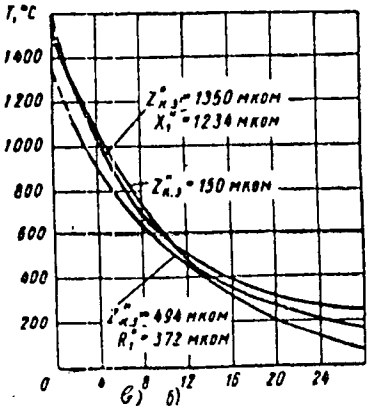
20225
S/135/61/000/004/001/012
A006/A101

The Effect of Real and Inductive Resistance of a Butt-Welding Machine in the Flash-Welding Process

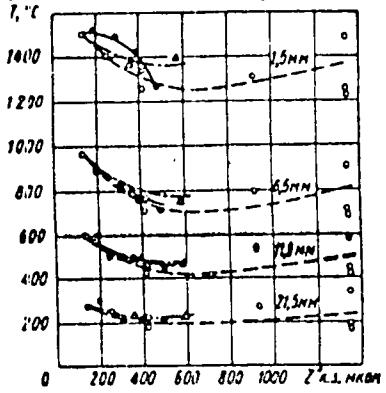
Figure 5 continued:

b) - temperature distribution along the generatrix of the pipe at the end of setting at various resistances of the machine;



б)

c) - temperature of heating the pipe at the end of flashing in spots at distances of 1.5; 5.5; 11.5 and 21.5 mm from the butt at changing R_1 (continuous line) X_1 (dotted line) and R_2 (dot-and-dash line).



distance в) from butt xmm

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The Effect of Real and Inductive Resistance of a Butt-Welding Machine in the Flash-Welding Process

Figure 6:

Dependence of heat content of pipes flashed at $U_{2_0 min}$ (a), of mean active power b) and mean effective thermal efficiency of the flashing process (c) on the resistance of the machine at varying its real and inductive components.

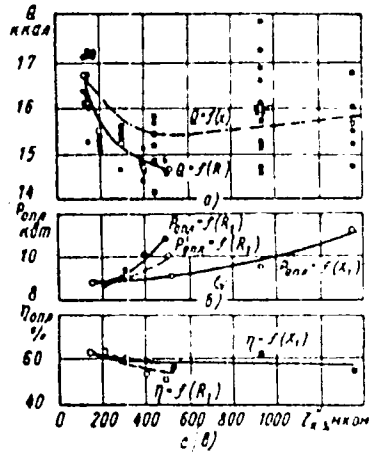

Рис. 6. Зависимости теплосодержания труб, оплавленных при $U_{2_0 min}$ (а), среднего значения активной мощности (б) и среднего эффективного термического к.п.д. процесса оплавления (в) от сопротивления машины при изменении его активной и индуктивной составляющих.

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A006/A101

The Effect of Real and Inductive Resistance of a Butt-Welding Machine in the Flash-Welding Process

Figure 7:

Dependences of the mean effective current in the welding circuit when flashing 32 x 3.5 mm pipes (a) and of the mean effective resistance of flashed butts (b) on the resistance of the welding machine at varying its real and inductive components.

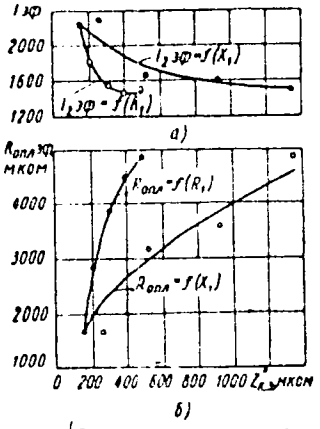


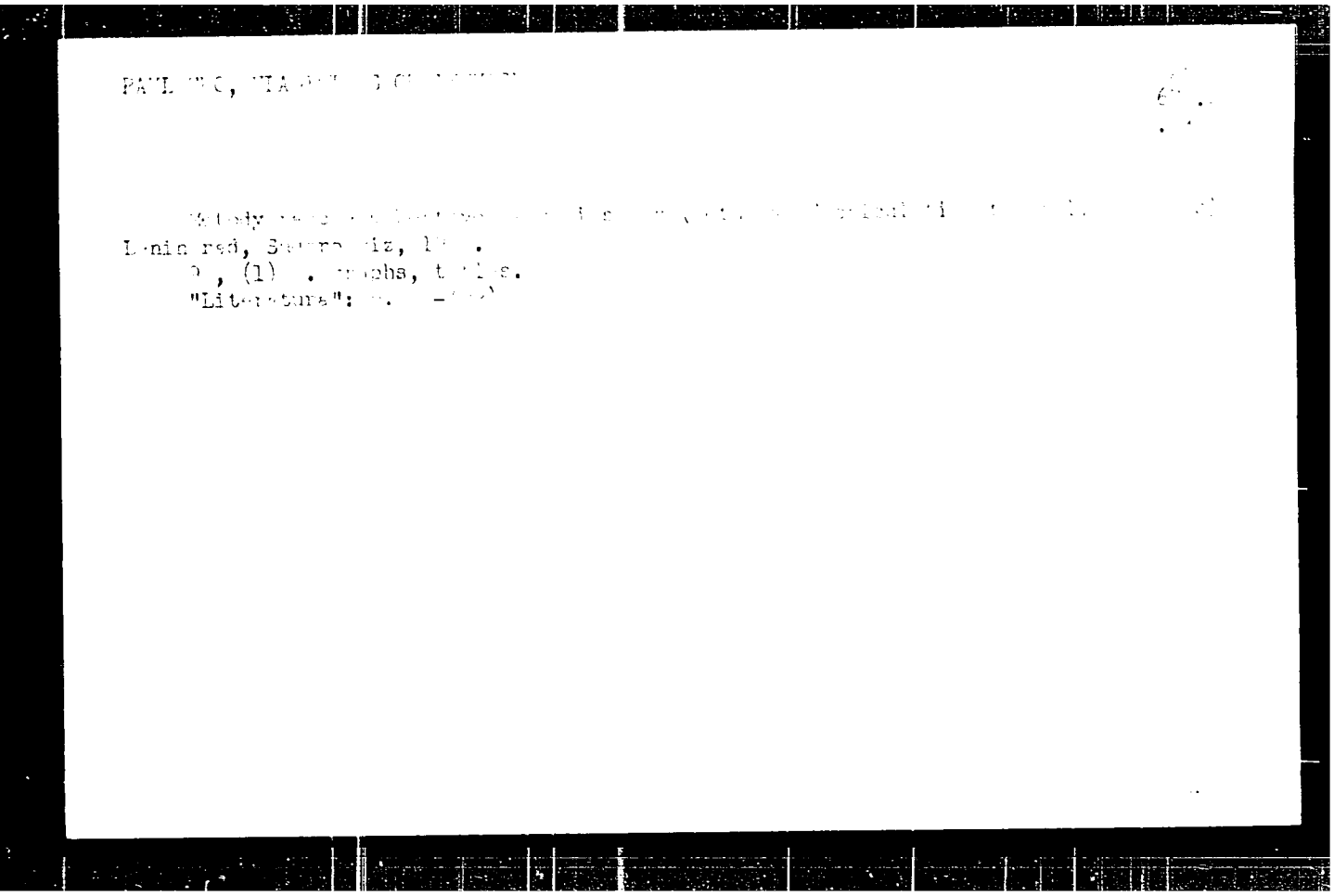
Рис. 7. Зависимости среднего эффективного тока в сварочной цепи при оплавлении труб 32×3,5 мм (а) и среднего эффективного сопротивления оплавляемых торцов (б) от сопротивления сварочной машины при изменении его активной и индуктивной составляющих

Card 10/10

PAVLENKO, V.S.

Utilizing waste lime. Sakh.prom.30 no.3:51-52 Mr '56. (MLRA 9:7)

1.Kupyanskiy sakharnyy zavod.
(Lime)



PAVLENKO, V.M., gornyy inzh.; STOLYARENKO, I.I., gornyy inzh.

Complete reorganization of mines in Krasnodon Coal Trust of the Donets Basin Anthracite Combine. Ugol' Ukr. 2 no.10:30-32 O '58. (MIRA 12:1)

1. Yuzhgiproshakht.
(Donets Basin--Coal mines and mining)

TOBILEVICH, N.Yu., kand. tekhn. nauk; SAGAN', I.I., kand. tekhn. nauk; TKACHENKO, S.I., inzh.; PAVLENKO, V.S., inzh.

Studying the circulation in evaporators at low pressure and under vacuum. Pishch. prom. no.1:131-137 '65. (MIRA 18:11)

GOLAND, Sh.N., kand. tekhn. nauk; LEDENTSOV, N.M., inzh.; NIKOLAYEV, A.S., inzh.; PAVLENKO, V.T., inzh.; PLAKIDA, M.A., kand. tekhn. nauk; PORADNYA, A.I., doktor tekhn. nauk; SPIRIDONOVA, O.M., kand. tekhn. nauk; SVYATSKIY, P.S., inzh.; FEDORTSOV, B.D., inzh., retsenzent; KAPLAN, M.Ya., red. izd-va; PUL'KINA, Ye.A., tekhn. red.

[Handbook of finishing operations] Spravochnik po otdelochnym rabotam. Pod red. A.I.Poradnia i O.M.Spiridonovoi. Leningrad, Gos. izd.-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 497 p. (MIRA 14:7)

1. Leningrad. Upravleniye po zhilishchnomu i grazhdanskomu stroitel'stvu.

(Finishes and finishing)

LEBEDEV, Leonid Nikolayevich, inzh.; PAVLENKO, Vladimir Timofeyevich; IVANOV-SKOBLIKOV, P.V., inzh., red.; GVIRTS, V.L., tekhn.red.

[Using rammed earth in building] Stroitel'stvo zdanii iz zemli. Leningrad, 1959. 38 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Stroitel'naia promyshlennost', vyp.5-6). (MIRA 13:4)
(Pisé)

PAVLENKO, V.V., agronom-fitopatolog

Role of windbreak belts in controlling the black rot of apple caused by Sphaeropsis malorum Reck. Zashch. rast. ot vred. i bol. 4 no.2:52 Mr-Ap '59. (MIRA 16:5)

(Apples—Diseases and pests) (Black rot)

S/123/61/000/024/003/016
A004/A101

AUTHOR: Pavlenko, V.V.

