Mes'kin, V.S.

81906
S/126/60/010/01/011/019
E111/E335

18.8100

AUTHORS: Mes'kin, V.S. and Al'ftan, E.A.

TITLE: Reasons for Instability of Alloys for Exact Resistances and Ways of Reducing It

PERIODICAL: Fizika metallov i metallovedeniye. 1960. Vol. 10. No. 1, pp. 90 - 100

TEXT: The authors point out that physico-chemical processes taking place on resistance alloys and leading to changes of resistance with time have not yet been studied. Mes'kin had previously arrived at a working hypothesis that such changes are due to gradual evolution of hydrogen from the alloy. The authors now give some existing evidence on this hypothesis and go on to describe special experiments to test it. For these, manganin (12.42% Mn, 2.52% Ni, 1.10% Co, remainder Cu) was artificially enriched with hydrogen either by blowing the gas into the liquid or by electrolytically introducing it into 0.8-mm dia wire after annealing and etching. For comparison ageing kinetics were studied on the same wire unhydrogenated and on a 0.4-mm workhardened one. Measurements had an accuracy of ± 0.002%. Fig. 1 shows that the relative change of resistance over about

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118 days was much greater at room temperature for a hydrogenated (Curve 1) than unhydrogenated specimen. More complex curves were obtained for the different specimens with ageing at 100 °C (Fig.2) for up to 30 hours and for ageing at room temperature (up to about 98 days) started a month after 30 hours ageing at 100 °C (Fig. 3). Further plots of averaged relative changes in resistance versus time (days) are given in Fig. 4 and show that after 30-hours ageing at 100 °C the resistance of annealed and of hydrogenated specimens rises, while that of work-hardened ones first falls and then rises. Schematic representation of relative resistance changes for simultaneous action of several factors is given in Fig.5: this shows that although certain combinations can lead to resistance stability, this is only temporary. Surface oxidation also plays a part in resistance changes and should be minimized, during service, as should hydrogen adsorption during manufacture. Other measures recommended by the authors include special heat treatment for hydrogen removal (e.g. annealing in argon at about 550 °C) and

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holding in oil, after etching, subjected to ultrasonic vibrations. The latter operation (conveniently carried out in apparatus shown in Fig. 7) was found to lead to significant improvements in resistance stability (Figs.8, 9). Further improvement can be obtained by ultrasonic treatment and passage of a high current density through the wire: this treatment should be used in addition to the foregoing especially when high-resistance stability is needed. There are 9 figures and 7 references: 4 Soviet, 2 English and 1 French.

SUBMITTED: October 21, 1959

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S/129/61/000/004/004/012
E073/E535

9.2100 (1001, 1145, 1331)

AUTHORS: Mes'kin, V. S., Doctor of Technical Sciences, Professor and Popova, L. A., Engineer

TITLE: Investigation of Alloys for Producing Accurate Resistances in the System Copper-Manganese-Tin

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1961, No.4, pp.20-24 + 1 plate

TEXT: The aim of the work was to determine the possibilities of reducing the temperature coefficient of the resistance α as compared with that obtained for classical manganin. S.V.Vinogradov has found that for manganin α can be reduced to some extent by introducing small quantities of certain elements. The investigations carried out in various countries led to Cu-Mn-Al and Cu-Mn-Al-Fe alloys with considerably reduced temperature coefficients of the resistance and also to Ag-Mn; Ag-Mn-Zn; Ag-Mn-Sn and Au-Cr, Au-Co alloys. Analysis of the isotherma sections of the ternary constitution diagram of state Cu-Mn-Sn at 350°C (C. W. Fink and J. A. Rowland, Ref.4) and at room temperature (H. Nishimura and M. Adachi, Ref.1 indicates that manganese reduces the solubility of tin in copper. The authors of this paper investigated ternary

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alloys containing 1-7% Sn with 5,7,9 and 12% Mn, the full analyses of the obtained alloys are given in Table 1. The plot, Fig.1, gives the influence of tin on the temperature coefficient of the resistance of annealed Cu-Mn alloys with various manganese contents. The authors recommend an alloy with 9% Mn and 4% Sn for which $\alpha \approx 2 \cdot 10^{-6}$, $\rho \approx 0.36$ Ohm·mm^2/m and $E \approx 0$. Fig.2 shows the influence of tin on the specific electric resistance ρ (Ohm·mm^2/m) and the e.m.f. E (μV/°C) (against Cu) of Cu-Mn alloys containing 9% Mn. It was found that the alloy No.10 (see Fig.3) is practically stabilized after seven heating cycles, whereby the resistance against its initial value changes only by 0.17%. Fig.3 shows the change of the electric resistance R measured at 22°C caused by cyclic heating to 100°C for 3 hours per day, R, Ohm vs. heating time, hours; top graph - copper alloy containing 9% Mn and 3% Sn (alloy No.10), bottom graph - manganin (alloy No.17). The mechanical properties and the structure of the Cu-Mn-Sn alloys were also investigated. The authors summarize their conclusions thus: 1. For manufacturing accurate resistances a ternary alloy containing about 9% Mn and 4% Sn is recommended. After annealing at 570°C in

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vacuum (10^{-2} mm Hg), this alloy has a specific resistance of 0.36 Ohm·mm^2/m, a temperature coefficient of the resistance of 2×10^{-6} in the temperature range 15-30°C and a thermo e.m.f. in a couple with copper equalling zero in the temperature range 0 to 100°C. The strength, elongation and hardness of the alloy is the same as for classical manganin.

2. The best electric properties were obtained for an alloy with about 11% Mn, 0.35% Sn and about 0.3% Si. In the work-hardened state (30% reduction) ρ = 0.42 Ohm·m^2/m, $\alpha_{15-30°} = 0$ and $E_{0-100°} = 0.8$ μV/°C.

3. The scatter in the measured values of the thermo e.m.f. values, the strength, the relative elongation and the microhardness showed that the investigated alloys were relatively uniform. Their other properties, particularly stability with time, tension stability and the technological properties require further detailed investigation. R. I. Sergiyenko participated in the experimental work. There are 3 figures, 5 tables and 7 references: 1 Soviet and 6 non-Soviet.

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Table 1

Chemical composition — Химический состав в %

Условный № сплава Alloy №	Cu	Mn	Sn	Условный № сплава Alloy №	Cu	Mn	Sn
1	93,71	4,41	1,21	10	87,91	8,63	3,05
2	91,50	4,53	3,37	11	85,91	9,08	5,14
3	89,80	4,40	5,68	12	83,87	8,87	6,99
4	88,15	4,96	7,08	13	87,08	11,68	1,06
5	92,31	6,80	1,20	14	85,42	11,63	3,12
6	90,35	6,69	3,14	15	82,16	12,60	5,63
7	88,80	6,04	5,24	16	81,35	11,35	7,28
8	85,80	6,79	7,58	17* (классический манганин) (classical manganin)	84,36	12,87	—
9	89,97	8,79	1,07				

* 3,29% Ni.

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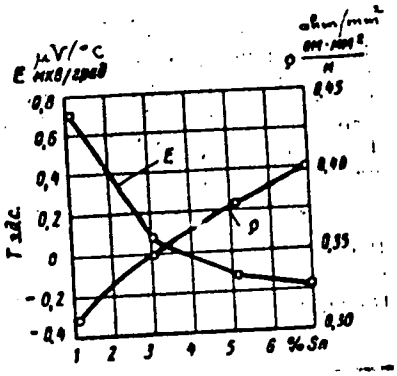
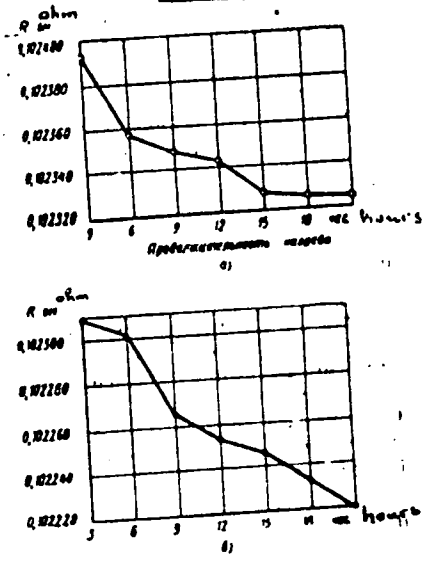
Fig.2



Фиг. 2. Влияние олова на удельное электросопротивление ρ и т. э. д. с. E (в паре с медью) сплавов Cu—Mn с 9% Mn.

