac{\delta}{2} \frac{\frac{d^2 p_x}{d\delta^2}}{\frac{dp_x}{d\delta}} \quad (4)$$

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The interpolation...

is the Grüneisen coefficient. With the use of Hugoniot's adiabatic equation, the interesting function $p_\gamma(\rho)$ is obtained from the above relations.

The coefficients a_i in (1) were calculated by a method developed by the authors in a previous paper (DAN SSSR, 131, no. 3, 1960). Fig. 1 compares the calculated dynamic adiabatics with experimental data found by other authors. Further, it is shown that the existing differences between experimental and calculated data can be reduced by using in the expression obtained for p_x an experimental point on the Hugoniot adiabatic as correction. Thus, the deviations between experimental and theoretical data do not exceed ± 3% for all metals. In a study of the dependence of the Grüneisen coefficient on density, it is shown that the "undulatory" dependences of this coefficient on density found in previous papers have no physical sense, and can only be considered as solution of a differential equation. In the method suggested here, these shortcomings are avoided; at high densities ($\delta > 3$), however, the Grüneisen coefficient is not correct in this case. In the closing part, it is shown that the method suggested does not permit a consideration of phase transformations or other deviations from the monotonic change in the substance properties at pressure changes. The authors thank B. P. Tikhomirov for programing

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25699 S/181/61/003/007/021/023
B104/B203

The interpolation...

the computations carried out on a "Strela" computer, and Academician Ya. B. Zel'dovich for a discussion and valuable remarks. Ya. B. Zel'dovich, A. S. Kompaneyets, L. V. Al'tshuler, A. A. Bakanova, and R. F. Trunin are mentioned. There are 5 figures, 1 table, and 19 references: 9 Soviet-bloc and 10 non-Soviet-bloc.

SUBMITTED: January 28, 1961 (initially), and
March 7, 1961 (after revision)

Card 4/5

LITKENS, V.A., dotsent; POPOVA, L.V., mladshiy nauchnyy sotrudnik

Using the method of roasting in a boiling fuel bed in copper smelting industry and its hygienic evaluation [with summary in English]. Gig. i san. 22 no.6:36-41 Je '57. (MIRA 10:10)

1. Iz Sverdlovskogo instituta gigiyeny truda i professional'noy patologii i kafedry gigiyeny truda Sverdlovskogo meditsinskogo instituta.

(INDUSTRIAL HYGIENE,
control of vapors in copper smelting (Rus))
(COPPER,
same)

Popova, L.V.

PROTAS, I.R.; LYU-DUN' [Liu-Tun]; POPOVA, L.V.

Kinetics of the chemical ripening of photographic emulsions.
Zhur. nauch. i prikl. fot. i kin. 3 no.2:88-95 Mr-Ap '58.
(MIRA 11:5)

1.Gosudarstvennyy opticheskiy institut im. S.I. Vavilova.
(Photographic emulsions)

POPOVA, L.V.

Energy values of terms of electron configuration f^3s, f^2d, and f^2d^2. Izv. Sib. otdd. AN SSSR no.7:65-70 '59.
(MIRA 12:12)

1.Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR.
(Atomic energy)

NECHITAYLO, Sergey Kirillovich. Prinimali uchastiye: SKVORTSOVA, Ye.N., geolog; POPOVA, L.V., geolog. CHEPIKOV, K.R., red.; DEMKIT'IKVA, T.A., vedushchiy red.; GANINA, L.V., tekhn.red.

[Geology, and oil and gas potentials of inadequately investigated areas in the northeastern Russian Platform] Geologicheskoe stroenie i perspektivy nefte-gazonosnosti novykh raionov severo-vostochnoi chasti Russkoi platformy. Pod red.K.R.Chepikova. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1960. 177 p. (MIRA 14:1)

1. Chlen-korrespondent AN SSSR (for Chepikov).
(Russian Platform--Petroleum geology)
(Russian Platform--Gas, Natural--Geology)

ARNAUTOV, A. K.; BURSHTEYN, S. A.; GENES, V. S.; DZHAFAROV, G. K.; KOGAN, I. A.; MAMOTYUK, Ye. M.; NIKOLAYEVA, M. G.; PISKAREVA, Ye. V.; POPOVA, L. Y.; TKACH, V. K.; FASTYUCHENKO, O. V.; FRENKEL', L. A.; TSYBENKO, P. A.