TITLE: Corrosion protection of metallic structures

PERIODICAL: Referativnyy zhurnal. Mashinostroyeniye, no. 24, 1961, 92, abstract 24B579 ("Mashinostr. i energ. Kazakhstana. Nauchno-tekhn st ", 1961, no. 3 (13), 65 - 68)

TEXT: The author describes the changes in the technology of cleaning and coating metal structures at the Ust'-Kamenogorsk GES, which made it possible to considerably increase the period between repairs of the equipment and the operation dependability and also to cut the labor consumption per surface unit. To improve the cleaning of angles, projections and ribs, a special hydraulic sandblast apparatus has been designed which permits to obtain a labor productivity of 12 - 15 m^2/hour on surfaces which are heavily corroded, and of 25 m^2/hour on surfaces less affected by corrosion. The structural modifications of the apparatus made it possible to use sand of any grain size and moisture. The average sand expenditure amounts to 0.15 - 0.20 m^3/hour, air consumption to 5.5 - 6.0 m^3/min, at a working pressure of up to 6 atm. The apparatus is loaded from a hopper

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Corrosion protection of metallic structures

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mounted above the apparatus. For protecting the faces of the workers a helmet from dense fabric is used, reinforced by a light Duralium carcass. After the cleaning a strong adhesion of the lacquer and paint coating to the metal surface is ensured. To protect the cleaned surface from rusting prior to the coating, the surface is washed with a 8 - 10% aqueous solution of phosphoric acid to which zinc oxide and sodium nitrite have been added. The main advantage of the method is the formation of a strong bond between the parkerized surface and the protective coating. Divinyl acetylene varnish (ethinol) was used as protective coating. The protector primer under this coating contains 85 - 90% by weight zinc powder. Ethinol varnish serves as film-forming material. The primer is applied by brush; then it is covered with three layers of aluminum paint on the same ethinol varnish. A drawback of these coatings is the fact that ethinol varnish quickly peels at the open air, particularly in the sun, and thus loses its protective properties. Therefore, metal structures which are operated alternately in water and in air, or which are partly submerged in water, are painted with two layers of ethinol paint, to which a layer of ethinol-perchlorovinyl enamel is applied, which consists of equal volumes of aluminum and ethinol paint and ПХВ 2т (PKhV-2t) perchloro vinyl enamel.
[Abstracter's note: Complete translation]

Card 2/2

VODOLAZOV, D., inzh.; PAVLENKO, Ye., inzh.

Transportation of shell-rock stone in packages without the use of pallets. Avt.transp. 39 no.3:12-13 Mr '61. (MIRA 14:3)
(Stone—Transportation) (Cargo handling)

PAVLENKO, Ye. (Simferopol')

What is more profitable? Avt.transp. 41 no.2:16-17 F '63.
(MIRA 16:2)
(Automobiles, Rental)

PAVLENKO, Ye.

Carts used in cleaning automobile brakes. Avt. Transp. 36 no.12:43 D '58. (MIRA 11:12)

(Automobile--Brakes)

PAVLIK, Y...

COUNTRY : GDR
CATEGORY :

ABS. JOUR. : [illegible] B-5
57165

AUTHOR : Pavlik, Ya.
INST. : Not Given
TITLE : Proportional-Speed Floating Action Pneumatic Controllers

ORIG. PUB. : Regelungstechnik, 6, No 4, 128-134 (1958)

ABSTRACT : The author discusses the construction and advantages of proportional-speed floating action pneumatic controllers, in which the position of the final control element is changed at a rate which is proportional to the deviation. Proportional-speed floating action pneumatic controllers used in conjunction with amplifiers have been shown in numerous experiments to possess high stabilizing properties, particularly in systems with high noise levels.

L. Kaplan

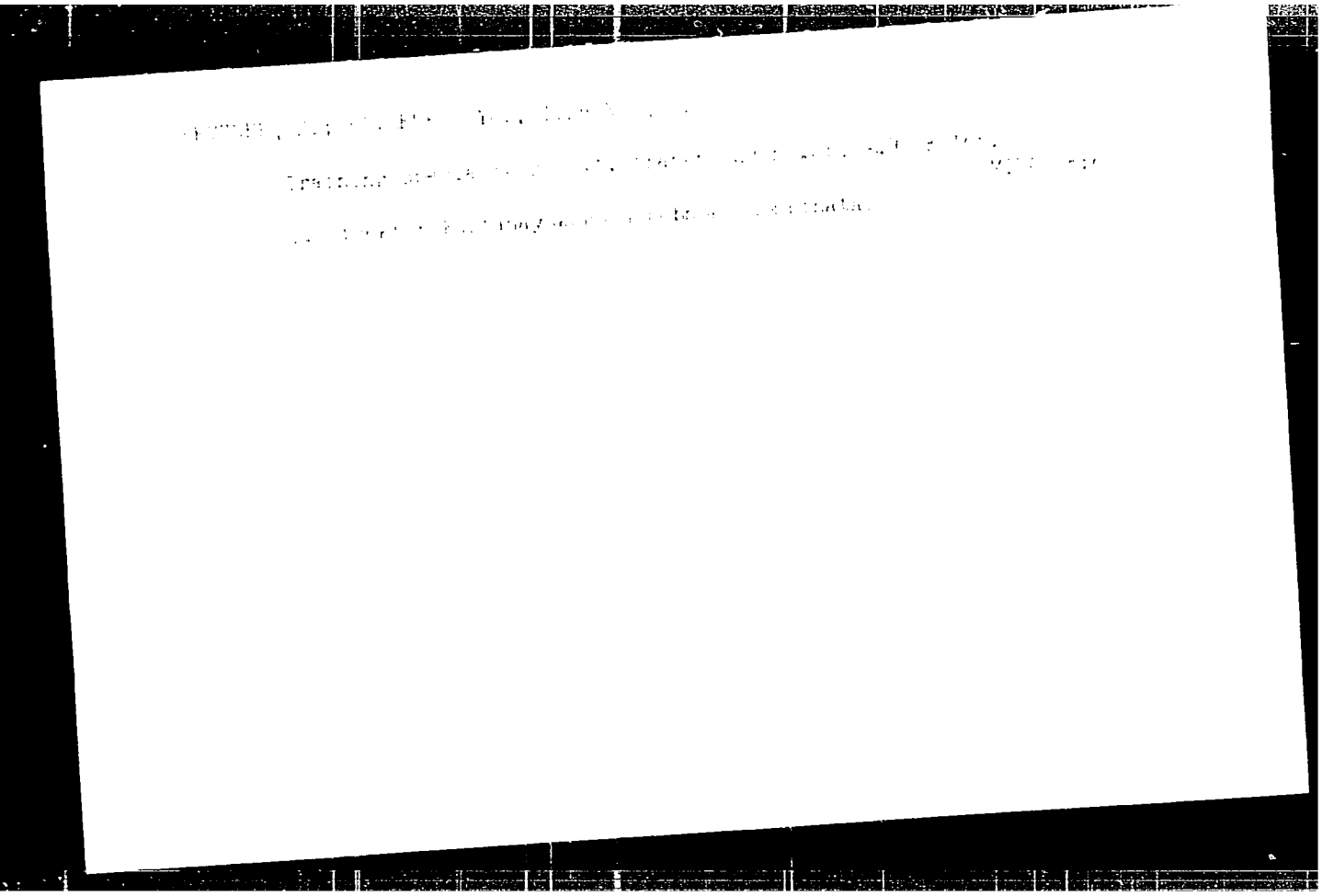
CARD: 1/1

PAVLENKO, Ye.

Device for dismounting and mounting gear boxes. Avt. transp. 37 no. 4:51-52 Ap '59. (MIRA 12:6)
(Automobiles--Transmission devices)

PAVLENKO, Ye.

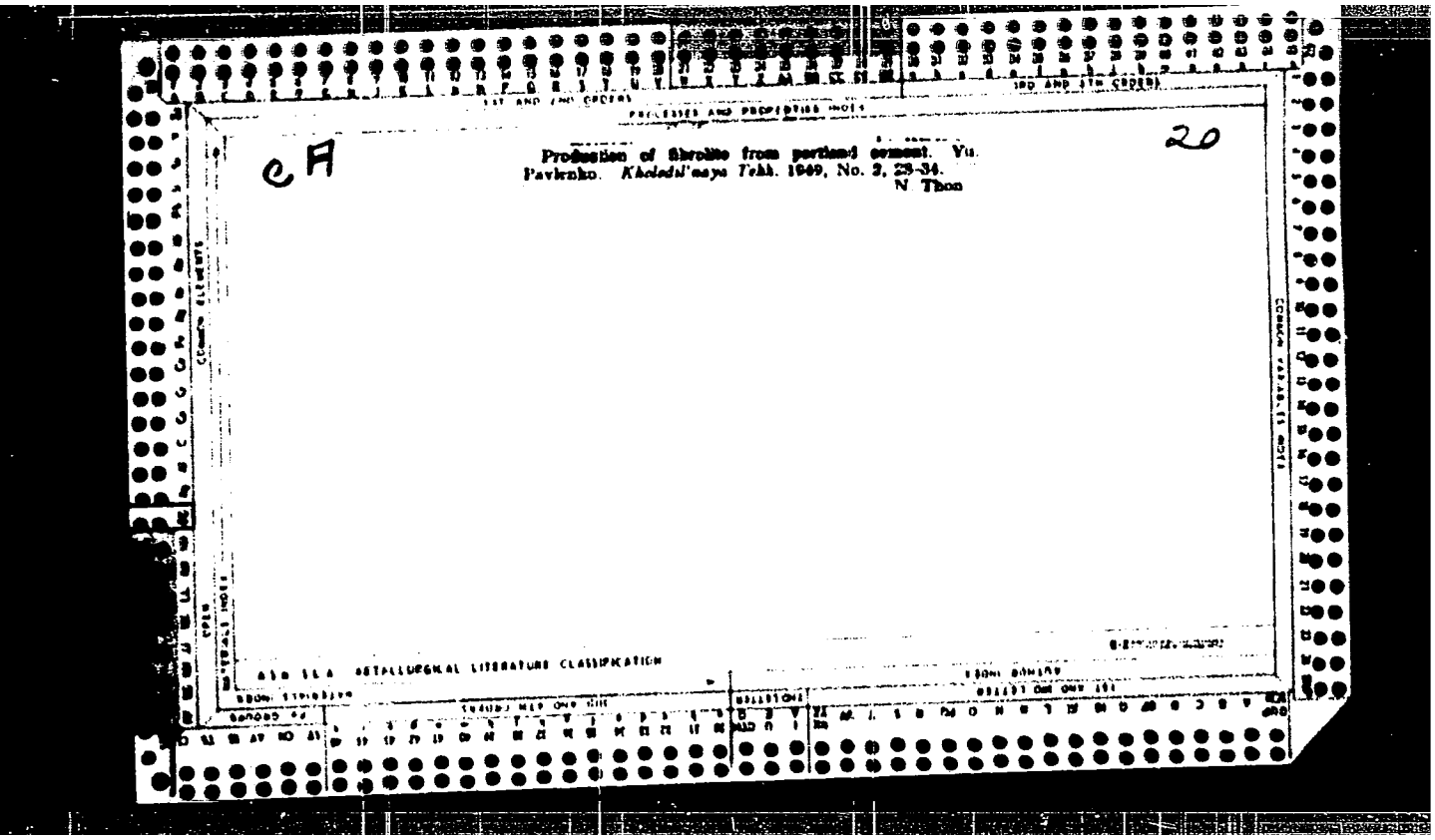
Establishing records for the loading and unloading stations. Avt. transp. 42 no.12:12-13 D '64. (MIRA 18:4)



NEMETS, O.F. [Niemets', O.F.]; PAVLENKO, Ye.A. [Pavlenko, IE.A.]; SOKOLOV, M.V.