Fig.3



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18.8100 1138 1418 1416
9.2100

S/129/61/000/008/011/015
E073/E535

AUTHORS: Mes'kin, V.S., Doctor of Technical Sciences Professor and Al'ftan, E. A., Engineer

TITLE: Some methods of stabilizing alloys for precision resistors

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1961, No.8, pp.43-46

TEXT: In an earlier paper (Ref.1: Fizika metallov i metallovedeniye, Vol.10, No.1, 1960) the authors expressed the hypothesis that variation in the resistance with the progress of time is caused by gradual elimination of hydrogen from the alloy. Experimental verification of the hypothesis has shown that, in addition to rejection of hydrogen, the formation of a fine oxide film on the surface and hydrogen redistribution at various temperatures play an important part. Therefore, it is essential to prevent penetration of hydrogen into the alloy during the entire process of manufacture and, primarily during the process of smelting. In the solid state pickling should be reduced to a minimum and the hydrogen absorbed during pickling should be

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eliminated by heating the alloy to an elevated temperature in oil which should preferably be stirred at the surface of the metal using ultrasonics. The object of the work described in this paper was to verify experimentally this assumption. Before starting the measurements, manganin wire of 0.8 mm diameter was etched for 30 min in an aqueous solution of 2% H_2SO_4 and 2% $K_2Cr_2O_7$. The anticipated influence of pickling was confirmed by the results, as can be seen from Fig.1, which gives the relative change in the electric resistance, %, as a function of time, hours (curve 1 - unpickled specimens, curve 2 - pickled specimens). To verify the effect of heating in oil with and without ultrasonics, the specimens were soaked in (vacuum) oil at temperatures between 20 and 110°C. The following values of the relative drop in the resistance in % were obtained.

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Heat treatment	0.5 mm annealed wire	0.4 mm unannealed wire
Soaking in oil and holding in air, 11 days	0.040	0.014
Same, plus 1 hour irradiation by ultrasonics	0.134	0.455
Same, plus heating in oil to 110°C for 1 hour	0.089	0.229
Soaking in oil and boiling in water for 6 hours during a period of two days	0.122	0.605
Soaking in oil and boiling in water for 30 hours during a period of two days	0.174	1.085

An experiment was also carried out to verify the increase in the stability resulting from irradiation with ultrasonics in

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air. The results of this treatment are shown in Fig.3 (relative change in the electric resistance, %, as a function of time, hours; curve 1 - specimens treated with ultrasonics, curve 2 - reference specimens). Holding of the alloy in oil leads to a removal of the adsorbed hydrogen, facilitates hydrogen diffusion from the alloy and stabilizes the latter. Intensive mixing of the oil at the surface of the metal by means of ultrasonics intensifies the stabilizing effect. Passage of a direct or alternating current will have an additional stabilizing effect on the alloy. There are 6 figures, 1 table and 1 Soviet reference.

S/148/61/000/011/014/018
E193/E383

9,2100 (1001, 1153, 1385)

AUTHORS Mes'kin, V.S., Sergiyenko, R.I., Popova, L.A. and Freydel', R.R.

TITLE Search for corrosion- and wear-resistant alloys for precision electrical resistance devices

PERIODICAL Izvestiya vysshikh uchebnykh zavedeniy Chernaya metallurgiya no. 11 1961 159 - 164

TEXT The conventional electrical resistance alloys exemplified by manganin and similar Cu-Ni-Mn alloys although satisfactory from the point of view of the electrical properties have a low resistance to the action of some corrosive media (sulphur-bearing or ammoniacal atmospheres) and are not always suitable for service in tropical or marine surroundings. A hard-wearing alloy free from these limitations would solve many design problems and it was for this reason that the present investigation, concerned with Pd-W and Pd-Mo alloys was undertaken. The experimental specimens were prepared by drawing molten alloys into quartz tubes (2.3 - 3 mm in diameter), preheated to 800 °C and swaging the resultant rods to 1.2 - 1.5 mm

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Search for corrosion-and ...

in diameter. After a series of exploratory measurements alloys of practical interest were drawn to wires 0.2 - 0.25 mm in diameter which were then used for the determination of electrical resistivity, ρ, temperature coefficient of electrical resistance, α, and thermo-emf against copper, E. The measurements were taken on specimens either cold-worked to approx. 50% reduction or vacuum-annealed. The results are reproduced graphically.

In Fig. 1 ρ (ohm mm^2/m, graph a) α, (x 10^4, graph b) and E ($\mu V/^oC$, graph c) are plotted against the W content (wt.%) in the Pd-W alloys vacuum-annealed at 700 °C. The curve in Fig. 1 has been divided into two branches, scale on the right-hand side relating to branch 1. experimental points denoted by circles had been obtained earlier (Ref. 1: V.A. Nemilov, A.A. Rudnitskiy - Izvestiya sektora platiny IONKh AN SSSR, 1949, no.23, 101). Since the temperature-dependence of α in the 15 - 90 °C range was linear, data reproduced in Fig. 1

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relate the entire 15 - 90 °C range. The concentration dependence of [illegible] and E of the Pd-Mo alloys is demonstrated in a similar manner in Fig. 3a, [illegible] and [illegible], respectively. It will be seen that in respect of their electrical properties the Pd-Mo alloys are inferior to Pd-W alloys. Since, in addition, they have some other shortcomings, the most promising of the Pd-W alloys (i.e. the 20% W-Pd alloy) denoted by a code mark [illegible] 20 (PV20) was selected for further tests. The results of contact resistance measurements, carried out on wires 0.25 mm diameter are reproduced in Fig. 4, where the contact resistance (ohm) is plotted against the contact pressure (g). Curves 1-5 relating to the following experimental conditions: 1 - PV20 in contact with itself (both wires vacuum-annealed at 800 °C), 2 - manganin in contact with manganin; 3 - PV20 in contact with PV20 both specimens preliminarily held for 24 h in a sulphurous atmosphere (0.02 g of SO_2 per 1 dm^3 of air) 4 - PV20 in contact with PV20, both wires preliminarily held for 24 h at 55 60 °C

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in air of 98% humidity. 5 - PV20 in contact with PV20, both wires preliminarily held for 36 h in a 25% ammonia solution (it is stated in this connection that contact resistance between manganin wires held preliminarily for 24 h in ammonia solution was infinitely large). In the next series of experiments the stability of ρ was studied. The specimens were heated in air at 100 °C for 3 h and after a 24 h interval their ρ at room temperature was measured, this treatment being repeated several times. The results are reproduced in Fig. 5, where the change in resistivity (%) due to cyclic heating is plotted against the total time (hours) at 100 °C. Curves 1 - 3 relating to various PV20 specimens. Curve 4 to manganin (the effect of similar treatment in boiling water was more pronounced, the increase in ρ of PV20 after 25 cycles amounting to 1.75%). Since after cyclic heating of the PV20 alloy its ρ at room temperature remained practically constant, this treatment should provide effective means of stabilizing ρ of this alloy. UTS and elongation of PV20 were respectively 133 kg/mm^2 and 1% in

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the cold-worked condition, and 33.2 kg/mm^2 and 25.3% after annealing. Wear-resistance of this alloy was also found to be much better than that of manganin. It was concluded that high strength combined with good wear- and corrosion-resistance render the PV20 alloy suitable for some applications. Since, however, this alloy is inferior to manganin in respect of its electrical properties (α and E), search should be continued for a material with better electrical properties which, at the same time, would be cheaper and easier to produce.
There are 5 figures and 5 references: 2 Soviet-bloc and 3 non-Soviet-bloc.

ASSOCIATION: Leningradskiy institut aviatsionnogo pribor-ostroyeniya i zavod "Lenteplopribor"
(Leningrad Institute of Aviation Instruments and "Lenteplopribor" Works)

SUBMITTED: February 22, 1961

MEŠ'KIN, V.S.; SERGIYENKO, R.I.; POPOVA, L.A.; FREYDEL', R.R.