Characteristics of some early reactions of rats, irradiated with various doses, to burning by flame. Radiobiologiia 2 no.3: 406-413 '62. (MIRA 15:7)

1. Institut meditsinskoy radiologii, Khar'kov.

(X RAYS—PHYSIOLOGICAL EFFECT)
(BURNS AND SCALDS)

ARNAUTOV, A.K.; BURSHTEYN, Sh.A.; GENES, V.S.; KOGAN, I.K.; MAMATYUK, Ye.M.; LITVINENKO, A.S.; MOSKALENKO, I.P.; NIKOLAYEVA, M.G.; PISKAREVA, Ye.V.; POPOVA, L.Ya.; RUDNEV, L.I.; SIDYAKIN, V.V.; TKACH, V.K.; FASTYUCHENKO, O.V.; FISUN, A.N.; FRENKEL', L.A.; TSYBENKO, N.A.; SHRAMENKO, B.I.

Comparative study on the effect of X rays (197 kv) and braking radiation generated with linear accelerator (3 Mev) upon animals. Radiobiologiia 2 no.2:211-215 '62. (MIRA 15:4)

1. Khar'kovskiy institut meditsinskoy radiologii i Ukrainskoy fiziko-tekhnicheskiy institut AN USSR, Khar'kov.
(RADIATION--PHYSIOLOGICAL EFFECT)

L 17565-63 EWT(l)/EWT(m)/BDS/ES(j) AMD/AFFTC/ASD AR/K

ACCESSION NR: AT3002360 S/2930/62/000/000/0029/0035

AUTHOR: Fastyuchenko, O. V.(Kharkov); Popova, L. Ya.(Kharkov); Nikolayeva, M. G.(Kharkov)

TITLE: Early changes in blood serum protein composition in acute radiation sickness

SOURCE: K voprosam ranney diagnostiki ostroy luchevoy bolezni; sbornik nauchnykh rabot. Kiev, Medgiz USSR, 1962, 29-35

TOPIC TAGS: blood serum, X-irradiation, general protein content, protein fraction , albumin, globulin subfraction

ABSTRACT: Lack of systematic observations on changes in blood serum total protein quantity and in protein fractions shortly after single total radiation exposure prompted this study. White rats were X-irradiated (RUM-3M unit, 28.5-32.0 r/min) in single doses ranging from 150 to 1200 r and tests were made 1, 24, 48, and 72 hrs after irradiation. Blood serum protein was determined by a micromethod and protein fractions were determined by electrophoresis on paper. In the first hour after irradiation for 150 to 1200 r the total protein content of the blood serum decreases. After 24, 48, and 72 hrs the total protein content in the blood serum grows proportionally to the

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ACCESSION NR: AT3002360

irradiation dose and time elapsed after exposure. Albumin content decreases and globulin content increases in all the serums shortly after exposure to X-irradiation regardless of dosage. Changes in the albumin-globulin coefficient value are similar to changes in albumin content under the same conditions. Increase in the globulin fraction is accompanied by increases in all its separate subfractions (alpha, beta, and gamma). The nature of the alpha-globulin changes coincides most of all with changes in the entire globulin fractions. Increase in globulins after irradiation can be considered as a natural protective reaction of the organism. Orig. art. has: 2 figures, 1 table.

ASSOCIATION: None

SUBMITTED: 00 DATE ACQ: 28May63 ENCL: 00

SUB CODE: AM NO REF SOV: 008 OTHER: 006

Card 2/2

L 17562-63 EWT(l)/EWT(m)/BDS/ES(j) AMD/AFFTC/ASD AR/K

ACCESSION NR: AT3002363 S/2930/62/000/000/0054/0061

AUTHOR: Fastyuchenko, O. V.(Kharkov); Popova, L. Ya.(Kharkov); Nikolayeva, M. G.(Kharkov)

TITLE: Early changes in spleen and marrow nucleic acid contents in acute radiation sickness 19

SOURCE: K voprosam ranney diagnostiki ostroy luchevoy bolezni; sbornik nauchnuky rabot. Kiev, Medgiz USSR, 1962, 54-61