Designing ionization chambers equipped with grids. Ukr. fiz. zhur. 3 no.6:837-839 '58. (MIRA 12:6)

1. Institut fiziki AN USSR.
(Ionization chambers)



PAVLENKO, Yu.

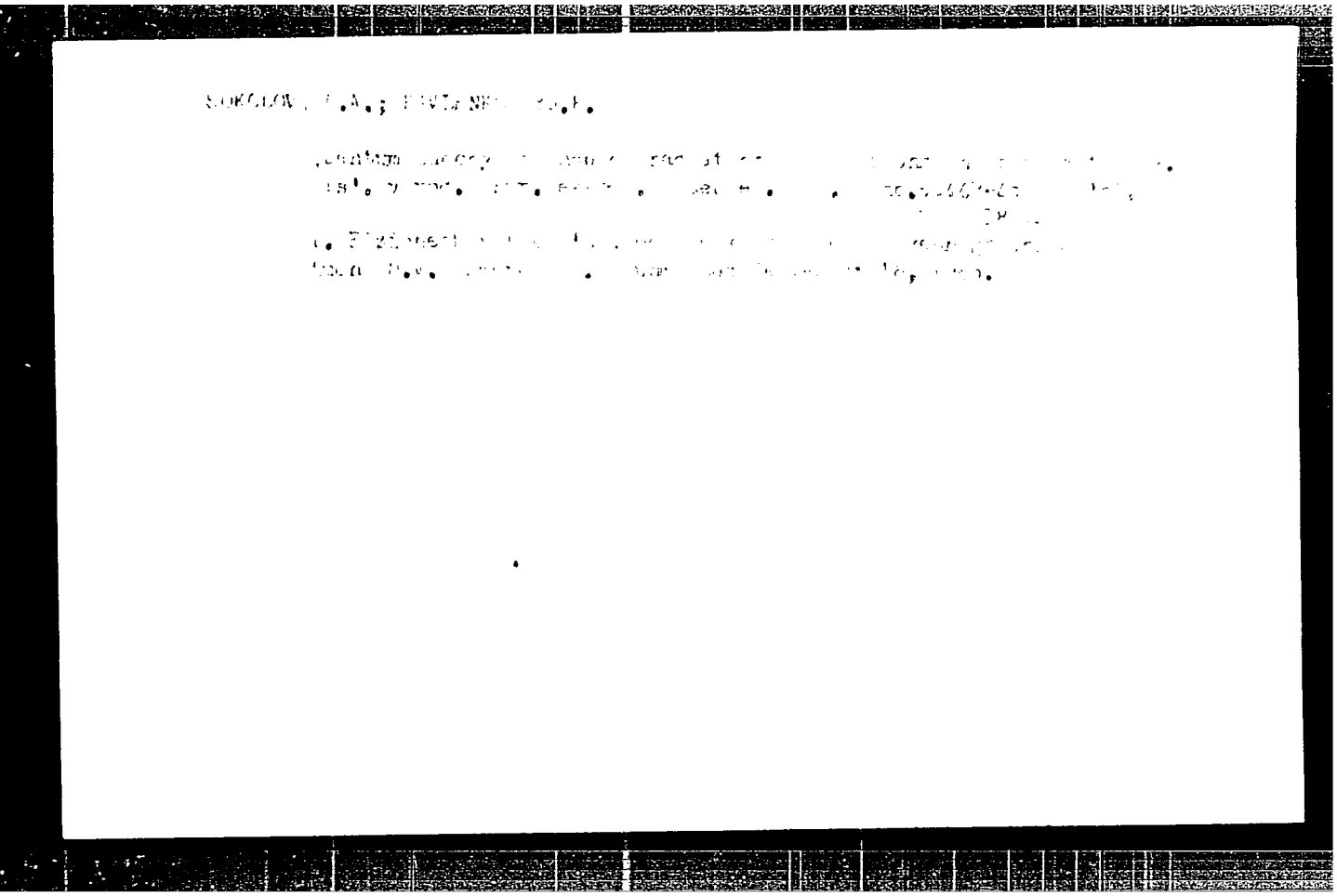
33099

Mekhanizatsiya I Ratsionalizatsiya Stroitelgnykh Rabot. Moluch. Prom-stg, 1949, nO. 10 c. 14-16

SO: Letopis' Zhurnal'nykh Statey, Vol. 45, Moskva, 1949

30904. PAVLENKO, Yu.

Stroit' kholodil'niki metodami peredovoy stroitel'noy tekhniki. Kholodil. tekhnika, 1949, No. 3, s. 1-7.



PAVLENKO, Yevgeniy Yakovlevich; KRESIN, M.L., red.; BODANOVA, A.P., tekhn. red.

[Automotive transportation; problems and exercises]Avtomobil'nye perevozki; sbornik zadach i uprazhnenii. Moskva, Avtotransizdat, 1962. 184 p. (MIRA 16:2)
(Transportation, Automotive--Study and teaching)

L 27863-66 EWA(k)/FBD/EWT(1)/EEC(k)-2/T/EWP(k)/EWA(m)-2/EWA(h) SCTB/IJP(c)
ACC NR: AP6000747 WG/GG/AT SOURCE CODE: UR/0386/65/002/009/0449/0451

AUTHOR: Sokolov, A. A.; Pavlenko, Yu. G. 22 B

ORG: Physics Department, Moscow State University im. M. V. Lomonosov (Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta)

TITLE: Quantum theory of stimulated emission of electrons in crossed fields

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 2, no. 9, 1965, 449-451

TOPIC TAGS: maser, laser, cyclotron maser, stimulated emission, electron emission, electrostatic field, quantum theory

ABSTRACT: The theory of an electron cyclotron maser is extended to include the presence of an electrostatic field. It is shown that stimulated emission of electric dipole radiation can be enhanced by an electrostatic field whose potential energy is of the type used in the analysis of a magnetron (P. L. Kapitsa, Uspekhi fizicheskikh nauk, v. 78, 1962, p. 181). The expression for the emitted power shows that stimulated emission reaches a maximum at the resonance. An applied electric field of this type should enhance stimulated emission at wavelengths of the order of tens of centimeters. Use of higher multipoles would decrease the wavelength at which emission could occur. Orig. art. has: 5 formulas. [CS]

SUB CODE: 20/ SUBM DATE: 16Sep65/ ORIG REF: 002/ OTH REF: 002/ ATD PRESS: 4162

Card 1/1

ACC NR: AP7004135 SOURCE CODE: UR/0051/67/022/001/0003/0008

AUTHOR: Sokolov, A. A.; Pavlenko, Yu. G.

ORG: none

TITLE: Stimulated and spontaneous emission in crossed fields

SOURCE: Optika i spektroskopiya, v. 22, no. 1, 196", 3-8

TOPIC TAGS: stimulated emission, spontaneous emission, electron radiation, wave function, Schrodinger equation, quantum generator, maser radar

ABSTRACT: The stimulated emission and absorption produced by an electron moving in crossed electric and magnetic fields is analyzed by methods of quantum mechanics. The wave function of the electron in the crossed field is obtained by solving the Schrodinger equation in cylindrical coordinates. This yields the range of variation of the axial, orbital, radial, and principal quantum numbers. Selection rules are derived for the possible induced transitions and the intensity of the induced emission and absorption is calculated. The conditions under which emission prevails over absorption are determined. It is shown in particular that if an electric field of approximate intensity 10^4 v/cm is superimposed on the magnetic field ($\sim 10^3$ Oe) for which a maser has already been realized (J. L. Hirshfield and J. M. Wachtel, Phys. Rev. Lett. v. 12, 533, 1964), the intensity of this maser would be greatly increased at a —

Card 1/2 UDC: 35.33:539.124

ACC NR: AP7004135

wavelength on the order of 10 cm. The analogy between the results and the theory of the radiating electron is discussed. The authors thank I. M. Ternov for a number of important remarks, and V. Ch. Zhukovskiy and Yu. A. Korovin for help with the calculations. Orig. art. has: 30 formulas. (W.A. 14)

SUB CODE: 20/ SUBM DATE: 06Jul65/ ORIG REF: 006/ OTH REF: 002

Card 2/2

PAVLENKO, Yu.G.

Electromagnetic form-factor [illegible]
Izv. vys. ucheb. zav.; fiz. [illegible]

1. Moskovskiy gosudarstvennyy universitet imeni [illegible]

ZHUKOVSKIY, A.S.; PAVLENKO, Yu.G.

The $\bar{\Lambda} + N \rightarrow N + \Sigma + \bar{K}$ reaction and the determination of the coupling constant of and K-mesons. Vest. Mosk. un. Ser.3: Fiz., astron. 19 no.5:8-10 S-O '64.

(MIRA 17:12)

1. Kafedra teoreticheskoy fiziki Moskovskogo universiteta.

ACCESSION NR: AP3001775 S/0188/63/000/003/0070/0074

AUTHOR: Pavlenko, Yu. G.