Investigation of corrosion-resistant and wear-resistant alloys for a high degree of resistance accuracy. Izv. vys. ucheb. zav.; chern. met. 4 no.11:159-164 '61. (MIRA 14:12)

1. Leningradskiy institut aviatsionnogo priborostroyeniya i zavod "Lenteplopribor".
(Alloys—Corrosion)
(Mechanical wear)

18.7000 4016, 1413, 1555

S/126/61/011/004/006/023
E111/E435

AUTHORS: Mes'kin, V.S. and Al'ftan, E.A.

TITLE: Investigation of the Influence of Ultra-Sonics on the Results of the Heat Treatment of Alloys

PERIODICAL: Fizika metallov i metallovedeniye, 1961, Vol.11, No.4, pp.533-544

TEXT: Ultra-sonic vibrations can affect transformations in alloys directly (e.g. Ref.5) or by improving heat-transfer rates to liquids and hence cooling rates in quenching (Ref.1 to 4). E.A.Al'ftan (Ref.13) is among those who have reported that dispersion hardening processes in heat resisting steels is affected. He has also shown (Ref.23) that ultra-sonic vibrations accelerate processes primarily at lattice imperfections and improvements in strength and plasticity characteristics can therefore be expected from such vibrations during heat treatment. In the present work this has been studied for isothermal hardening, low-, medium- and high-temperature annealing after hardening to martensite, dispersion hardening of beryllium bronze and the sulphocyaniding of steel. The apparatus (Fig.1) consisted of a

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generator of 800 W output at 10 to 100 kc/s (1), a selenium rectifier (2), autotransformer (3), condenser bank (4), choke (5), magnetostriction vibrator for 25 to 26 kc/s (6), water cooling pipes (7), control rheostat (8), furnace (9), nitrate bath (10), thermocouple (11), galvanometer (12). The test steel specimen (13) was screwed (if made of bronze it was attached with a special holder) into the vibrator and a control specimen (14) was also placed in the bath. The amplitude of vibration was determined from the length of lines produced in the field of view of a microscope by silver particles on the specimen and the vibrator surfaces. The steel specimens were mostly square or round in cross-section, the beryllium bronze (2.05% Be) was a straight wire 3 or 3.5 mm diameter. The maximum and minimum variable stresses were calculated; the stress rose to about 10 to 12 kg/mm^2 for steel and to 4.5 for bronze specimens. Fig.2a shows the amplitude of alternating stress (kg/mm^2) plotted against distance in mm from the bottom end of steel specimens of the various types, and where mechanical test-pieces were cut out from the specimens. For studying isothermal hardening type II and

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IV specimens of 35ХГСА (35KhGSA) and type IV of 40ХНМА (40KhNMA) steels were used, normalized from 890 ± 10 and 860 ± 10°C, respectively. Specimens were preheated and then transferred to the nitrate bath and subjected to vibration for 10 or 20 minutes at 400 - 470°C and 345-385°C (35KhGSA and 40KhNMA respectively) and air cooled. Vibration was stopped when the specimen had cooled to 100 - 200°C. The control specimens were subjected to the same treatments but without vibration. With 35KhGSA steel, no significant change in structure or grain size was produced by the vibration treatment but toughness increased somewhat. Specimens treated at 470 contained not over 1% austenite, those treated at 400°C contained 10 to 15%. With 40KhNMA steel vibration treatment had a negligible effect on plasticity and hardness but increased strength and gave a more dispersed microstructure; indirect indications are that toughness would not fall through the treatment. For investigating low- and medium-temperature tempering, type III specimens of ЭИ.50 (Э.50) steel were used, normalized from 880 ± 10°C and oil quenched at the same temperature. Tempering was effected at 200 - 450°C (± 5°C); ultra-sonic vibration had no effect at the lower temperature but at

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higher temperatures it increased hardness and slightly, toughness. For high-temperature tempering, type III specimens of 30KhGSA steel were normalized and then oil quenched from 890°C tempered at 600°C and subjected to ultra sonic treatment for 1 to 6 hours at 500°C. Although the treatment increased toughness, the type of fracture was generally slate-like and no final conclusion on reversible temper brittleness was therefore possible. Ultra-sonic vibrations produced in oil were found to increase the hardenability of St.50 steel and the authors recommend the adoption of this method of hardening in industry. Tempering beryllium bronze at 275 and 325°C with vibration after water quenching from 770°C gave a higher plasticity than without vibration. Ст.20 (St 20) steel was sulphocyanided in a bath of 75% potassium ferrocyanide, 12% anhydrous hyposulphite and 13% caustic soda at 570 ± 20°C for 30 to 120 min. the best effects were obtained where the vibrations intensified stirring rather than producing maximum vibration stresses in the specimens, and this should be utilized in practical applications. Finally, the authors found that the martensite point of an austenitic steel (0.31% C, 0.13 Si, 0.86 Mn, 23.15 Ni) was not significantly

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affected by ultra-sonic treatment at +10 to -22°C, after water quenching from 900°C. The authors' general conclusion is that the practical application of ultra-sonic treatment should be restricted to specially important parts where even a small improvement in properties is advantageous. There are 5 figures, 5 tables and 23 references: 9 Soviet and 14 non-Soviet.

ASSOCIATION: Leningradskiy institut aviatsionnogo priborostroyeniya (Leningrad Institute of Aviation Instrument Construction)

SUBMITTED: July 4, 1960 (initially)
October 20, 1960 (after revision)

18 1280
18 8200

25924

S/126/61/012/001/016/020
E193/E480

AUTHORS: Mes'kin, V.S., Mishkevich, R.I. and Serova, N.Sh.

TITLE: The variation of hardness in technical platinum-tungsten and palladium-tungsten alloys

PERIODICAL: Fizika metallov i metallovedeniye, 1961, Vol.12, No.1, pp.140-144

TEXT: The object of the present investigation was to obtain more complete information on the effect of composition on the hardness of Pt-W and Pd-W alloys. The experimental materials contained 10 to 90% W (at 10% intervals). The test pieces for hardness measurements, in the form of discs 2.5 mm in diameter and 0.7 mm thick, were made by the powder metallurgy technique. The powder, mixed in a ball mill, was compacted with the application of a binder (12% solution of bakelite in alcohol) under a pressure of 4 tons/cm^2. The green Pt-W compacts were vacuum annealed for 1 hour at 850°C, sintered for 20 minutes in vacuo at 1700°C and then cooled to room temperature in 15 to 20 minutes. The Pd-W compacts were sintered for 3 hours in argon at 400 mm Hg at 1300°C, these conditions having been found to give maximum soundness of the sintered material. The results are reproduced graphically

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The variation of hardness ...

in Fig.5 and 9. In Fig.5, microhardness (kg/mm2) of the Pt-W alloys is plotted against the W content (%), graph (b) relating to microhardness of the α-phase (Pt-rich) measured under the load of 50 and 20 g (curves 4 and 5 respectively); curves in graph (a) relate to (1) microhardness of the specimen measured under the load of 200 g; (2) microhardness of the α-phase measured under the load of 50 g and (3) microhardness of the β-phase measured under the load of 50 g. In Fig.9, microhardness (kg/mm^2) of the Pd-W alloys is plotted against the W content (%), graphs (a) and (b) relating to the α and β-phases respectively, curves 1 and 2 showing the results obtained under loads of 20 and 10 g, respectively. The results shown in Fig.5 and 9 relate to alloys cooled at relatively slow rates; the pronounced increase in hardness of alloys containing 70 to 80% W has been attributed to a disorder-order transformation resulting in the formation of a superstructure. This view is supported by the fact that hardness of quenched Pt-W and Pd-W alloys of this composition is considerably lower. Metallographic examination of the experimental specimens confirmed the findings of E.Raub (Ref.8: Zs.Metallkunde, 1958, 48, 2, 53) that 30% tungsten can be dissolved in palladium at room temperature.

The variation of hardness ...

There are 9 figures and 8 references: 2 Soviet and 6 non-Soviet. The three references to English language publications read as follows: Jaffee R.I., Nielsen H.P. Techn. Publ. No.2420, AIMME, August 1948; Hultgren R.R., Jaffee R.I. Appl. Phys., 1941, 12, 501; Vines R.F. The Platinum Metals and their Alloys, International Nickel Co., 1941.