TOPIC TAGS: acute radiation sickness, nucleic acid , spleen, marrow, DNA, RNA, X-irradiation

ABSTRACT: Spleen and marrow of white rats were X-irradiated (RUM-3 unit, 28.5-32.0 r/min) with single doses ranging from 150 to 1200 r and tests were made 1, 24, 48, and 72 hrs after exposure to determine nucleic acid changes. Nucleic acids were separated from the tissues by Schmidt's and Tangauzer's fractionation method. It was found that 1 to 72 hrs after irradiation the nucleic acids decrease in the spleen and marrow for all radiation doses. The sharpest decrease in nucleic acids in the spleen and marrow appears 24 hrs after irradiation with maximal RNA changes for 300, 450, and 1050 r and maximal DNA changes

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L 17562-63
ACCESSION NR: AT3002363

for 300, 450, 750, 1050, and 1200 r. 48 -72 hrs. after irradiation the sharpest decrease in RNA content is observed for 600 r and 750 r and the sharpest decrease in DNA content is observed for 600, 750, 1050, and 1200 r. With large doses of X-irradiation (900 and 1200 r) RNA content is restored to its normal level and in some cases exceeds it. The lack of correlation between radiation doses and the disturbances in the nucleic acids indicate that X-irradiation depending on dose affects different systems of the organism differently. Orig. art. has: 2 figures.

ASSOCIATION: None

SUBMITTED: 00 DATE ACQ: 28May63 ENCL: 00

SUB CODE: AM NO REF SOV: 012 OTHER: 007

Card 2/2

NIKITIN, V.N.; KAPLAN, V.A.; KORNEYKO, A.V.; POPOVA, L.Ya.

Some aspects of the biochemistry of lactation. Zhur.ob.biol. 17 no.4: 272-282 Jl-Ag '56. (MLRA 10:2)

1. Kafedry fiziologii cheloveka i zhivotnykh Khar'kovskogo universiteta i fiziologii i biokhimii sel'skokhozyaystvennykh zhivotnykh Khar'kovskogo zootekhnicheskogo instituta.
(LACTATION)

BULANKIN, I.M.; NIKONOVA, A.S.; ROKHKIND, R.F.; POPOVA, L.Ya.; USHKATS, Ye.V.

Joint uric and acidic-alkaline denaturation of globular proteins. Ukr.biokhim.zhur. 24 no.2:216-224 '52. (MLRA 6:11)

1. Kafedra biokhimiyi Kharkivs'koho derzhavnoho universytetu im. O.M.Gor'koho. (Proteins)

POPOV, A.A. [deceased]; POPOVA, L.Ye.; KURUKLIS, G.L.; FAN SHU-SEN'
[Fang Shu-sen]

Precipitation hardening alloys for cast and hard-faced tools.
Izv. vys. ucheb. zav.; chern. met. 7 no.2:124-128 '64.
(MIRA 17:3)

1. Ural'skiy politekhnicheskiy institut.

ACCESSION NR: AP4017761 S/0148/64/000/002/0124/0128

AUTHOR: Popov, A. A. (Deceased); Popova, L. Ye.; Kuruklis, G. L.; Fang, Shu-sen

TITLE: Precipitation hardened alloys for cast and hard-faced tools

SOURCE: IVUZ. Chernaya metallurgiya, no. 2, 1964, 124-128

TOPIC TAGS: precipitation hardening, tool, cast tool, Fe, W, Co, Mo, Va, hard-faced tool, hard facing

ABSTRACT: In an attempt to decrease the brittleness of Fe-W-Co, Fe-Mo-Co and Fe-Va-Co alloys, the authors investigated an alloy containing 18% W, 30% Co and 50% Fe with 0.5 and 1.0% Ti additions. The specimens were prepared in a 30 kg induction furnace and cooled in sand or special precision cast molds. Etching was done with phosphoric acid and hydrogen peroxide (1:4). In cast specimens austenite was frequently transformed to a eutectoid mixture forming a saturated alpha-solid solution. Rapid cooling decreased the austenite decomposition. Additional Ti alloying refined the grain but decreased