TITLE: Scattering amplitude in a quasi-classical approximation

SOURCE: Moscow. Universitet. Vestnik. Seriya 3. Fizika, astronomiya, no. 3, 1963, 70-74

TOPIC TAGS: scattering, scattering amplitude, high energy particle, Matrin element, high energy particle scattering, s Matrin, Regge pole

ANSTRACT: The scattering of high-energy particles is analyzed. Starting with the radial part of the Schroedinger equation, wave functions of the particles are expressed in terms of integral equations which have no singularities at the distance of the closest approach and are therefore very convenient for the calculation of quasi-classical Matrin elements. An expression is derived for the S-Matrin. It is shown that at high energies Regge pole trajectories can be obtained from the S-Matrin. The S-Matrin can be extended to negative energies, which makes it possible to obtain energy eigenvalues in the form of a series in powers of $\hbar$. Orig. art. has: 17 formulas.

Card 1/2

ACCESSION NR: AP3001775

ASSOCIATION: Kafedra statisticheskoy fiziki i makhaniki (Department of Statistical Physics and Mechanics)

SUBMITTED: 16Oct62 DATE ACQ: 09Jul63 ENCL: 00

SUB CODE: PH NO REF SOV: 003 OTHER: 001

Card 2/2

L 41605-66 EWT(1) IJP(c) AT

ACC NR: AP6018807 SOURCE CODE: UR/0056/66/050/005/1285/1290

AUTHOR: Pavlenko, Yu. G.

ORG: Moscow State University (Moskovskiy gosudarstvennyy universitet)

TITLE: Electron radiation stimulated in crossed fields

SOURCE: Zh eksper i teor fiz, v. 50, no. 5, 1966, 1285-1290

TOPIC TAGS: laser theory, laser power amplifier, electron beam, relativistic electron, electron transition, electron spectrum

ABSTRACT: In view of recent interest in the theory and practice of quantum-mechanical generators and amplifiers whose active medium consists of electron beams controlled by electric and magnetic fields, rather than atoms or molecules, the author analyzes from the point of view of quantum theory the radiation produced by a relativistic electron and shows that in crossed electric and magnetic field configurations, similar to those used in magnetrons, the electron is capable of amplifying external radiation in a wide range of frequencies. The spin of the electron is neglected and its wave function is obtained from the Klein equation. Calculation of the frequency and intensity of the radiation or absorption accompanying the transition of the electron from one level to another shows that the energy levels have an equidistant distribution in a small quasiclassical section of the spectrum, and that in such an approximation the electron is capable of absorbing a quantum of the frequency of the external field and going over to a lower level, or to the contrary give up part of its energy

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ACC NR: AP6018807

and go over to higher levels. An important feature of the deduction is that the expression for the emission or absorption intensity does not contain Planck's constant, thus indicating that the effect has a classical nature. Amplification of the external radiation is possible also in the next higher approximation, when the levels are no longer equidistant. The author thanks A. A. Sokolov and I. M. Ternov for a useful discussion. Orig. art. has: 46 formulas.

SUB CODE: 20/ 09/ SUBM DATE: 03Nov65/ ORIG REF: 006/ OTH REF: 003

ns
Card 2/2

ACCESSION NR: AP4043835 S/0020/64/157/005/1096/1099

AUTHORS: Sokolov, A. A.; Ivanov, Yu. P.; Pavlenko, Yu. G.; Kerimov, B. K.

TITLE: Account of damping in weak interactions

SOURCE: AN SSSR. Doklady*, v. 157, no. 5, 1964, 1096-1099

TOPIC TAGS: weak interaction regime, elementary particle, scattering amplitude perturbation theory, polarization, neutrino, mu meson, electron

ABSTRACT: The scattering of an electronic neutrino by an electron or the scattering of a muonic neutrino by a muon are considered in the four-component theory with damping taken into account. The use of damping theory eliminates the difficulty arising at high neutrino energies (~10^3 BeV in the center of mass system), when the lower order of perturbation theory yields diverging series. Since the

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S/188/62/000/005/004/008
B102/B108

AUTHOR: Pavlenko, Yu. G.

TITLE: On the problem of the spin-orbital interaction of two nucleons

PERIODICAL: Moscow. Universitet. Vestnik. Seriya III. Fizika, astronomiya, no. 5, 1962, 30 - 34

17 -

TEXT: To refute the assumption that the meson theory offers no proof that an LS potential exists in NN-interaction, the system of two nucleons interacting via a symmetrical pseudoscalar field is considered. The pseudoscalar theory with pseudoscalar coupling yields an expression for the potential, analogous to the Breit electron-electron interaction potential. The theory of perturbation supplies, in first approximation, an expression for the matrix element of elastic NN scattering. Finally, after having passed from the Dirac to the nonrelativistic wave functions φ an expression of the form

$$M = -\frac{i}{\hbar}\int d^3r_1\, d^3r_2 \varphi^+_{a'b'}(\vec{r}_1, \vec{r}_2)\, U^N(r)\, \varphi_{ab}(\vec{r}_1, \vec{r}_2),$$

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is obtained for the matrix element, wherein U^{Λ} representing $U_1+U_2+U_3+U_4$ is the NN interaction energy. In the center of mass system ($\vec{k}_1 = -\vec{k}_2 = \vec{k}$, $\vec{\pi}_1 = -\vec{\pi}_2 = -i\nabla$) these components are:

$$U_1 = -\frac{G^2}{4k_0^2}\vec{\tau}_1\vec{\tau}_2(\vec{\sigma}_1\nabla)(\vec{\sigma}_2\nabla)\frac{e^{-\mu r}}{r}.$$

$$U_2 = -\frac{G^2}{2\mu}\vec{\tau}_1\vec{\tau}_2\left[1-\frac{(\vec{k}-\vec{\pi})^2}{4k_0^2}-\frac{k^2}{4k_0^2}\right](\vec{\sigma}_1\nabla)(\vec{\sigma}_2\nabla)e^{-\mu r}.$$

$$U_3 = -\frac{G^2}{4M^2c^2}\vec{\tau}_1\vec{\tau}_2[2(\vec{\sigma}_1\vec{p})(\vec{\sigma}_2\vec{p})-\vec{\sigma}_1\vec{\sigma}_2p^2]\frac{e^{-\mu r}}{r} -$$

$$-\frac{G^2}{4M^2c^2}\vec{\tau}_1\vec{\tau}_2[(\vec{\sigma}_1\vec{l})(\vec{\sigma}_2\vec{l})-\vec{\sigma}_1\vec{\sigma}_2l^2+r^2(\vec{\sigma}_1\vec{p})(\vec{\sigma}_2\vec{p})]\frac{1}{r}\frac{\partial}{\partial r}\left(\frac{e^{-\mu r}}{r}\right),$$

$$\vec{L} = \hbar\vec{l} = [\vec{r}\vec{p}], \quad \vec{p} = \hbar\vec{k}.$$

Card 2/4

$$U_4 = \frac{G^2\hbar^2}{4M^2c^2}(\vec{\tau}_1\vec{\tau}_2)\frac{1}{r}\frac{\partial}{\partial r}\left(\frac{e^{-\mu r}}{r}\right)(\vec{S}\vec{l}) +$$

$$+ \frac{iG^2\hbar}{4M^2c^2}(\vec{\tau}_1\vec{\tau}_2)[(\vec{\sigma}_1\vec{r})(\vec{\sigma}_2\vec{p}) - (\vec{\sigma}_1\vec{p})(\vec{\sigma}_2\vec{r}) - (\vec{\sigma}_1\vec{\sigma}_2)(\vec{p}\vec{r})]\frac{1}{r}\frac{\partial}{\partial r}\left(\frac{e^{-\mu r}}{r}\right) +$$

$$+ \frac{iG^2\hbar}{4M^2c^2}(\vec{\tau}_1\vec{\tau}_2)[(\vec{\sigma}_1\nabla)(\vec{\sigma}_1 r)(\vec{\sigma}_2\vec{r})(\vec{\sigma}_1\vec{p}) + (\vec{\sigma}_2\nabla)(\vec{\sigma}_1\vec{r})(\vec{\sigma}_2\vec{r})(\vec{\sigma}_2\vec{p})]\frac{1}{r}\frac{\partial}{\partial r}\left(\frac{e^{-\mu r}}{r}\right).$$

$$\vec{S} = \frac{1}{2}(\vec{\sigma}_1 + \vec{\sigma}_2).$$

Hence, a square LS potential enters U_3 (radius of action $\approx\hbar/mc$) and the first term of U_4 is the ordinary spin-orbit interaction potential for nucleon-nucleon interaction

$$U_{LS} = U_0(\vec{\tau}_1\vec{\tau}_2)\frac{1}{x}\frac{\partial}{\partial x}\left(\frac{e^{-x}}{x}\right)(\vec{S}\vec{l}). \qquad (11)$$

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On the problem of the spin-orbital... S/188/62/000/005/004/008
B102/B108

$U_o = (\frac{\gamma^2}{\hbar c})(\frac{m}{2M})\, mc^2$; $x = \alpha r$. (cf. Signel, Marshak, Phys. Rev. 109, 1229, 1958).

ASSOCIATION: Kafedra statisticheskoy fiziki i mekhaniki (Department of Statistical Physics and Mechanics)

SUBMITTED: December 11, 1961 (initially),
May 9, 1962 (after revision)

Card 4/4

ACC NR: AT7010695 SOURCE CODE: UR/0203/66/006/004/0790/0791

AUTHOR: Pavlenko, Yu. G.

ORG: Institute of Terrestrial Magnetism, Ionosphere and Radio Wave Propagation, AN SSSR (Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR)

TITLE: Doppler shift of the frequency of a radiation source moving in the ionosphere

SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 4, 1966, 790-791

TOPIC TAGS: Doppler shift, ionosphere, artificial satellite orbit

SUB CODE: 20,04,22

ABSTRACT: A number of authors have computed the Doppler shift of frequency for a three-dimensional nonhomogeneous ionosphere in a case when the coefficient of refraction along the wave propagation path differs little from unity. The derived formulas relate the difference of the Doppler frequencies of radio waves emitted coherently from an artificial earth satellite with the local value of the electron concentration in the neighborhood of a source and angles of refraction dependent on the integral properties of the ionosphere. In this paper the author computes the values in rectangular coordinates, one of whose

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UDC: 550.388.2

0830 1891

ACC NR: AP7010695

axes (x1) is directed from the point of observation to the source. In this case the number of unknowns in the formula for decreases and the computation of the local concentration along the satellite orbit is easier. Thus, the paper gives an analysis of the formula for in the mentioned coordinate system. A number of conditions are given which must be used in combination with the concepts of Geometrical optics. The author thanks Ya. L. Al'pert for formulating the question, and for discussion and observations. Orig. art. has: 12 formulas. [JPRS: 40,291]

Card 2/2

PAVLENKO, Yu.P., inzh.; PETROV, I.P., inzh.