SUBMITTED: October 21, 1960

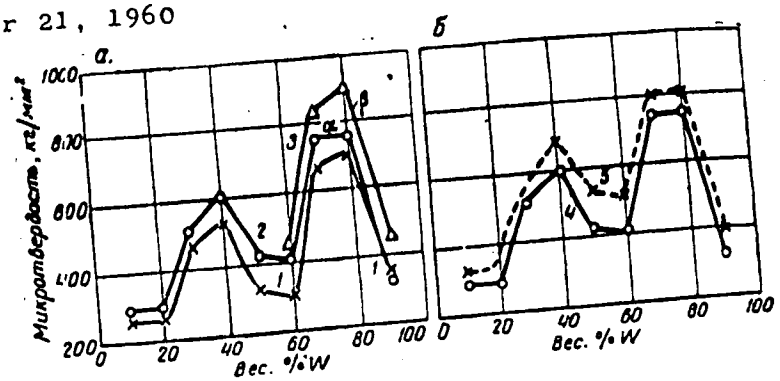

Fig.5.

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MESKIN V. S.

PHASE I BOOK EXPLOITATION SOV/6158

Seminar "Sovremennyye voprosy fizicheskogo metallovedeniya," Leningrad, 1961.

Sovremennyye voprosy fizicheskogo metallovedeniya; materialy seminara, provedennogo v Leningradskom Dome nauchno-tekhnicheskoy propagandy 9 - 11 maya 1961 g. (Present Problems in Physical Metallurgy; Materials of the Seminar Held in Leningrad House of Scientific and Technical Propaganda, 9 - 11 May 1961). Leningrad, 1962, 60 p. (Series: Leningradskiy Dom nauchno-tekhnicheskoy propagandy. Sektsiya metallovedeniya i termoobrabotki. Seriya: Metallovedeniye i termicheskaya obrabotka) 4500 copies printed.

Sponsoring Agency: Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy RSFSR, and NTO Mashprom Leningradskoye oblastnoye pravleniye. Leningradskiy Dom nauchno-tekhnicheskoy propagandy. Sektsiya metallovedeniya i termoobrabotki. Ed.: N. F. Vyaznikov, Engineer, Candidate of Technical Sciences; Ed. of Publishing House: D. P. Freger; Tech. Ed.: V. A. Bol'shakov.

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Present Problems in Physical Metallurgy; (Cont.) SOV/6158

PURPOSE: This booklet is intended for scientists and engineers interested in physical metallurgy.

COVERAGE: This booklet contains five of the fourteen reports presented at the seminar on "Present Problems of Physical Metallurgy," held in the Leningrad House of Scientific and Technical Propaganda on May 9-11th, 1961. The program of the seminar was worked out by the Organizational Committee under the supervision of Academician N. N. Davidenkov. The reports review a number of new trends in the development of physical metallurgy. No personalities are mentioned. Each report is accompanied by references, mostly Soviet.

TABLE OF CONTENTS:

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VEYNGARTEN, Abram Mikhaylovich, kand. tekhn.nauk; DELLE, Vasiliy Adoliyevich, prof., doktor tekhn. nauk; NOSKIN, Aba Vladimirovich, kand. tekhn. nauk; SOKOLOV, Nikolay Nikolayevich, kand. tekhn. nauk; TOVSTYKH, Yevgeniy Vasil'yevich, kand. tekhn. nauk; SHPEYZMAN, Veniamin Matveyevich, kand. tekhn. nauk; LEBEDEV, K.P., kand. tekhn. nauk, retsenzent; ALESHIN, D.V., inzh., retsenzent; MES'KIN, V.S., doktor tekhn. nauk, nauchnyy red.; KLIORINA, T.A., red.; TSAL, R.K., tekhn. red.; KRYAKOVA, D.M., tekhn. red.

[Shipbuilding steel]Sudostroitel'naia stal'. [By] A.M. Veingarten i dr. Leningrad, Sudpromgiz, 1962. 303 p. (MIRA 15:11)

(Shipbuilding materials) (Steel, Structural)

37246
S/148/62/000/003/011/011
E111/E435

18.1141

AUTHORS: Mes'kin, V.S., Sukazov, E.A., Sergeyev, Yu.G.

TITLE: Corrosion-resistance of magnetically soft alloys of the iron-aluminium system

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no.3, 1962, 153-158

TEXT: Corrosion resistant alloys for use in magnetic circuits with an air gap should have a coercive force that is not too high, sufficient electrical resistance and a ductility high enough to enable them to be rolled to a thickness of 0.1 to 0.2 mm. The authors describe experiments on alloys of iron with 4 to 14% aluminium and various additions on which the corrosion resistance, shaping properties and magnetic properties were studied. For good shaping the aluminium content should be under 12%, but then additions to improve corrosion resistance are needed: chromium and nickel contents tried were 0.7, 1.3 and 2.5% each, that of copper 0.5%. To refine the primary crystals 0.5 to 0.8% Mn was added. Various heat treatments were used. The authors conclude that the alloy with 9% Al and 2.5% Cr (0.5% Cu and 0.5 to 0.8% Mn)

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Corrosion-resistance ...

is of practical interest. This alloy has a comparatively good corrosion-resistance (tested in a cabinet with 98% relative humidity at 45 to 50°C), high electrical resistance (1 to 1.2 ohm mm^2/m) and, if annealed at 1150 to 1200°C and then rapidly cooled, a high coercive force. However, its induction is not high enough and shaping properties are not very satisfactory, therefore, further research is needed. The authors propose to carry this out in order to find the range of application of alloys of this type, comparing them with alloys of other systems previously investigated for this purpose. Results will be reported in a further communication. There are 7 figures and 3 tables.

ASSOCIATION: Leningradskiy institut aviatsionnogo priborostroyeniya (Leningrad Institute of Aviation Instrument Construction)

SUBMITTED: April 20, 1961

X

Card 2/2

S/126/62/013/001/012/018
E193/E383

18.1180

AUTHORS: Mes'kin, V.S., Sergiyenko, R.I. and Popova, L.A.

TITLE: Anomalous electrical resistivity and formation of the K-state in palladian-tungsten and palladian-molybdenum systems

PERIODICAL: Fizika metallov i metallovedeniye, v. 13, no. 1, 1962, 126 - 131

TEXT: One of the main manifestations of the formation of the K-state in an alloy consists of the fact that the electrical resistance of the alloy increases after annealing and decreases after cold plastic deformation or quenching from sufficiently high temperature. These effects were observed by the present authors in palladian-tungsten and palladian-molybdenum alloys whose properties they had studied in connection with a search for corrosion-resistant alloys which could be used as high-precision resistance materials. Those results of this investigation which relate to annealing-induced anomalous variation of electrical resistance and other properties are reported in the

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present paper. The experiments were carried out on Pd-base alloys containing 5 - 20 wt.% W or 2.5 - 10 wt.% Mo. The experimental wire specimens were obtained by drawing molten alloys into porcelain tubes (2.5 - 3 mm in diameter) and swaging the rods obtained in this manner to 1.2 - 1.3 mm diameter. The properties of the alloys were determined on both cold-worked and vacuum-annealed specimens. The results are reproduced graphically. In Fig. 1, the changes in the electrical resistivity ($\Delta\rho$, %) and temperature coefficient of the electrical resistivity ($\Delta\alpha$, %) of palladian-tungsten alloys, brought about by annealing (1 hour at 700 °C, followed by slow cooling) specimens cold-worked to 40-50% reduction, are plotted against the W content of the alloys. It will be seen that annealing brought about an anomalous increase in electrical resistivity of the alloys containing 15 - 20% W and a corresponding decrease in the temperature coefficient of the electrical resistivity, a similar effect having been observed in palladian-molybdenum alloys with more than 7% Mo. The effect of annealing on the thermo-emf of the alloys studied against copper was less pronounced but

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Anomalous electrical ....

the maxima on the emf/concentration curves for the annealed specimens were slightly higher than those for cold-worked material. The anomalous increase in the electrical resistance was observed also in specimens annealed at lower temperatures; the magnitude of this effect increased with increasing annealing temperature, reached a maximum after annealing at 700. °C and stayed at this level up to annealing temperatures of 1 100 °C. The results of the last series of experiments are reproduced in Fig. 6, where the microhardness (kg/mm^2) of the Pd-19.3% W alloy, cold-worked to 50% reduction, is plotted against the annealing temperature, curve 1 relating to specimens cooled slowly (100 - 120 °C/hour) after annealing, curve 2 to material cooled at a faster rate and curve 3 to water-quenched specimens. Analysis of the results obtained led to the conclusion that the formation of the K-state is a result of at least two processes: disorder-order transformation and a change in the electron structure of the atoms, each process affecting different properties of the alloys. The

Card 3/5

Anomalous electrical ....

increase in hardness is associated with ordering, short-range order only being attained in the alloy since long-range order would be bound to be reflected in a decrease in the electrical resistivity. Short-range order (if scattering of electron waves only is taken into account) should either have no influence on the electrical resistivity or lead to its decrease. At the same time, short-range order, entailing an increase in the number of the solute atoms in the vicinity of a solvent atom, can cause substantial changes in the electron structure of atoms in the system and a corresponding change in its electrical and other properties. In particular, it would appear that the change in the electrical resistivity accompanying formation of the K-state is associated with the decrease in the number of s-electrons. There are 6 figures.