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ACCESSION NR: AP4017761

austenite stability during cooling. Additional tempering at 400, 500, 600 and 700C increased hardness, particularly in specimens without titanium. The decrease in hardness observed at 800C was attributed to the coagulation of particles. Ti accelerated the dissolution of the $\mathcal{E}$ -phase. Oil quenching was recommended in preference to other hardening processes and after quenching, the hardness of specimens amounted to 38-42 Rockwell C hardness. A two-hour holding period at an optimum temperature of 600-650C resulted in maximum hardness (65 Rockwell C hardness). Ti additions drastically accelerated the decomposition of the saturated solution. The cutting properties were determined with 10x10x30 mm forged specimens hardened at 1300C by means of face turning tests with and without impact on 268 mm diameter cylinders made out of 40 N steel which had a Brinell hardness number of 200. The cylinder turned at 125 rpm, the infeed was 0.3 mm per turn, and the cutting depth was 1 mm. The cutting speed of all the specimens was 20% higher than in high-speed "R18" steel. The results of the impact tests only proved satisfactory after 1% titanium additions. Cast 15x15 mm specimens were forged to 8x8 mm and used as electrodes with a coating of special BO composition. All three

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ACCESSION NR: AP4017761

alloy specimens displayed improved cutting properties. The results of the impact and other resistance tests showed an analogous cutting strength in all specimens. The authors attribute the high brittleness of the investigated alloys to the unfavorable form of ε-phase precipitation along the grain boundaries. The possibility of using these alloys for hard-faced tools is excellent but further study is called for. Orig. art. has: 6 figures and 2 tables.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural Polytechnic Institute)

SUBMITTED: 07Dec62 DATE ACQ: 12Mar64 ENCL: 00

SUB CODE: NO REF SOV: 000 OTHER: 000

Card 3/3

L 44392-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD
ACC NR: AP6023046 SOURCE CODE: UR/0148/66/000/004/0128/0132

AUTHOR: Zubov, V. Ya.; Popova, L. Ye.; Baraz, V. R.

ORG: Ural Polytechnic Institute (Ural'skiy politekhnicheskiy institut)

TITLE: Effect of manganese and silicon on the transformation of supercooled austenite in cobalt steel

SOURCE: IVUZ. Chernaya metallurgiya, no. 4, 1966, 128-132

TOPIC TAGS: cobalt steel, alloy steel, manganese, austenite transformation, temperature dependence, metallographic examination, metal hardening

ABSTRACT: The effects of manganese and silicon additions on the transformation characteristics of cobalt steel were studied. A 0.7% carbon steel was alloyed with Co, Co and Si, or Co and Mn; in all, 9 alloys were tested. Isothermal transformation curves are given for each steel. The steels were austenitized at 900°C for 3 min. Cobalt with or without other alloying elements decreased the stability of austenite in all subcritical temperature intervals. Intermediate transformations occurred in all steels. Cobalt promoted the formation of a thin ferrite-carbide mixture with a high degree of hardness. Depending on the austenitic transformation temperature in the subcritical region, different methods could be developed for forming a definite type of structure having particular properties: a) sorbite at transformation temperatures of 550-650°C;

UDC: 669.15-194:669.25:620.181

Card 1/2

POPOV, Aleksandr Artem'yevich; POPOVA, Lyudmila Yevgen'yevna; SADOVSKIY, V.D., doktor tekhn. nauk, prof., retsenzent; YERMAKOV, N.P., tekhn. red.

[Heat treatment handbook; isothermal and thermokinetic diagrams on the decompsition of undercooled austenite] Spravochnik termista; izotermicheskie termokineticheskie diagrammy raspada pereokhlazhdennogo austenita. Moskva, Mashgiz, 1961. 430 p. (MIRA 15:2)

(Steel--Heat treatment) (Austenite)

POPOV, Aleksandr Artem'yevich; POPOVA, Lyudmila Yevgen'yevna

[Isothermal and thermokinetic diagrams of the decomposition of undercooled austenite; handbook for the heat treatment specialist] Izotermicheskie i termokineticheskie diagrammy raspada pereokhlazhdennogo austenita; spravochnik termista. Izd.2., ispr. i dop. Moskva, Metallurgiia, 1965. 495 p. (MIRA 18:7)

POPOVA, M.; TERZIEV, G.; DIMITROV,D.