Results of controlling dust during development working with the help of a cutter-loader. Ugol' 39 no.3:62-63 My'64. (MIRA 17:5)

1. Vostochnyy nauchno-issledovatel'skiy institut po bezopasnosti rabot v gornoy promyshlennosti.

PAVLENKO, Yu.P., inzh.

Dust control in mining by cutter loaders. Bezop.truda v prom. 7 no.7: 24-26 Jl '63. (MIRA 16:9)

1. Nachal'nik rudnichnoy ventilyatsionnoy sluzhby shakhty "Polysayevskaya-3" kombinata ugol'nykh predpriyatiy Kuznetskogo kamennougol'nogo basseyna. (Kuznetsk basin—Coal mines and mining—Safety measures)

PAVLENKO, Yu.P.

Practices in the operation of PK-3 cutter-loaders in the "Polysaevskaia" No.3 mine of the Kuzbassugol' Combine. Ugol' 36 no.3:25-26 Mr '61. (MIRA 14:5)
(Kuznetsk Basin--Coal mines and mining)

PAVLENKO, Yu.P., inzh.; BATALIN, S.A., dotsent, kand. tekhn. nauk

Efforts to control dust in stopes of cutter-loader mine development workings. Bezop. truda v prom. 8 no.11:35-37 N '64. (MIRA 18:2)

1. Vostochnyy nauchno-issledovatel'skiy institut po bezopasnosti rabot v gornoy promyshlennosti (for Pavlenko). 2. Tomskiy politekhnicheskiy institut (for Batalin).

DASHEVSKIY, Lev Naumovich, kand. tekhn. nauk; POGREBINSKIY, Solomon Beniaminovich, inzh.; LUKASHA, Yekaterina Alekseyevna, kand. tekhn. nauk **Prinimali uchastiye** LOSEV, V.D.; ABAKUMOVSHNIKOVA, L.M.; ZORINA, Z.S.; ORLOVA, I.A.; ZUBATENKO, A.Ya.; PAVLENKO, Yu.S., inzh., **retsenzent**; GLUSHKOV, V.M., akademik, red.

[The "Kiev" computer, its design and operation] Vychislitel'naia mashina "Kiev"; proektirovanie i ekspluatatsiia. Kiev, Tekhnika, 19[illegible]. [illegible] p. (MIRA 17:11)

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IZERGIN, A.P.; PAVLENKO, Yu.S.; STROITELEV, S.A.

Effect of vibrations on the shape of monocrystals grown by the Chokhral'skii method. Izv. vys. ucheb. zav.; fiz. no.1:107-110 '59. (MIRA 12:8)

1.Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversite gosuniversitete imeni V.V. Kuybysheva.
(Germanium crystals--Vibration)

PAVLENKO, Yu.S.; TANTSYURA, N.A.

Automatic machine for measuring the size and thickness of hides.
Leg.prom.17 no.3:38-41 Mr '57. (MLRA 10:4)
(Hides and skins) (Measuring instruments)

PAVLENKO, Yu.S.

Cyclic-to-binary code converters. Avtom.i prib. no.3:34-36 Jl-S '62. (MIRA 16:2)

1. Kiyevskiy gosudarstvennyy universitet.
(Electronic digital computers)

L 12235-63 EWT(d)/FCC(w)/BDS ASD/APGC Pg-4/Pk-4/Pn-4/Po-4/Pq-4
GG/IJP(C) S/271/63/000/004/035/045

73

AUTHOR: Pavlenko, Yu. S.

TITLE: Cyclic-to-binary code converters 16

PERIODICAL: Referativnyy zhurnal, Avtomatika, telemekhanika i vychislitel'naya tekhnika, no. 4, 1963, 27, abstract 4B153 (Avtomatika i proborostr. Nauchno-tekhn. sb; 1962, no. 3, 34-36)

TEXT: Two variants of a method for converting cyclic code into binary code are described. Following certain transformations, the equations $B_k = B_{k+1} \cdot \overline{C}_k \vee \overline{B}_{k+1} \cdot C_k$ are obtained, where B and C are numbers of the binary and cyclical codes, respectively. The code converter on the basis of this equation will consist of n identical circuits (n is the number of columns in the code). The author presents a logical circuit for one column, and notes that a test was made of the correctness of operation of this circuit for a six-digit code. Here, the time required for converting amounted to 2 microseconds. There are two illustrations. E. G.

[Abstracter's note: Complete translation]

Card 1/1

PAVLENKO, Yu.S., inzh.

Method for an optimum cutting of fabrics into layers. Izv. vys. ucheb. zav.; tekh. leg. prom. no.5:3-9 '63. (MIRA 16:12)

1. Kiyevskiy gosudarstvennyy universitet imeni T.G. Shevchenko.

PAVLENKO, Yu.P., inzh.; PETROV, I.P., kand. tekhn. nauk

Application of water air ejectors for combatting dust. Ugol' 40 no.1:67-69 Ja '65. (MIRA 18:4)

1. Vostochnyy nauchno-issledovatel'skiy institut po bezopasnosti rabot v gornoy promyshlennosti.

24(2) SOV/139-59-1-18/34

AUTHORS: Izergin A P., Pavlenko Yu.S. and Stroitelev S A

TITLE: On the Effect of Vibrations on the Form of Monocrystals Grown by the Chokhralskiy (Czochralski) Method (O vliyanii vibratsiy na formu monokristallov, vyrashchennykh po metodu Chokhral'skogo)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Fizika, 1959, Nr 1, pp 107-110 (USSR)

ABSTRACT: Alkali-halide monocrystals grown from melt by the Czochralski method at constant temperature and a constant rate of withdrawal are roughly cylindrical in shape. Cross-sections of such crystals depend primarily on the form of the melt meniscus which is determined by the surface tension and the temperature distribution in the crucible. When monocrystals are grown by the Czochralski method with rotation of the seed, vibrations of the melt and the crystal holder usually occur. It was found that monocrystals grown under the conditions of rotation and vibration were no longer cylindrical but had definite faces. The cross-sections were roughly square if the seed was withdrawn in the direction [100] (Fig 1δ) and trigonal (triangular) or ditrigonal in the direction [111]

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On the Effect of Vibrations on the Form of Monocrystals Grown by the Czochralski Method

(Fig 1?). In the first case the crystal is a square pseudo-prism whose side faces in KCl correspond to {100}. In the second case the crystal is a trigonal or ditrigonal prism and its faces were "hatched", i.e. they consisted of steps formed by faces of a cube. These effects were also observed on growing germanium monocrystals by the Czochralski method using the apparatus constructed at the Siberian Physico-Technical Institute and described earlier (Ref 1). Germanium monocrystals grown in the direction {111} without vibrations and without rotation of the seed were of roughly cylindrical shape, as shown by Fig 2a. On drawing of germanium crystals in the direction {100} a roughly square pseudo-prism was obtained (Fig 2b) whose side face corresponds in general to the crystal direction {111} but it is "hatched" and it consists of steps formed by octahedral faces {111}. When germanium crystals were drawn in the direction {110} a trigonal or ditrigonal pseudo-prism was obtained (Fig 2c), whose side faces were also "hatched" and formed octahedral steps. The tendency of germanium monocrystals to assume the form

On the Effect of Vibrations on the Form of Monocrystals Grown by the Czochralski Method

{111} is quite natural since in free growth in a melt (when the crystal is not drawn) germanium grows in octahedral form (Ref 3). The authors grew crystals without rotation of the seed but transmitting 2 - 20 c/s vibrations directly to the melt itself. It was found that increase of the vibration intensity produced crystals with clearer faces than rotation of the seed and consequent vibrations. Crystals of small diameter were found to have more clearly defined faces (Fig 3). At the same amplitude and frequency of vibrations the faces of germanium monocrystals appeared less clearly than in alkali-halide salts. The authors suggest that the vibrations of the melt and the crystal holder and rotation of the seed equalise the conditions of crystallization along the whole surface of separation between the solid and liquid phases. This probably

SOV/139-59-1-15/34

On the Effect of Vibrations on the Form of Monocrystals Grown by the Czochralski Method

makes it possible for the crystal to grow its natural faces.

There are 3 figures and 3 references, 2 of which are Soviet and 1 translation from English into Russian.

ASSOCIATION: Sibirskiy Fiziko-tekhnicheskiy Institut pri Tomskom Gosuniversitete imeni V.V. Kuybysheva (Siberian Physico-Technical Institute at Tomsk State University imeni V.V. Kuybyshev)

Card 4/4

SUBMITTED: June 19, 1958

KUPRIYANOV, M.P., inzh.; PAVLENKO, Yu.S., inzh.; CHIZHMAKOV, V.P., inzh.

Using the method of forced oscillations in determining mechanical properties of leather and shoe components. Izv.vys.ucheb.zav.; tekh.leg.prom. no.4:59-63 '58. (MIRA 11:12)

1.Ukrainskiy nauchno-issledovatel'skiy institut kozhevenno-obuvnoy promyshlennosti.
(Leather--Testing) (Shoe manufacture--Testing)
(Oscillations)

PAVLENKO, Yu.S. (Kiyev)

Some problems of the operation of the EMP"-2. Shvein.prom. no.5:26-27 S-O '65. (MIRA 18:10)

Calculating fabric pieces for [illegible] cutting without waste.
Shveĭn.prom. no.4:14-17 [illegible] (MIRA 17:10)

[illegible] cutting fabric
[illegible] Ibid. 17-19

GONCHAR, M. P.; PAVLENKO, Yu. S.

Shoe Machinery

Electric heat for presses used in hot volcanization of shoe soles, Leg. prom., 12, No. 8, 1952.

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

PAVLENKO, Yu. Ye.