SUBMITTED: February 28, 1961 (initially)
June 24, 1961 (after revision)

Card 4/5

MES'KIN, V.S.; MOSHKEVICH, Ye.I.

Effect of hydrogen on the properties of transformer steel. Fiz. met. i metalloved. 13 no.6:945 Je '62. (MIRA 15:7)
(Steel—Hydrogen content)

AID Nr. 985-1 7 June MESKIN, V. S.

STRAIN HARDENING OF QUENCH-HARDENED STEELS (USSR)

Meskin, V. S., and L. A. Kirmalov. Metallovedeniye i termicheskaya obrabotka metallov, no. 4, Apr 1963, 20-25. S/129/63/000/004/005/014

The All-Union Scientific Research Institute of Metrology experimented with strain hardening of quench-hardened steels in an attempt to obtain materials with a high proportional limit for superhigh-pressure gages. The six steels tested contained 0.43 to 0.80% C, 0.50 to 2.58% Si, 0.45 to 1.06% Mn, 1.13 to 6.04% Cr, 2.67 to 3.31% Ni (one steel with 0.80% C and 6.04% Cr contained no Ni), 0.28 to 0.86% Mo (one steel contained 2.48% W instead of Mo), and 0.13 to 0.28% V. Steel specimens were austenitized and either oil-quenched and tempered or "martempered," i.e., cooled rapidly to a temperature slightly above the M_s, held for 10 to 60 min, and air-cooled. Some of the martempered specimens were tempered. Then the specimens were strain-hardened by stretching 1.0 to 1.5% at room temperature. Some of the specimens were retempered after strain hardening. It was found that strain hardening in all cases did not affect the tensile strength and ductility, but increased the proportional limit and yield strength almost to the magnitude of the tensile strength. Retempering after strain hardening increased the tensile strength while

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STRAIN HARDENING OF QUENCH-HARDENED STEELS [Cont'd] S/129/63/000/004/005/014

lowering the elongation somewhat and raised the proportional limit almost to the new value of the tensile strength. For instance, a martempered and strain-hardened steel with 0.50% C, 1.86% Si, 0.87% Mn, 1.32% Cr, 3.13% Ni, 0.40% Mo, and 0.17% V had a tensile strength of 240 to 250 kg/mm^2, proportional limit of 230 to 250 kg/mm^2, elongation of 2.5 to 4.7%, and reduction of area of 12.5 to 23.5%. Prior to strain hardening the as-martempered steel had a proportional limit of 192 to 209 kg/mm^2. Tempering of martempered steel prior to strain hardening resulted in a considerably lower tensile strength (200 to 215 kg/mm^2) and proportional limit (200 to 213 kg/mm^2) of the strain-hardened steel. Similar results were obtained with another steel (. . (0.43% C, 2.32% Si, 0.98% Mn, 1.38% Cr, 3.31% Ni, 0.43% Mo, 0.20% V) which after austenitizing was oil-quenched, tempered, strain-hardened, and retempered. It had a tensile strength and proportional limit of 235 kg/mm^2, an elongation of 3.8 to 4.0%, and a reduction of area of 35.0 to 38.0%. All steels, including those with low ductility, showed a ductile type of fracture. [WW]

Card 2/2

GUKAZOV, E.A.; MES'KIN, V.S., prof., doktor tekhn. nauk, red.

[Ferromagnetic alloys; a lecture] Ferromagnitnye splavy; lektsiia. Leningrad, Leningr. in-t aviatsionnogo priborostroeniia, 1964. 42 p. (MIRA 17:11)

MES'KIN, Veniamin Semenovich

[Principles of steel alloying] Osnovy legirovaniia stali. Izd.2., perer. i dop. Moskva, Izd-vo Metallurgiia, 1964. 684 p. (MIRA 17:7)

L 23568-65 EWT(m)/EWA(d)/EWP(t)/EWP(b) MJW/JD

AM4046026 BOOK EXPLOITATION S/

B+1

Mes'kin, Veniamin Semenovich

Principles of alloying steel (Osnovy* legirovaniya stali) 2nd ed., rev. and enl. Moscow, Izd-vo Metallurgiya, 1964. 684 p. illus., biblio., index. Errata slip inserted. 3550 copies printed. Editor of the publishing house: Ye. N. Berlin; Technical editor: L. V. Dobushinskaya

TOPIC TAGS: alloying, alloy steel, heat resistant steel, high temperature steel, iron alloy, stainless steel, tool steel, structural steel, low alloy steel

PURPOSE AND COVERAGE: This book was intended for engineering technicians and the scientific personnel in the metallurgical, machine-building, instrument-building, and other branches of industry. It may be used also as an aid for students at metallurgical and machine-building vuses. In the book, experimental materials on the theory and the practice of alloying steel are generalized. Information is presented concerning the structure and properties of alloy steels and the influence of different elements on the processes occurring in steels. The principles of alloying steels for different purposes are analyzed, as well as

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the possibility of effect on their properties. The author expresses his gratitude especially to A. P. Gulyayev, V. A. Delle, S. F. Yur'yev, A. M. Borzdyka, N. F. Vyagnikov, A. V. Smirnov, M. L. Bernshteyn, L. A. Glikman, A. S. Zaymovskiy, Ye. V. Mes'kina, I. V. Mes'kin, and L. P. Makarova.

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L 23568-65
AM4046026

SUB CODE: MM SUBMITTED: 13Mar64 NR REF SOV: 726

OTHER: 288

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L 42989-66 EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) JD/JG/WB/DJ

ACC NR: AR6014102 SOURCE CODE: UR/0272/65/000/011/0128/0128

67
B

AUTHOR: Mes'kin, V. S.

TITLE: Corrosion-resistant and abrasion-resistant alloys for accurate variable resistors

SOURCE: Ref. zh. Metrologiya i izmeritel'naya tekhnika, Abs. 11.32.1143

REF SOURCE: Sb. Osnovn. napravleniya i perspektivy razvitiya tekhnol. priborostr. M., 1964, 142-152

TOPIC TAGS: corrosion resistance, wear resistance, wear resistant alloy, corrosion resistant metal, electric resistance, palladium, tungsten, variable resistor

ABSTRACT: A palladium alloy containing 18.5--20.0% of W (PV20) is suitable for producing corrosion-resistant accurate resistors, especially for equipment to be used in automating technological processes in the metallurgical, chemical, petroleum, and other branches of industry. The alloy is highly resistant to wear, which property makes it especially proper for resistors subject to friction. 5 illustrations. Bibliography of 6 titles. L. Ivanova. [Translation of abstract]

SUB CODE: 11

UDC: 389:621.316.8

Card 1/1

L 52109-65 EPF(n)-2/EWA(h)/EWT(m)/EWP(b)/EWP(t) Pu-4/Peb IJP(c) JD/JG

ACCESSION NR: AP5015243 UR/0286/65/000/009/0030/0030

34
B

AUTHORS: Sergeyev, Yu. G.; Mes'kin, V. S.

TITLE: Steel. Class 18, No. 170539 16

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 30

TOPIC TAGS: steel, manganese, niobium, copper, carbon, boron, silicon, steel property

ABSTRACT: This Author Certificate presents a steel containing manganese and niobium. To improve its mechanical properties, the steel has the following composition (in %):

carbon	≤ 0.12
manganese	0.5 -1.0
niobium	0.06-0.15
boron	0.002-0.005
silicon	≤ 0.30

Copper (0.2-0.4%) may be introduced to produce an alternate type of this steel.