Fatal poisoning with rimicid and its demonstration by chemical methods. Folia med. (Plovdiv) 6 no.5:350-353 '64

1. Vurshiy meditsinsiy institut imeni I.P.Pavlova, g. Plovdiv, Bolgariya, Kafedra sudebnoy meditsiny (Vrach rukovoditel': prof. P. Mironov) i Gorodskaya bol'nitsa g. Chirpan (glavnyy vrach: D. Mylchanov [D.Milchanov]).

POPOVA, M.

[Gooseberry fruitworm] Kryzhovnikovaia ognevka. Moskva, Gos. izd-vo selkhoz lit-ry, 1958. 37 p. (MIRA 11:12)
(Pyralid moths)
(Gooseberries--Diseases and pests)

POPOVA, M.

From the practice of Karaganda financial organs. Fin. SSSR 22 no.7:68-71 Jl '61. (MIRA 14:7)

1. Nachal'nik otdela gosdokhodov Karagandinskogo gorfinotdela. (Karaganda--Finance) (Auditing)

TERZIEV,G.; BLIZNAKOV, Khr.; TCHOMAKOV, M. [Chomakov, M.]; PETCHILKOV, I. [Pechilkov, I.]; BAKOV, P.; PEEV, Khr.; DIMITROVA, N.; POPOVA, M.

Fatal parathion poisoning. Folia med. (Plovdiv) 6 no.4:274-279 '64

1. Institut de Hautes Etudes Medicales "I.P.Pavlov" de Plovdiv, Bulgarie; Chaire de Medecine Legale (Directeur interimaire: prof. P. Mironov).

POPOVA, M.

H-4

BULGARIA / Chemical Technology. - Corrosion. Protection from Corrosion. Chemical Products and Their Application. Part 1.

Abs Jour : Referat. Zhurnal Khimiya, No 4, 1958, 11680.

Author : P. Angelov, K. Domuzov, M. Popova.

Inst : Not given.

Title : Characteristic Case of "Alkaline Brittleness" in Boilers.

Orig Pub : Tekhnika (B"lg.), 1957, 6, No 5, 13 - 15.

Abstract : A case of formation of cracks in consequence of inter-crystallite corrosion of the metal in riveted seams of drums of 14 atm. sectional water tube boilers of 5 tons per hour is described. Feedwater was softened with lime, soda and phosphate to a residual hardness of 0.04 mg-equ. per lit. Recently the boiler water had the alkalinity of 11 to 14 mg-equ. per lit

Card 1/2

POPOVA, M.

Difficulties encountered by the small enterprises. Mias.ind. SSSR 33 no.3:29 '62. (MIRA 15:7)

1. Pinskiy stitsekombinat.
(Meat industry)

POPOVA, M. d-r

How to make astronomical observations in 1957. Nauka i tekh mladezh no.1:4,29 Ja '57.

SIMOVA, P.; POPOVA, M.; DIMITROV, Kh.; PETSEV, N.

Studies in alkyl phenol spectra. Pt.1. Doklady BAN 17 no.2:113-116 '64.

1. Submitted by Corresponding Member E.Dzhakov.

POPOVA, M.

Groups of economic analysis have been organized. Fin. SSSR 23 no.8:60-64 Ag '62. (MIRA 15:8)

1. Nachal'nik otdela gosudarstvennykh dokhodov Karagandinskogo gorodskogo finansovogo otdela.
(Karaganda--Auditing and inspection)

POPOVA, M.

Variations of the brightness of the unexplored S 5438 Gemini variable star, and their characteristics. Doklady BAN 16 no.6: 609-611 '63.

1. Note présentée par N.Bonev.

FOMOVA, M.,

Diseases and pests of fruits and berries. Izd. 2., ispr. i dop. Moskva, Gos. izd-vo selkhoz lit-ry, 1955. 295 p.

1. Fruit - Diseases and pests. 2. Berries - Diseases and pests

POPOVA, Malina, d-r

International Geophysical Year. Nauka i tekh mladezh no.10:1-2 O '57.

POPOVA, M.

Kitchen-factory attached to the plant. Sov.torg. no.5:25-26 My '56. (MLRA 9:8)

1. Sekretar' partiynoy organizatsii fabriki-kukhni Kalininskogo tresta stolovykh.

(Leningrad--Restaurants, lunchrooms, etc.--Equipment and supplies)

POPOVA, M.