Effect of additional pollination on the crop capacity and breed quality of sugar-beet seeds. Sakh.prom. 34 no.5:66-67 My '60. (MIRA 14:5)

1. Vserossiyskiy nauchno-issledovatel'skiy institut sakharnoy svekly i sakhara.

(Sugar beets)

L 17159-65 EWT(m)/EPR/T/EWP(t)/EWP(b) Pad/Pu-4 IJP(c)/ASD(f)-2/ASD(m)-3
ACCESSION NR: AT4046852 JD/HW/JG/MLK S/0000/64/000/000/0258/0261

AUTHOR: Gorev, K. V.; Pavlenko, Z. D. 21

TITLE: Effect of iron, aluminum and titanium on the heat resistance of nickel-chromium based alloys

SOURCE: AN SSSR. Nauchnyy sovet po probleme zharoprochnykh splavov. Issledovaniya staley i splavov (Studies on steels and alloys). Moscow, Izd-vo Nauka, 1964, 258-261

TOPIC TAGS: heat resistant alloy, nickel chromium alloy, iron admixture, aluminum admixture, titanium admixture, alloy heat resistance, dispersion strengthening, alloy mechanical property

ABSTRACT: Dispersion strengthening, long-term hardness, stress-rupture strength, and the nature of the changes in aluminum solubility in the γ-solid solutions were the characteristics investigated in a study of the heat resistance of four types of alloys, with 0, 10, 20 and 40% iron, 16% chromium and varying nickel (35-70%), aluminum

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L 17159-65
ACCESSION NR: AT4046852

(0-8%) and titanium (0-3%) contents. The alloys were hardened at 1200C and aged at 750C for 20 hrs. The long-term hardness of the alloys as a function of iron, aluminum and titanium contents was measured by means of a press at 900 kg and 750C for one hour, the diameter of spherical samples being 9.5 mm. A VP-8 machine was used at 23 kg/mm^2 and 750C to measure stress-rupture strength. The results of the study, complex and largely nonuniform, are shown in the Enclosures. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 18Jun64 ENCL: 03 SUB CODE: MM, TD

NO REF SOV: 002 OTHER: 000

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L 17159-65
ACCESSION NR: AT4046652

ENCLOSURE: 01

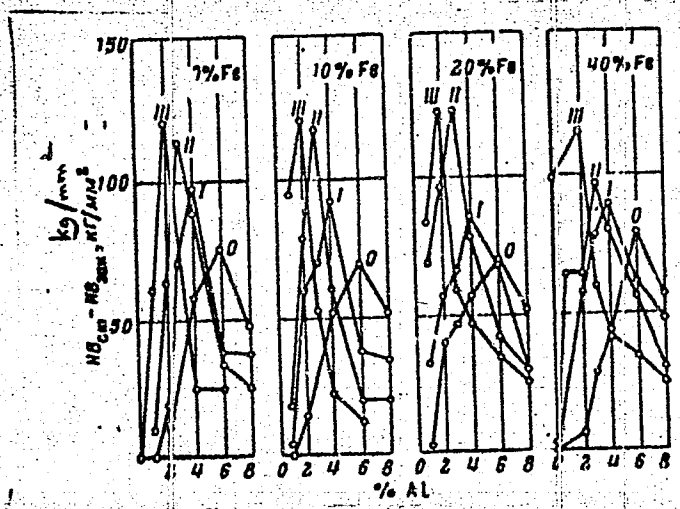

Fig. 1. Dependence of dispersion hardening of Ni-Cr - based alloys on iron, aluminum, and titanium content. O - 0% Ti; I - 1% Ti; II - 2% Ti; III - 3% Ti.

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L 17159-65
ACCESSION NR: AT4046852

ENCLOSURE: 02

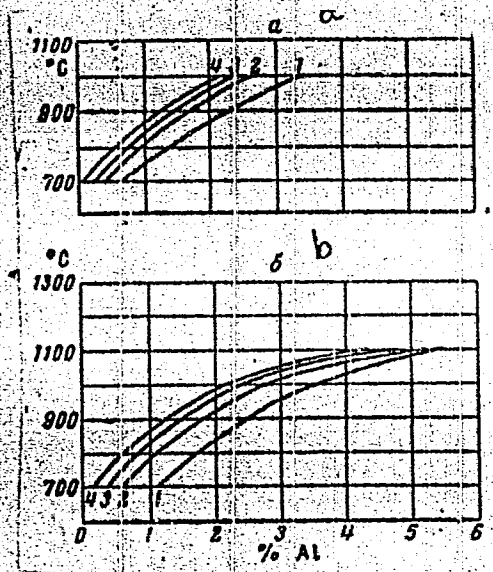

Fig. 2. Dependence of the solubility of aluminum in the γ-solid solution of Ni - Cr based alloys on iron content. a) results of x-ray structural analysis; b) results of microstructural analysis; 1 - 0% Fe, 2 - 10% Fe, 3 - 20% Fe; 4 - 40% Fe.

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L 17159-65
ACCESSION NR: AT4046852

ENCLOSURE: 03

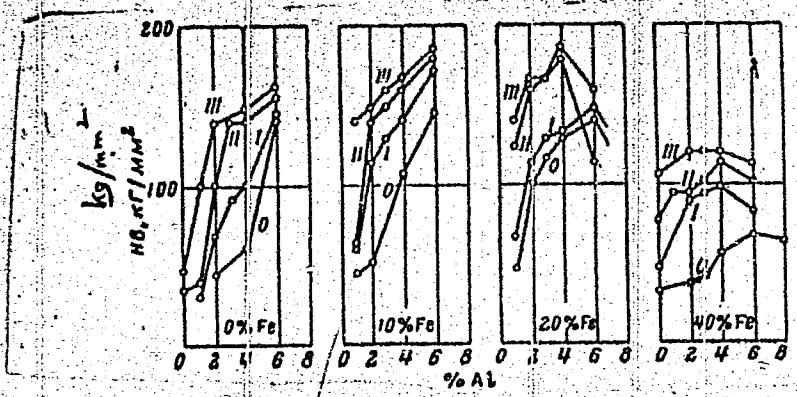

Fig. 3. Long-term hardness of Ni - Cr based alloys as a function of iron, aluminum and titanium content (designations as in Fig. 1).

Card 5/5

GOREV, K.V. [Horau, K.V.]; PAVLENKO, Z.D. [Paulenka, Z.D.]

Effect of iron on the solubility of aluminum in γ-solid solutions of the system Ni - Cr - Fe. Vestsi AN BSSR Ser. fiz.-tekh. nav. no.1:110-112 '64 (MIRA 17:5)

GOREV, K.V. [Horau, K.V.]; PAVLENKO, Z.D. [Paulenka, Z.D.]

Properties of alloys of the system Ni - Cr - Fe with additions of aluminum and titanium. Vestsi AN BSSR. Ser. fiz.-tekh. nav. no.3:94-97 '63. (MIRA 16:10)

PAVLENKO, Z. D.,

"Effect of Preliminary Plastic Deformation on the Martensite Transformation in Fe-Cr-Ni Alloy," with Kuriyumov, G. V., Academician; Maksimova, O. P., Cand. Tech. Sci.; Nikonorova, A. I., Cand. Tech. Sci. and Yampol'skiy, A. M., pages 41.

In book Problems of Physical Metallurgy, Moscow, Metallurgizdat, [illegible]
(Its: Sbornik trudov, v. 5)

The articles in the book present results of investigations conducted by the issuing body, Inst of Physical Metallurgy, a part of the Cent Sci Res Inst of Ferrous Metallurgy located in Dnepropetrovsk. The investigations were concerned with phase transformations in alloys, strengthening and softening processes, diffusion processes (studied with the aid of radioactive isotopes), and certain other questions.

SOV/137 58 8-17675

Translation from: Referativnyy zhurnal Metallurgiya, 1958 Nr 8 p 210 (USSR)

AUTHORS: Kurdyumov G V Maksimova O P Nikonorova A I Pavlenko Z D Yampol'skiy A M

TITLE: The Effect of Preliminary Plastic Deformation on Martensite Transformation in Fe Cr Ni Alloys (Vliyaniye predvaritel'noy plasticheskoy deformatsii na martensitnoye prevrashcheniye v splavakh Fe Cr Ni)

PERIODICAL: Sb tr In t metalloved i fiz metallo Tsentr n i in ta chernoy metallurgii, 1958 Vol 5, pp 41 55

ABSTRACT: Investigations were performed in order to evaluate the effect of plastic deformation (PD) and subsequent heating on processes of martensite transformation (MT) during cooling and on iso thermal MT in an alloy composed of Kh18N8 (0 039% C 18 10% Cr, and 8 1% Ni) and Kh17N9 (0 05% C 17 25% Cr and 9 16% Ni) The PD was effected by compression of specimens in a press at room temperature as well as at temperatures of 100 and 175°C Changes in the ability of austenite (A) to undergo transformations were evaluated by means of a thermomagnetic method involving plotting of martensite cooling curves during

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The Effect of Preliminary Plastic Deformation (cont.)

cooling of the material to 196° followed by heating to a temperature of 20° at a rate of 10°/min. The summary transformation effect obtained as a result of the cooling and heating processes was taken as a criterion of stability of A. After deformation and annealing, the crystalline substructure of the A was characterized by the width of X-ray interference lines. It is established that, depending on the conditions of PD and annealing procedures, the PD may have an activating or a retarding effect on the MT. A small degree of PD extends the temperature range of the MT, increases the initial rate of isothermal transformation, and increases the overall quantity of martensite. As the degree of PD and the temperature at which it is accomplished are increased, the PD begins to exert a retarding influence on the ability of A to undergo MT. Annealing of metal in the temperature range between 100° and 400° eliminates the activating effect of a preceding PD without destroying its retarding effect. At PD of a high degree, annealing at temperatures of 100-400° results in an additional improvement of the stability of A. The activation of the MT is affected by stresses which arise during PD; these stresses are restricted to small volumes and are different from stresses of type II, which are determined by the blurring of the interference lines. The retarding action of PD is affected by the breaking up of the zones of coherent dispersion of X-rays, an effect which hampers the formation of martensite nuclei. The activating and retarding

The Effect of Preliminary Plastic Deformation (cont.)

action of PD on the MT is a function not only of the degree of the PD but of the plastic elastic properties of the initial phase as well

1. Chromium-iron-nickel alloys—Analysis
2. Martensite—Transformations
3. Martensite—Deformation
4. Martensite—Temperature factors

M Sh.

Card 3/3

PAVLENKA, Z. D.