ASSOCIATION: none

SUBMITTED: 22Jan64 ENCL: 00 SUB CODE: MM

NO REF SOV: 000 OTHER: 000

Card 1/1

L 62820-65 EWT(m)/EWP(w)/EPF(c)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b) LJP(c)
KJW/JD/JG/WB

ACCESSION NR: AP5018058 UR/0129/65/000/007/0046/0050
669.018.5

AUTHOR: Mes'kin, V. S.

TITLE: New resistant alloys

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 7, 1965, 46-50

TOPIC TAGS: alloy corrosion, corrosion stability, alloy conductivity, contact resistance, palladium alloy, gold alloy, manganin, tungsten alloy, chromium alloy, nickel alloy, copper alloy silver alloy, manganese alloy, antimony alloy, tin alloy, sulfur content, alloy hardness, elasticity limit / PdV-20 alloy, ZIKh alloy

ABSTRACT: In the search for alloys with high electrical resistivity and simultaneous corrosion stability the author (jointly with R. I. Sergiyenko) carried out a comparative study of the contact resistance, electrical resistivity and stability against corrosion of manganin, PdV-20 (Pd with 18.5-20% W), ELKh-2.8 (91% Au, 2.8% Cr, 5.2% Ni, and 1% Cu), Ag + 8.8% Mn, Ag + 9.0% Mn + 1% Sb, Ag + 8.8% Mn + 1% Sb, and Ag + 8.8% Mn + 7% Sn in contact with various similar alloys. The article also contains data on temperature changes in PdV-20 resistors, on the

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L 62820-65
ACCESSION NR: AP5018058

contact resistance as a function of the load, and on the influence of S on the electrical properties, hardness, and elasticity limit of the Ag + 8.8% Mn alloy. The article concludes with recommendations concerning the uses of the specific alloys. Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: Leningradskiy institut aviatsionnogo priborostroyeniya (Leningrad Institute of Aircraft Instrument Design)

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NO REF SOV: 004 OTHER: 000

Card 2/2

S/153/60/003/004/005/014 A
B004/B075

AUTHORS: Meskina, E. L., Fikhman, V. D., Petrunin, N. I., Tsar'kova, A. V.

TITLE: Ways for Reducing the Consumption of Dimethyl Formamide in the Production of Nitron Fiber

PERIODICAL: Khimicheskiye volokna, 1960, No. 4, pp. 15-18

TEXT: The authors attempted to determine the losses in dimethyl formamide (DMF) in the individual stages of the production of Nitron fiber and the possibilities of reducing these losses. They experimentally studied the hydrolysis of DMF at 100°C in 25, 60, and 92% aqueous solution. A КУ-1 (KU-1) cation exchanger was used for analyzing the mixture. To study the effect of impurities on the hydrolysis, it was studied also with additions of 0.17% oxalic acid, and admixtures of stainless steel of type 1Х19Н9Т (1Kh19N9T) (this steel is used for the construction of apparatus in which Nitron fiber is precipitated). The experimental results are given in Fig. The loss in DMF due to the hydrolysis at 100°C was estimated to 0.027 kg, at 80°C to 0.001 kg per kg of fiber. Furthermore, the authors studied the

effect of various rectification methods on the DMF losses. They found that the rectification of the mixture water-DMF in vacuo at only 90-100°C considerably reduces hydrolysis. A general calculation of the DMF losses in the individual divisions of the pilot plant (in kg per kg of fiber) yielded the following results:

spinning division and chemical division	0.09-0.40
rectification	0.04-0.07
vacuum distillation	0.06-0.07
	0.20-0.53

The DMF losses in the chemical division and the spinning division consist of the loss occurring when changing the filters (0.018 - 0.052 kg/kg of fiber) and the amount of DMF carried along by the fiber (0.006-0.02 kg/kg). These losses can be reduced to 0.001 kg/kg by additional washing. Further losses were caused by the removal of DMF by ventilators. These losses are due to the insufficient packing of the apparatus in the chemical division. They can be completely eliminated. In the spinning division, however, the evaporation of DMF cannot be avoided. This loss is estimated to 0.112 kg/kg. The authors discuss the regeneration of DMF from the ventilator air of the spinning division. T. M. Ivanova, collaborator of the first association

has already studied adsorption by means of charcoal which, however, pro- inadequate. On the basis of the equilibrium curve of vapor pressure of DMF above water, absorption of DMF by water is suggested. The water of the distillation column of the rectifier division is capable of absorbing up to 90% of DMF contained in the ventilator air. Considering the possible improvements, the following conclusions are drawn:

DMF losses, kg/kg Nitron	chemical division	0.01 - 0.012
	by the fiber	0.001
	spinning division	0.04 - 0.045
	regeneration	0.05 - 0.06
	other losses	0.009- 0.008
		0.11 - 0.13

The following can be regenerated in the absorption of DMF from ventilator air by means of water:		0.035 - 0.04
	remaining loss	0.075 - 0.09

There are 4 figures, 4 tables, and 4 references: 3 Soviet and 1 German.

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Ways for Reducing the Consumption of Dimethyl Formamide in the Production of Nitron Fiber

S/183/60/000/004, [illegible], XX
B004/B075

ASSOCIATION: Kalininskiy filial VNIIV (Kalinin Branch of the All-Union Scientific Research Institute of Synthetic Fibers): Meskina, E. I., Fikhman, V. D.; Eksperimental'nyy zavod VNIIV (Pilot Plant of the All-Union Scientific Research Institute of Synthetic Fibers): Petrunin, N. I., Tsar'kova, A. V.

Legend to Fig. 2: 1) 75% solution of DMF without additions; 2) 60% solution of DMF without additions; 3) 60% DMF with addition of stainless steel of the type 1Kh18N9T; 4) 60% DMF with addition of oxalic acid (0.17% calculated for DMF); 5) 92% DMF without addition; a) hours, b) total content of HCOOH mole/l·10^4.

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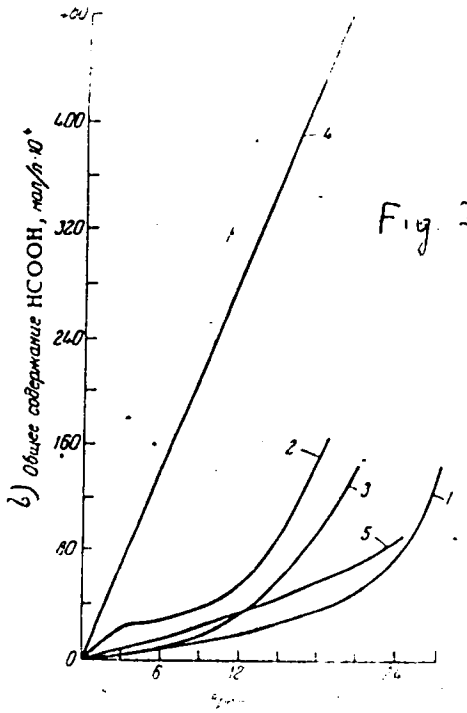

S/183/60/000/004/008/014
B004/B075

Fig. 2

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FEDOTOVA, T.T.; MES'KINA, F.A.