BOGDANOV, M.; BEREL'SON, A.; VOLKOV, V.; VOZNESENSKIY, S.; ZELENUKHIN, S.; IOFFE, N.; KORENEV, P.; KRIVINSKAYA, I.; KULAGIN, M.; MARSAVIN, M.; MINAKOVA, P.; POPOVA, M.; SUKHNEV, S.; SHTALTOVNYY, A.; FALEYEVA, L. FROKTISTOV, P.; CHULANOVA, M.; YATSYNIN, N.

Obituary. Ptitsevodstvo 9 no.2:48 F '59. (MIRA 12:3)
(Shutov, Nikolai Ivanovich, d. 1958)

POPOVA, M.

Sheep farm in Yagodovo. p. 20.

Vol. 10, no. 12, Dec. 1955
KOOPERATIVNO ZEMEDELIE
Sofiya, Bulgaria

So: Eastern European Accession Vol. 5 No. 4 April 1956

POPOVA, M.

POPOVA, M. Radiants, activity, and physical characteristics of telescopic meteors from the Perseid shower. p. 161. Vol. 5 Jan./Dec. 1955
IZVESTILA SERILA FIZICHESKA. Sofiia, Bulgaria

SOURCE: East European Accessions List (EEAL) Vol. 6 No.4 April 1957

POPOVA, M.

POPOVA, M. Luminescent function of meteors of the Perseid group. In French with Russian summary. p.13.

Vol. 8, no. 2, Apr./June 1955, DOKLADY, Sofiya, Bulgaria.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 10, Oct. 1956.

POPOVA, M.

[Pests and diseases of fruits, berries, and grapes] Vrediteli i bolezni plodovo-iagodnykh kul'tur i vinograda. Moskva, Gos. izd-vo selkhoz lit-ry, 1956. 214 p. (MLRA 10:4)
(Fruit--Diseases and pests)

POPOVA, M.

[Diseases and pests of fruits, berries, and grapes] Vrediteli i bolezni plodovo-iagodnykh kul'tur i vinograda. Izd.2. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1961. 271 p.
(Fruit--Diseases and pests) (MIRA 15:4)
(Grapes--Diseases and pests)

SIMOVA, P.; POPOVA, M.; DIMITROV, Kh.; PETSEV, N.

Study of alkyl phenol spectra. Pt. 3. Doklady BAN 17 no.4:353-356 '64.

1. Predstavleno chl.-korr. E. Dzhakovym.

Popova, M.

VALYUZHINICH, Ye.N.; POPOVA, M.

Determination of vanillin in brandy [in Russian with English summary]. Biokhim.vin. no.1:39-46 '47. (MLRA 7:10)

1. TSentral'naya nauchno-issledovatel'skaya enokhimicheskaya laboratoriya Rosglavvinc, Moscow.
(Brandy) (Vanillin)

IELINEK, Milosh [Jelinek, Milos] (Prague); POPOVA, M. [translator]

New views on the theory of teaching, and their reflection on teaching mathematics. Mat i fiz Bulg 7 no.4:38-45 Jl-Ag '64.

POPOVA, M.A.

"The Use of the Carbamide of Synthetic Urea in the Raising of Young Steers of Large Horned Cattle";

dissertation for the degree of Candidate of Agricultural Sciences
(awarded by the Timiryazev Agricultural Academy, 1962)

(Izvestiya Timiryazevskoy Sel'skokhozyaystvennoy Akademii, Moscow, No. 2, 1963, pp 232-236)

S/123/61/000/013/014/025
A052/A101

AUTHORS: D'yachenko, S. S.; Palatnik, L. S.; Popova, M. A.