S/0201/63/000/003/0094/0097

ACCESSION NR: AP3010438

AUTHOR: Goraw, K. V., Pawlenka, Z. D.

TITLE: Properties of alloys of the nickel-chromium-iron (Ni-Cr-Fe) system alloyed with aluminum and titanium

SOURCE: AN BSSR. Izvestiya. Seriya fiziko-tekhnicheskokh nauk, no. 3, 1963, 94-97

TOPIC TAGS: nickel-chromium-iron system alloy, heat resistant alloy, nickel-chromium alloy, aluminum alloy, titanium alloy, hardness measurement, breaking strength measurement, alloy aging

ABSTRACT: The effect of aging, the puncture [literal transl.] hardness and the tensile strength were measured on four groups of alloys with iron content of 0, 10, 20 and 40 per cent. Within each group the aluminum content was varied between 0 and 8 per cent., and the titanium content between 0 and 3 per cent. Also investigated was the nature of the change in solubility of aluminum in the gamma-phase solid solution as a function of the iron content at a constant titanium

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ACCESSION NR: AP3010438

concentration of 2 per cent. For all investigations the chromium content was maintained constant at 16 per cent. The results are presented in a series of graphs, but there is little by way of an organized and unifying interpretation of the observed values. Orig. art. has 4 figs and 1 table.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 04Oct63 ENCL: 00

SUB CODE: ML NO REF SOV: 002 OTHER: 000

Card 2/2

SOV/126-6-1-12/33

AUTHORS: Kurdyumov, G. V., Maksimova, O. P., Nikonorova, A. I., Pavlenko, Z. E., and Yampol'skiy, A. M.

TITLE: Influence of Preliminary Plastic Deformation on the Martensitic Transformation in the Alloy Fe-Cr-Ni (Vliyaniye predvaritel'noy plasticheskoy deformatsii na martensitnoye prevrashcheniye v splave Fe-Cr-Ni)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958 Vol 6 Nr 1, pp 95-105 (USSR)

ABSTRACT: The results are described of experiments carried out for elucidating the finer features of the influence of plastic deformation and subsequent annealing on the martensite transformation in Fe-Cr-Ni alloys of the type Kh18N8. The aim was to establish the activating effect of deformation in such an alloy and to verify the validity of the assumption of the activating influence of stresses on the martensitic transformation of deformed austenite. For this it was necessary to study the character of elimination of the after effects of deformation with gradually increasing annealing temperature, in view of the possible super-position of diffusion processes onto the processes of stress elimination during annealing.

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such investigations could not be effected on steel. If the assumption on the favourable influence of stresses on the martensitic transformation of deformed austenite would be correct, the effect of activation should be eliminated in the case of heating in the range of relatively low temperatures. Another aim of the described work was to study the influence of deformation on the isothermal martensitic transformation for the purpose of elucidating the characteristic features of the changes in the kinetics caused by the influence of the activating and/or the braking effects of deformation. Since the activating influence of deformation can only be detected in alloys with high elasticity values, it was decided to carry out the experiments on the alloy Kh18N8 (0.05% C, 18.10% Cr, 8.1% Ni) and the alloy Kh17N9 (0.05% C, 17.25% Cr, 9.16% Ni), both of which are similar in composition and as regards the martensitic point. On the alloy Kh18N8 the influence of deformation and subsequent heating for obtaining martensitic transformation during cooling was studied whilst on the alloy Kh17N9 the influence of deformation on the isothermal

Influence of Preliminary Plastic Deformation on the Martensitic Transformation in the Alloy Fe-Cr-Ni

martensitic transformation was studied. Investigations were carried out on flat 3.5 x 5.5 x 25.5 mm specimens which after manufacture were subjected to diffusion annealing at 1150°C for ten hours. The plastic deformation was effected by compression by means of a press at room temperature at 100 and at 175°C. Deformation at 100 and 175°C was effected inside a special sleeve fitted with a heater winding ; as a medium for ensuring the temperature of 100°C boiling water was used whilst deformation at 175°C was effected in glycerine. Evaluation of the change of the ability of the austenite to become transformed into martensite was effected by means of the thermo-magnetic method by plotting the curves of cooling to -196°C and subsequent heating to 20°C with a speed of 10°C/min. As the basic criterion of the stability of the austenite, the total transformation effect was chosen which was obtained as a result of cooling and heating. The change in the fine structure of the austenite during the plastic deformation and during the

Card 3/8 subsequent heating was investigated by the X-ray method

by measuring the width of the line (311). As a characteristic of the state of the structure of the austenite (Type II stresses dimensions of the blocks and coherent scattering) the magnitude of physical widening of the (311) austenite lines was chosen. In Fig.1 the transformation of the austenite into martensite during cooling to -196°C and subsequent heating to +20°C is graphed after various degrees of preliminary plastic deformation at room temperature for the alloy Kh18N9. In Fig.2 the same relation is graphed for the case of deformations taking place at 100°C and at 175°C. In Fig.3 the change of the total effect of martensitic transformation as a function of the degree of preliminary plastic deformation is graphed for various temperatures of preliminary deformation for the alloy Kh18N9. In Fig.4 the influence of the annealing temperature on the transformation of the deformed austenite during cooling to -196°C and heating to 20°C is graphed for various degrees of deformation at 100°C (alloy Kh18N9). In Fig.5 the change of the widening of the line (311) of the

Influence of Preliminary Plastic Deformation on the Martensitic Transformation in the Alloy Fe-Cr-Ni

austenite, of the total effect of martensitic transformation (during cooling and during heating) and the change of the martensitic point are graphed as functions of the annealing temperature for specimens of the Kh18N8 alloy deformed by 10% at 100°C. In Fig.6 the temperature dependence of the initial speed and the total effect of isothermal martensitic transformation are graphed for non-deformed and deformed (8 and 17%) states for a deformation temperature of 100°C (alloy Kh17N9). It was found that, depending on the conditions of deformation and annealing, plastic deformation can have an activating or a braking effect on the martensitic transformation. Small degrees of deformation activate the transformation, i.e. widen the temperature range of the transformation, bring about an increase of the initial speed of the isothermal transformation and of the total quantity of the martensitic phase. Various changes in the fine crystalline structure of the austenite may lead either to easier formation of martensite nuclei during subsequent cooling or may impede their formation. For small degrees

Influence of Preliminary Plastic Deformation on the Martensitic Transformation in the Alloy Fe-Cr-Ni

of plastic deformation those structural changes will occur to an increasing extent which bring about the formation of germinations. However, even at such degrees of deformation changes occur in the austenite which impede transformation. With increasing degree of deformation and also with increasing deformation temperature, the changes in the structure which bring about braking of the transformations increase in importance. The changes in the fine crystalline structure, which activate the transformation are eliminated at relatively low annealing temperatures at which the width of interference lines does not yet change i.e. also there are still no important changes in the magnitude of the Type II distortions or in the dimensions of the areas of coherent scattering. Changes in the structure braking the formation of germinations are maintained thereby; elimination of these takes place only at higher temperatures corresponding to the region of decrease in the degree of blurring of the lines. It is not possible as yet to establish those details of the fine structure

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which favour the formation of martensite germinations and those which impede their formation. Comparison of the results relating to the influence of plastic deformation on the martensitic transformation in Fe-Ni-Mn and Fe-Cr-Ni systems leads to the conclusion that the intensity of the deformation caused changes of structural factors depends on the elastic-plastic properties of the austenite. The relation between the changes bringing about activation and braking of the martensitic transformations may differ depending not only on the degree of deformation but also on the elastic-plastic properties of the initial phase. As a result of this an unequal character of the effects of plastic deformation on the martensitic transformation

SOV/126-6-1-12/33

Influence of Preliminary Plastic Deformation on the Martensitic Transformation in the Alloy Fe-Cr-Ni

was observed in various materials.
There are 6 figures and 11 references, 9 of which are Soviet, 1 German, 1 English

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (The Central Research Institute of Ferrous Metallurgy)

SUBMITTED: March 21, 1957

Card 8/8 1. Chromium-iron-nickel alloys--Transformations 2. Chromium-iron-nickel alloys--Deformation 3. Chromium-iron-nickel alloys--Heat treatment

I 02512-67 EWT(m)/T/EWP(t)/ETI IJP(c) JD/JH

ACC NR: AR6023328 SOURCE CODE: UR/0276/66/000/003/B022/B022

58
56
B

AUTHOR: Shvedov, L. I.; Pavlenko, Z. D.

TITLE: Testing high-temperature steel for thermal stability

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 3B164

REF SOURCE: Sb. Metallovedeniye i term. obrabotka met. Minsk, Nauka i tekhnika, 1965, 172-179

TOPIC TAGS: thermal stability, cyclic annealing, ~~heat treatment~~, high temperature steel

ABSTRACT: A method is developed for studying the thermal stability of high-temperature steel and the effect which thermal cycling during heat treatment has on the dimensions of steel specimens. The cyclic heat treatment consisted of heating to 900°C with holding to temperature equalization and cooling in water, which corresponds to the operating conditions for the hearths in tempering furnaces. Kinematic and electrical diagrams are given for the special installation used for cyclic heat treatment. An installation is designed for testing the thermal stability of materials without the application of external loads. The proposed device heats the specimen longitudinally and may be used for determining the variation in its length after cyclic heat treatment according to a given set of conditions. Diagrams of the

Card 1/2 UDC: 621.785.001.5:669.15.001.5

Card 2/2 agw

S/137/60/000/012/033/041
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No. 12, pp. 235-236, # 29981

AUTHORS: Gorev, K.V., Rapoport, L.A., Pavlenko, Z.L.

TITLE: Neutralization of Lead in Nimonik-95 Alloy

PERIODICAL: Sb. nauchn. tr. Fiz.-tekhn. in-t AN BSSR, 1959, No. 5, pp. 120-125

TEXT: The authors studied the effect of Zr, Ce, Ca, Ba and B on heat resistant properties of a nimonik-95 alloy containing (in %): Co 16, Cr 20, Al 1.75, Ti 3, the rest Ni, and Pb admixture in amounts of 0.002, 0.01, 0.05, and 0.1%. Prior to the tests the specimens were heat treated under the following conditions: heating for 8 hours at 1,150°C, air cooling with subsequent aging for 20 hours at 750°C; the methods employed were centrifugal bending and partially endurance tests. It was found that in alloys without Al or with its reduced content (0.8%) in the presence of 0.01 and 0.05% Pb, 0.05% Zr causes reduction and 0.5% Zr improves their properties. The effect of Cl is analogous. B has a positive effect

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S/137/60/000/012/033/041
A006/A001

Neutralization of Lead in Nimonik-95 Alloy

on the heat-resistant properties when its content in relation to Pb is ≤ 6.1, opposite to Ba and Ca which are completely unsuitable to be used as neutralizing admixtures. There are 5 references.