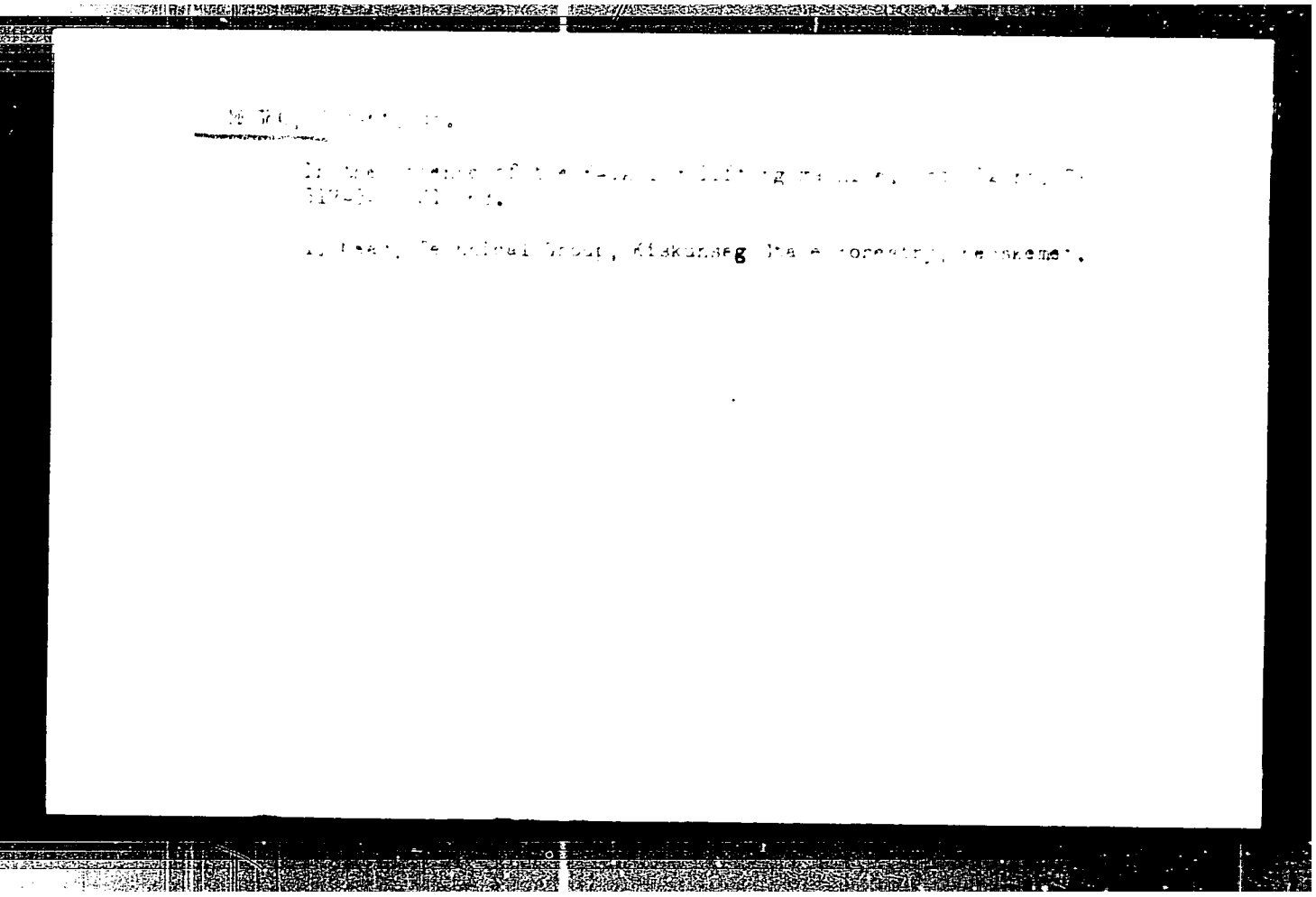
Improvements in the technological aspects of the manufacture of food concentrates. Kons.i ov.prom. 12 no.8:35 Ag '57. (MLRA 10:10)

1. Moskovskiy ordena Lenina pishchevoy kombinat imeni Mikoyana.
(Food, Concentrated)

MESKO, Gabor

Fifteen years of the Chemical Industry University in Veszprem.
Magy kem lap [illegible] '64

1. Chemical Industry University, Veszprem.



MESKO, K.

Studies on achromocytes. Magy. belorv. arch. 5 no.3:97-101 Sept 1952. (CLML 25:5)

1. Doctor. 2. First Internal Clinic (Director -- Prof. Dr. Janos Angyan), Pecs Medical University.

MESKO, Kalman, dr.

On mutual relationship between waves in various electrocardiographic leads. Magy.belorv.arch. 12 no.5:139-142 O '59.

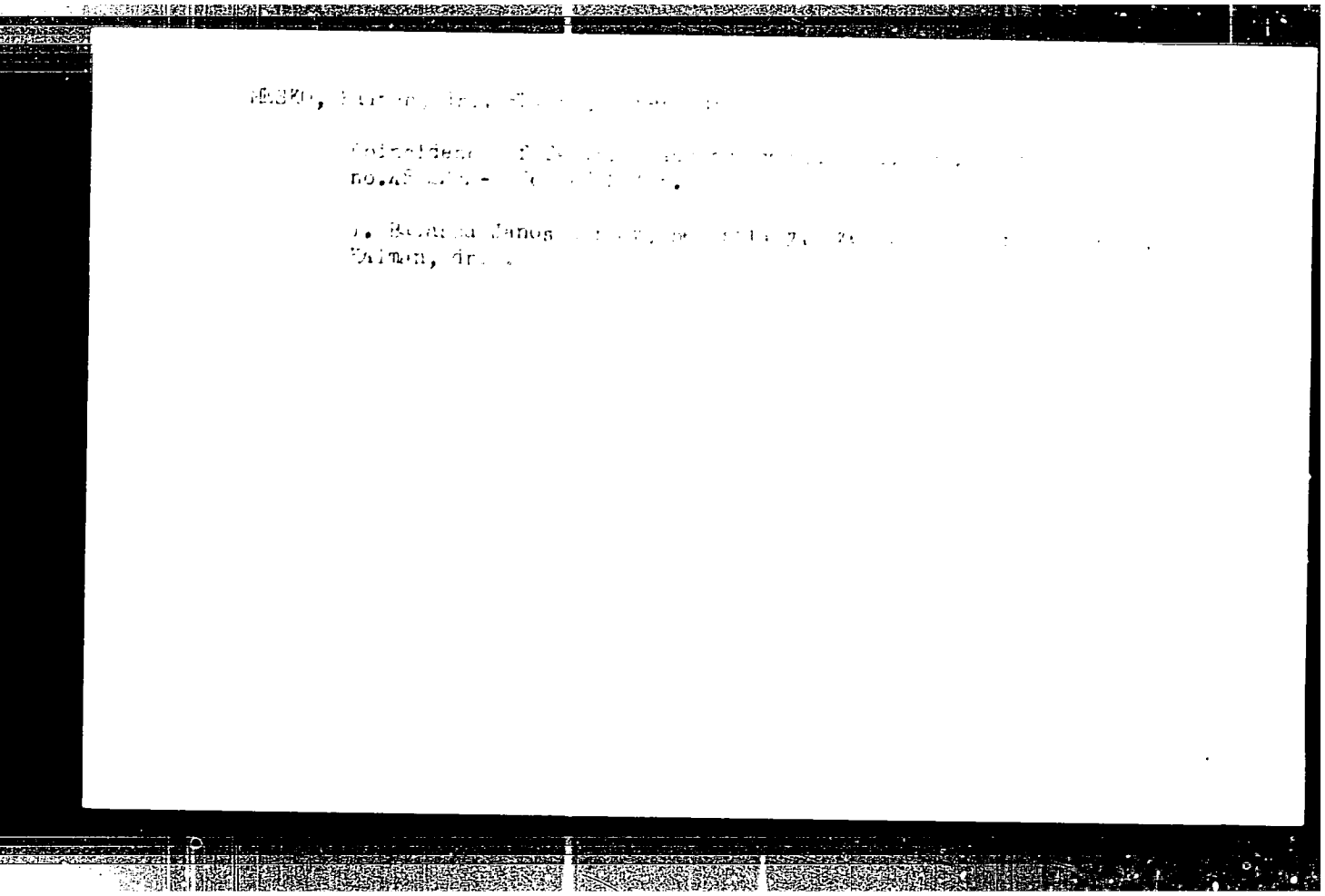
1. A Szekszardi Megyei Korhaz (Igazgato: Dr. Pelikan Erzsebet) Belgyogyaszati Osztalyanak (Foorvos Dr. Mesko Kalman) kozlemenye.
(ELECTROCARDIOGRAPHY)

MESKO, Kalman, dr.; FENYOHAZI, Laszlo, dr.

Role of respiratory tract infections in congestive heart failure. Orv. hetil. 102 no.16:740-742 16 Ap '61.

1. Szekszard Megyei Korhaz, Belgyogyaszati Osztaly.

(RESPIRATORY TRACT INFECTIONS compl)
(HEART FAILURE CONGESTIVE etiol)



MESKO, Laszlo, okleveles banyamernok

Analytic examination of the working of almost horizontally situated seam groups. Bany lap 96 no.4:249-261 Ap '63.