TITLE: The effect of heat treatment conditions on the structure of 20XM-A (20KhM-L) steel

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 13, 1961, 93, abstract 13B649 ("Tr. Khar'kovsk. politekhn. in-ta", 1959, no. 25, 91-97)

TEXT: The effect of tempering temperature on microstructure and composition of the carbide phase of 20KhM-L steel has been investigated by the metallographic, electron microscopic and X-ray diffraction methods. After tempering at 400°C the carbide phase consists of $Cr_{23}C_6$ carbide and a small quantity of Fe_2Mo_2C and Fe_3C carbides. With an increase of tempering temperature the α - solid solution becomes poorer in alloying elements, which is accompanied by an increased content of Fe_2Mo_2C carbide. Above 570°C cementite is dissolved and Mo_2C carbide separates in ferrite grains. The stability of carbide phases ($Cr_{23}C_6$, Fe_2Mo_2C, Mo_2C) is explained by the closeness and low values of their specific thermodynamic potentials. There are 5 figures and 16 references. N. Il'ina

[Abstracter's note: Complete translation]

Card 1/1

POPOVA, M.A.

Conditions for the evolution of time-averaged absolute geopotential fields. Meteor. i gidrol. no.2:20-24 F '61. (MIRA 14:1)
(Weather forecasting)

POLYA, M.A.

Significance of aerostatic flows of masses in pressure field evolution. Trudy OGMI no.17:31-42 '58. (MIRA 12:7)
(Atmospheric pressure)

L 13002-65 EPA(s)-2/EWT(m)/EWP(t)/EWP(b) Pt-10 JD/JG
ACCESSION NR: AR4046007 S/0058/64/000/007/E028/E029

SOURCE: Ref. zh. Fizika, Abs. 7E212

AUTHORS: Zakharin, Ya. A.; Kulik, I. O./Madikyan, E. M./ Popova, M. A./Eydel'man, L. G.

TITLE: Growing of large NaI(Tl) and CsI(Tl) single crystals

CITED SOURCE: Sb. Stsintillyatory* i stsintillyats. materialy*. Khar'kov, Khar'kovsk. un-t, 1963, 13-17

TOPIC TAGS: activated crystal, single crystal, scintillator, crystal growth, crystal imperfection

TRANSLATION: The Stockbarger method is used to develop equipment and a procedure for obtaining single crystals of NaI(Tl) (I) and CsI(Tl) (II) of large dimensions (diameters 200 and 100 mm, respectively). An oven system is described, which ensures temperature stability within the working volume of the oven accurate to 0.1 -- 0.15% , and which makes it possible to obtain crystals free of macroscopic defects. The single crystals were grown in quartz ampoules

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ACCESSION NR: AR4046007

suspended in the oven to prevent deformation of the phase separation boundaries at the place of contact with the oven, and to prevent formation of parasitic crystallization nuclei resulting from the increased heat transfer. The formation of parasitic nuclei in II is influenced by the aperture angle of the ampoule cone. The annealing regime and the lowering of the temperature to room temperature during the growth of single crystals I and II are discussed. For I the annealing time was 10--14 days; crystals II, which are plastic down to room temperature, required no prolonged annealing. L. Yerman.

SUB CODE: SS ENCL: 00

Card 2/2

L 49010-65 EWT(l)/EWT(m)/T/EWP(t)/EEC(b)-2/EWP(b)/EWA(c) Pi-4 IJP(c)
GG/JD

ACCESSION NR: AR5007232 S/0081/65/000/002/B041/B042

35
B

SOURCE: Ref. zh. Khimiya. Sv. t., Abs. 2B292

AUTHOR: Zakharin, Ya.; Kulik, I. O.; Madikyan, E. M.; Popova, M. A.; Eydel'man, L. G.

TITLE: Cultivation of large single crystals of NaI(Tl) and CsI(Tl)

CITED SOURCE: Sb. Stsintillyatory i stintillyats. materialy. Kar'kov, Khar'kovsk. un-t, 1963, 13-17

TOPIC TAGS: crystal growth, single crystal, scintillator, sodium iodide, cesium iodide, activated crystal, crystallization furnace, crystallization nucleus

TRANSLATION: Based on the method of D. C. Stockbarger (Trans. Faraday Soc., 1949, No. 5, 294, 299), the authors developed an apparatus and a technique for the preparation of large single crystals of NaI(Tl) and CsI(Tl), with diameters of 200 and 100 mm, respectively. A schematic diagram is given of a crystallization furnace which guarantees a stable temperature in the working chamber of the furnace with an accuracy of 0.1-0.15C, and in which it is possible to obtain crystals which are free of macroscopic defects. The cultivation of single crystals was carried out in quartz ampoules, suspended in the crystallization furnace in order