G. M.

Translator's note: This is the full translation of the original Russian abstract.

L 25652-65 EWP(m)/EPF(c)/EPF(n)-2/EPR/EWG(v)/EWT(1)/EPA(bb)-2/FCS(k)/ 52
T/EWA(1) Pd-1/Pe-5/Pi-4/Pr-4/Ps-4/Pu-4 WW
ACCESSION NR: AR4046147 S/0264/64/000/008/A008/A008 41
B

SOURCE: Ref. zh. Vozdushnyy transport. Svodnyy tom, Abs. 8A52

AUTHOR: Pavlenkov, A. A.

TITLE: An experimental study of the effects of free convection on heat exchange and drag force in a transverse flow around a cylinder 21

CITED SOURCE: Tr. Kuybyshevsk. aviats. in-t, vyp. 15, ch. 2, 1963, 221-223

TOPIC TAGS: wind tunnel test, transverse flow, heat exchange, drag force, free convection, detachment point displacement, streamline boundary layer, turbulent boundary layer

TRANSLATION: The experimental model consisted of a cylinder with an electric heater inside, a coordinator with an adapter for measuring velocity and its direction, thermocouples and a system of supports for suspending the unit from a wind tunnel balance. The unit was placed in a closed wind tunnel with an open experimental area. The two experimental schedules involved flow velocities of V = 13.4 and 24 m/sec and cylinder drag point temperatures of t = 325 and 234C, respectively. Results are given and the following conclusions were reached: 1)

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ACCESSION NR: AR4046147

heating of the cylinder causes the boundary layer along its top surface to become turbulent at low Re, as indicated by a rearward displacement of the detachment point beyond the cylinder's midsection, and produces an increase in drag force. The boundary layer remains streamline along the cylinder's bottom surface, a fact deduced from the unchanged location of the detachment point; 2) since the boundary layer is turbulent along the top and streamline along the bottom surfaces of a heated cylinder, air at points (symmetrical to the horizontal axis) in the boundary layer below the cylinder's bottom surface will be heated to a greater degree than air over its top surface; 3) a significant downwind displacement of the detachment point beyond the cylinder's midsection can occur at a given velocity and cylinder temperature. Drag force decreases in such cases. Bibl. with 5 titles; 2 illustrations. O. Vershova

SUB CODE: ME, MD ENCL: 00

Card 2/2

L 15721-66 EWT(d)/EWT(l)/EWP(m)/EWT(m)/EWP(w)/EWA(d)/EWP(v)/EWP(k)/EWA(h)/ETC(m)-6/
ACC NR: AT6003090 FCS(k)/EWA(1) SOURCE CODE: UR/3181/63/000/015/0221/0223
LJP(c) JD/WW/EM

AUTHOR: Pavlenkov, A. A.

ORG: None

TITLE: Experimental determination of the effect of free convection on heat transfer and aerodynamic force in transverse flow around a cylinder

SOURCE: Kuybyshev. Aviatsionnyy institut. Trudy, no. 15, pt. 2, 1963. Doklady kustovoy nauchno-tekhnicheskoy konferentsii po voprosam mekhaniki zhidkosti i gaza (Reports of the Joint scientific-technical conference on problems of the mechanics of liquid and gas). 221-223

TOPIC TAGS: convective heat transfer, fluid flow, aerodynamic force

ABSTRACT: The experiment was carried out in a unit consisting of a cylinder with an inside electric heater, means for measuring the magnitude and the direction of the velocity, thermocouples, and a system of brackets for suspending the unit in an aerodynamic balance. (A photo of the unit is shown) Measurements of the static pressure and the temperature on the surface of the cylinder were made with thermocouples and a static pressure tube. The unit was so constructed that measurements could be made of the velocity and temperature fields in the flow of air (heated and cooled) around a cylinder suspended in an aerodynamic

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ACC NR: AT6003090

balance. One set of experimental conditions corresponded to a flow velocity of 13.4 m/sec and a temperature of the front of the cylinder equal to 325°C; the second set of conditions involved a flow velocity of 24 m/sec and a temperature of the front of the cylinder of 234°C. Results showed that: (1) the break-off point of the boundary layer for a cooled cylinder, under both sets of conditions, was ±79°; (2) for a heated cylinder, under both sets of conditions, the break-off point on the upper surface of the cylinder was displaced by 15° along the flow for small Reynolds numbers, while for large Reynolds numbers, it moved forward by 5-6° and on the bottom surface it remained unchanged at -79°; (3) as a rule, at symmetrical points, the temperature of the air under the lower surface of the cylinder is higher than the temperature of the air above the upper surface of the cylinder; and, (4) the resistance of the heated cylinder is 6-11% greater than the resistance of the cooled cylinder, and depends on the flow velocity and the temperature of the cylinder. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 00/ ORIG REF: 005/ SOV REF: 000/ OTH REF: 000

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S/196/62/000/010/020/035
E073/E155

10.3400
AUTHOR: Pavlenkov, A.A.

TITLE: Influence of free convection on the heat-transfer coefficient and lift during flow past a cylinder

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.10, 1962, 3, abstract 10 G15. (Tr. Kuybyshevsk. aviats. in-t, no.12, 1961, 193-197)

TEXT: Formulae are given for calculating the temperature gradients along the normal to the surface of a body and the projection of the speed during free convection for the case when the liquid or the gas is above the heated body. Two opposite directions of the heat flow are considered. On the basis of the temperature gradients, the heat-transfer coefficient can easily be determined. From the similarity with given solutions of the two-dimensional problem it is easy to obtain a solution for the three-dimensional problem. Knowing the speed at the boundary of the thermal boundary layer, the speed and temperature distribution inside the thermal boundary layer can be determined by applying

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PAVLENKOV, V.S., dotsent

Old local varieties of red clover in Ivanovo Province. Sbor. nauch.trud. Ivan.sel'khoz.inst. no.16:42-49 '58. (MIRA 13:11)

1. Kafedra botaniki i selektsii Ivanovskogo sel'skokhozyaystvennogo instituta.

(Ivanovo Province--Red clover--Varieties)

PAVLENKOV, V.S., dotsent; STOLBUNOVA, A.Ye., assistent

Sparseness of growth on red clover fields. Sbor.nauch.trud. Ivan. sel'khoz.inst. no.16:50-54 '58. (MIRA 13:11)

1. Kafedra botaniki i selektsii Ivanovskogo sel'skokhozyaystvennogo instituta.

(Red clover)

USSR / Cultivated Plants. Fodder Crops. M-5

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 58651

Author : Pavlenkov, V. S.
Inst : Ivanov Agricultural Institute
Title : Intervarietal Crossbreeding of Red Clover

Orig Pub : Agrobiologiya, 1957, No 2, 35-39

Abstract : The influence on the yield of the natural crossbreeding of variety - populations of red clover was studied at the Ivanov Agricultural Institute in 1952-1954. Hybrid and common seeds of the selection variety Moskovskaya 1 and old local varieties from the kolkhoz of Ivanovskaya oblast were sown. The sowing of clover and timothy was carried out after a cover of winter wheat. The natural intervarietal crossbreeding contributed to an increase in plant vitality, in the yielding capacity of clover, and in clover-head seed production. The

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EXCERPTA MEDICA Sec.8 Vol.11/4 Neuro.-Psychiatry Apr 58

PAVLENKOVA, E.F.

2091. THE USE OF AMINAZINE IN THE PSYCHIATRIC CLINIC (Russian text) - Lukomskii I.I. and Pavlenkova E.F. - ZH. NEVROPAT. PSIKHIAT.(Mosk.) 1956, 56/7 (575-576)

Report on the effect of aminazine on 12 hospitalized psychiatric patients. Greatest success was achieved in cases of acute psychomotorical irritation, in depression and in hypochondrial depression with strong emotional disposition. Low blood pressure is not an absolute contraindication for aminazine. Hádlík - Brno

PAVLENKOV, V.S., kandidat sel'skokhozyaystvennykh nauk.

Intervarietal crossing of red clover. Agrobiologiia no.2:35-39 Mr-Ap '57. (MLRA 10:5)

1.Ivanovskiy sel'skokhozyaystvennyy institut.
(Clover breeding)

PAVLENKOV, V. S.,
A. M. SVERDLOV, Organisation Socialiste Agr. No. 1 -1.,
53-65 (1932)

PAVLENKOVA, A. F.

USSR

Determination of silicic acid in boiler water without the use of a photocolorimeter. V. I. Blankshtein and A. F. Pavlenkova. *Zhur. Analit. Khimii* 25, No. 2, 47–8(1954).—The method is based on the stability of the silicomolybdic complex and its destruction in strong acid. For this purpose, the acidity of the boiler water is first adjusted at 0.10–0.25*N* H_2SO_4 and then raised with H_2SO_4 to 2.6–3*N*. The stable complex is then reduced with $SnCl_2$ and the blue color compared with standards.

B. Z. Kamich

PAVLENKOVA, A.F.

BLANKSHTEYN, V.I., inzhener; PAVLENKOVA, A.F., inzhener.

Detecting silicic acid in boiler water without a photocolorimeter. Elek.sta. 25 no.2:47-48 F '54. (MLRA 7:2)
(Feed water)

SOLLOGUB, V.B.; CHEKUNOV, A.V.; PAVLENKOVA, N.I.; KHILINSKIY, L.A.

Nature of the Novotsaritsynskaya gravity anomaly in the Crimean plain according to seismic studies. Geofiz. sbor. no.8:3-12 '64. (MIRA 18:6)

1. Institut geofiziki AN UkrSSR.

SOLLOGUB, V.B., doktor geol.-min.nauk; CHEKUNOV, A.V.; PAVLENKOVA, N.I.; KALYUZHNAYA, L.T.

Some characteristics of the wave pattern in the crustal fault zones of the Ukrainian S.S.R. Geofiz.sbor. no.1:32-39 '65. (MIRA 18:12)

1. Institut geofiziki AN UkrSSR. Submitted November 10, 1964.