1. Borsodi Szenbanyaszati Troszt, Miskolc.

SCHLENK, Balint; MESKO, Laszlo

Current integrator for measuring the ion current of accelerators.
ATOMKI kozl 6 no.3/4:151-156 D '64.

SZABO, Marton; RIPPEL, Geza; MESKO, Sandorne

Applying epoxy resins in protecting the component parts in telecommunication technology. Hir techn 14 no.2:67-72 Ap '63.

1. REMIX Radiotechnikai Gyar.

STEINER, J.; FORMANEK, G.; MESKO, Z.; FISCHOVA, A.; CERNY, J.

The "scimitar syndrome" -- right-sided partial subdiaphragmatic transposition of the pulmonary veins. Cesk. pediat. 20 no.8: 689-692 Ag '65.

1. I. detska klinika (prednostka prof. dr. I. Jakubcova) a katedra chirurgie detskeho veku (veduci prof. dr. M. Kratochvil, DrSc.) Lekarskej fakulty Univerzity Komenskeho v Bratislave.

PA 240T71

USSR/Electricity - Personalities Nov 52

"Professor I. L. Kaganov in Connection With His 50th Birthday," V. V. Meshkov et. al.

"Elektrichestvo" No 11, p 87

Brief review of professional life and main organizational affiliations of I. L. Kaganov, born 1 May 25. Made director of Chair of Ionic Devices and Converters (Chair of Industrial Electronics) at Moscow Power Eng Inst in 1943, he created new courses in industrial electronics,

240T71

has published 25 works including 5 books (one of them "Electronic and Ionic Converters," 1st edition in 1937, latest 1950, a textbook), and has recently directed development of new types of semiconductor and dielec firing devices for ignitrons, new inverter systems with high power factor for long-distance power transmission, new systems of ionic drive with high power factor, and ionic frequency converters. He has been awarded Labor Red Banner, Red Star, Badge of Honor, and medals.

240T71

MESKOV, V. V.

KOREN, K.; MESKOVA, M.; BRIX, M.; ZILAVY, S.; CANO, M.

Metabolism of glycides in patients following stomach resection for gastroduodenal ulcer. Bratisl Lek. Listy 44 no.7:422-428 '64.

1. I chirurgicka klinika Lek. fak. Univerzity Komenskeho v Bratislave (veduci prof. MUDr. K. Carsky).

KADLIC,T.; JACZ,K., MUDr.; MESKOVA, M.; MIKLAS,R.; SOMODI,J.; MORAVEC, R.

Injuries of extremities resulting from accidental intra-arterial injections. Bratisl. lek. listy 45 no.7:414-419 15 Ap '65.

1. I. chirurgicka klinika Lekarske fakulty Univerzity Komenskeho v Bratislave (veduci: prof. MUDr. K. Carsky); Neurochirurgicke oddelenie Krajowej ustavy narodniho zdravi v Bratislave (veduci: MUDr. K. Jacz, CSc) a Chirurgicke oddelenie Obvodniho ustavu narodniho zdravi, Nitra (veduci: primar MUDr. S.Frastacky).

BERKELIYEV, M.; MASHRYKOV, K.K., doktor geol.-miner. nauk, red.; MESKUTOV, V., red.; GULZHAYEV, E., red.; KHAITONOVA, Ye.I., red.; STREL'TSOV, E., tekhn. red.

[Russian-Turkmen dictionary of geological terms] Russko-turkmenskii slovar' geologicheskikh terminov. Pod red. K.K. Mashrykova i V.Meskutova. Ashkhabad, Izd-vo Akad. nauk Turkmenskoi SSR, 1962. 226 p. (MIRA 16:1)
(Russian language—Dictionaries—Turkmen)
(Geology—Dictionaries)

SPITSYN, Vikt.I.; MESMEYANOVA, G.M.; VIKULOV, A.I.

Some characteristics of uranium oxidation by trivalent iron ions. Atom. energ. 17 no.2:119-123 Ag '64 (MIRA 17:8)

MESHYANKIN, A.N.

Wedge devices for a simultaneous punching of holes in cylindrical parts. Kuz.-shtam.proizv. 2 no.1:43-45 Ja '60. (MIRA 13:5)
(Sheet-metal work)

KAL'CHENKO, Ye.S.; MESNYANKIN, L.S.

New design of the oblique bar for a continuous furnace. Sbor. rats.predl.vnedr.v proizv. no.5:33-34 '60. (MIRA 14:8)

1. Novolipetskiy metallurgicheskiy zavod.
(Furnaces, Heating)

MESNYAYEV, G.V.

Saint Nicholas Day. Nashi veeti no. 21:1-2 D '52. (MLRA 7:9)
(Patron saints)

MESHYAYEV, G.V.

On the threshold of the New Year. Nashi vesti 9 no.23:1-2 Ja '53.
(Refugees--Political activities) (MLRA 7:9)

MESNYAYEV, G.V.

The future is in the past. Nashi vesti 9 no.26:1-2 Mr '53.
(Russia--Politics and government) (MLRA 7:9)

KESHYAYEV, G.

On the 50th anniversary of A.P.Chekhov's death (July 15, 1904-1954)
Nashi vesti 10 no.59:1-2 Jl '54. (MLRA 7:8)
(Chekhov, Anton Pavlovich, 1860-1904)

MESNYAYEV, G.

In memory of the Cesarevitch; on the 50th birthday anniversary of the Cesarevitch Aleksei Nikolaevich. Nashi vesti no.61:1-2 Ag '54. (MLRA 8:1)
(Alexis, Grand Duke of Russia, 1904-1918)

KHYAYEV, G.

Christmas moods. Kashi vesti no.70:1-2 Ja '55. (MLRA 8:1)
(Christmas)

MESHYAYEV, G.

General M.I.Dragomirov; on the 50th anniversary of his death, 1905-1955. Nashi vesti no.73:1-3 F'55. (MLRA 8:3)
(Dragomirov, Mikhail Ivanovich, 1830-1905)

MESHYAYEVA, V.M.

Para-strains of dysentery bacteria. Zhur.mikrobiol., epidem. i immun. 27 no.3:24 Mr '56. (MLRA 9:7)

1. Is Chernovitskoy oblastnoy sanitarno-epidemiologicheskoy stantsii.

(SHIGELLA,
paradysenteriae (Rus))

HRIBERNIK, E.; MODIC, R.; JOST, J.; CUKROV, J.; MESOJEDIC, B.

Adsorption of phenols on the Yugoslav coals and cokes.
Vest Slov kem dr 9-no.1/2:21-26 Ja-Je '62.

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1. Comunicare prezentata de academician C. Ionescu-Mihaiesti, in sedinta Sectiei de stiinte medicale a Academiei R.P.R.
(ANTIBIOTICS, eff.
on Micrococcus pyogenes & E. coli, resp. of antibiotic-resist. & antibiotic-sensitive strains)
(MICROCOCCUS PYOGENES, metabolism
resp. of antibiotic-resist. of antibiotic-sensitive strains)
(ESCHERICHIA COLI, metabolism
(SAME)

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(ANTIBIOTICS, effects
on E. coli & micrococcus pyogenes, resp. of resist. & sensitive strains, eff. of lysozyme & acid extracts of leukocytes)
(MICROCOCCUS PYOGENES, metabolism
resp. of antibiotic-resist. & antibiotic-sensitive strains, eff. of lysozyme & acid extracts of leukocytes)
(ESCHERICHIA COLI, metabolism
(SAME)
(LYSOZYME, effects
on resp. of antibiotic-resist. & antibiotic-sensitive strains of E. coli & Micrococcus pyogenes)
(LEUKOCYTES
acid extracts, eff. on resp. of antibiotic-resist. & antibiotic-sensitive strains of E. coli & Micrococcus pyogenes)

Microbiologia, P.

SURNAME, Given Names

Country: Rumania

Academic Degrees:

Affiliation: -not given-

Source: Bucharest, Microbiologia, Parazitologia, Epidemiologia, Vol VI, No 4, Jul-Aug 1961, pp 369-371.

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IEREMIA, T., -Dr.-

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RUMANIA

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1. Director al Instituttului "Dr. I.Cantacuzino" (for Mesrobeanu). 2. Sef de laborator la Catedra de mic.biologie I, I.M.F., Bucuresti (for Mateescu).

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