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L 49020-65

ACCESSION NR: AR5007232

to prevent deformation of the surface of phase separation at the points of contact with the furnace and the formation of parasitic nuclei of crystallization due to increased heat abduction. The formation of parasitic nuclei in CsI(Tl) is affected by the angle of solution of the tip of the ampoule. The rates of heating and of the subsequent cooling to room temperature during the cultivation of single crystals of NaI(Tl) and CsI(Tl) are evaluated, and it is pointed out that for NaI(Tl) the duration of heating should be 10-14 days, while for crystals of CsI(Tl), which are plastic to room temperature, the duration of heating is unimportant. L. Yerman

SUB CODE: IC,SS ENCL: 00

Card 2/2

S/124/61/000/010/043/056
D251/D301

AUTHOR: Popova, M.A.

TITLE: On the value of ageostrophic currents of mass in the evolution of a pressure field

PERIODICAL: Referativnyy zhurnal. Mekhanika, no. 10, 1961, 101-102, abstract 10 B700 (Tr. Odessk. gidrometeorol. in-ta, 1958, no. 17, 31-48)

TEXT: In the first part of the work a survey is given of prognostic prescriptions of a qualitative nature, based on the vortex equation. It is shown that for the prognosis of the evolution of a state of pressure it is desirable to know how to estimate the divergence of the wind velocity, or, as is suitable for a finite volume, to estimate the flux of velocity through the surface which bounds it. With this aim a method is laid down in the second part for estimating the flux of velocity induced by the ageostrophic expression of the wind. For an estimation of the ageostrophic flux

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D251/D301

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of velocity it is necessary to calculate the ageostrophic wind, i.e. the vector of the deflection of the wind from the geostrophic. For this the well-known formula of I.A. Kibel'

$$U' = -\frac{1}{2\omega \sin\varphi}\left(\frac{\partial Vg}{\partial t} + Ug\frac{\partial Vg}{\partial x} + Vg\frac{\partial Vg}{\partial y}\right)$$

$$V' = \frac{1}{2\omega \sin\varphi}\left(\frac{\partial Ug}{\partial t} + Ug\frac{\partial Ug}{\partial x} + Vg\frac{\partial Ug}{\partial y}\right)$$

may be used, where ω is the angular velocity of rotation of the earth, φ is the breadth of the locus, t is the time Ug and Vg are components of the geostrophic wind and U', V' of the ageostrophic wind relative to the x and y axes respectively. Using these formulae, the author considers only one term in the parentheses of each of them, ignoring the other two. The discarded terms have such an order of magnitude as those considered, so that the given simplification, says the author, is not sufficiently correct. In the third part the method described is applied to the analysis of an example.
[Abstracter's note: Complete translation]

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L 13566-66 EWT(m)/ETC(F)/EWG(m)/EWP(t)/EWP(b) IJP(c) EDW/JD
ACC NR: AP6001231 SOURCE CODE: UR/0363/65/001/012/2151/2153

AUTHOR: Abrikosov, N. Kh.; Yelagina, Ye. I.; Popova, M. A.

ORG: Institute of Metallurgy im. A. A. Baykov (Institut metallurgii); Moscow Institute of Fine Chemical Technology im. M. V. Lomonosov (Moskovskiy institut tonkoy khimicheskoy tekhnologii)

TITLE: Study of the $PbTe-Sb_2Te_3$ system

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 12, 1965, 2151-2153

TOPIC TAGS: lead compound, antimony compound, tellurium compound, solid solution, PHASE DIAGRAM, THERMAL ANALYSIS

ABSTRACT: Microstructural and thermal analyses were used to study the $PbTe-Sb_2Te_3$ system, and a phase diagram of the latter was plotted (see Fig. 1). It was shown that a

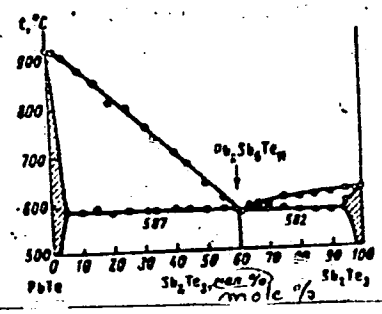

Fig. 1. Phase diagram of the $PbTe-Sb_2Te_3$ system.

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