"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

STERENBOGEN, Yuriy Aleksandrovich; PATON, B.Ye., otv.red.; ASNIS, A.Ye., red.; KAZIMIROV, A.A., red.; MEDOVAR, B.I., red.; PODGAYETSKIY, V.V., red.; MANDEL'BERG, S.L., inzh., red.vypuska; SERDYUK, V.K., inzh., red.

[Electric slag welding] Elektroshlakovaia svarka. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 81 p. (MIRA 13:4)

(Electric welding)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

18.7200
18.1110
~~18(7), 25(1)~~

80265
S/125/60/000/04/002/018
D042/D006

AUTHOR: Poznyak, L.A. and Podgayetskiy, V.V.

TITLE: Research on the Influence of Manganese on the Redistribution of Sulfur Between the Metal and Slag in Welding Low-Carbon Steel

PERIODICAL: Avtomaticheskaya svarka, 1960, Nr 4, pp 5-12 (USSR)

ABSTRACT: The article describes the results of research on the redistribution of sulfur between the metal of the molten pool and liquid slag in the automatic welding of low-carbon steel under "AN-348A" flux, depending on the manganese content of the weld metal. The composition of the "AN-348A" flux is: 43.6% SiO_2; 38.4% MnO; 4.4% CaF_2; 5.1% CaO; 4.5% MgO; 3.2% Al_2O_3; 0.8% FeO; 0.13% S and 0.06% P. The experiments are described in detail. Sulphur iso-

Card 1/4

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Research on the Influence of Manganese on the Redistribution of Sulfur Between the Metal and Slag in Welding Low-Carbon Steel

topes were used in the experiments. Measurements of the radioactivity of the metal and slag showed that the increase in the manganese content of the welds intensifies the passage of sulfur from the weld metal to the slag. The following conclusions were drawn. Beginning with a concentration of 1.5% Mn, the product [%Mn] [%S] becomes approximately constant in the welding pool, showing that the reaction $FeS + Mn \rightleftarrows Fe + MnS$ takes place in the molten pool. Desulfuration by manganese of the molten pool metal cannot be the result of the reaction $[S] + [O^{2-}] \rightleftarrows (S^{2-}) + [O]$ as manganese decreases the activity of sulfur in metal and is a weak deoxidizing agent. Radiometric investigation

Card 2/4

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Research on the Influence of Manganese on the Redistribution of Sulfur Between the Metal and Slag in Welding Low-Carbon Steel

shows that the passage of radioactive sulfur from the metal of the molten pool into the slag is proportional to the concentration of manganese in the metal. In these conditions the sulfur passes from the metal into the slag with the manganese as its sulfide. The passage of radioactive sulfur from the slag into the metal does not depend on the concentration of manganese in the welding pool, and in experimental conditions it remains constant within the limits of 21-27%. Sulfur passes from the slag into the metal only with the iron as its sulfide. The distribution of sulfur between the slag saturated with silica and containing oxides of manganese and the liquid steel can be expressed by the formula:

$$(FeS) + (MnO) \rightleftarrows (FeO) + (MnS)$$

$$\downarrow$$

$$\underline{FeS} + \underline{Mn} \rightleftarrows \underline{Fe} + \underline{MnS}$$

Card 3/4

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D042/D006

Research on the Influence of Manganese on the Radistribution of Sulfur Between the Metal and Slag in Welding Low-Carbon Steel

In welding low-carbon steel under "AN-348A" flux containing 0,13% S the equilibrium of the distribution of sulfur between the metal and slag is obtained when the metal of the welding pool contains about 1.5 % Mn. There are 7 tables and 13 references, of which 7 are Soviet, 5 English, and 1 German.

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im. Ye.O. Patona AN USSR (Order of the Red Banner of Labor Institute of Electric Welding imeni Ye.O. Paton AS UkrSSR).

SUBMITTED: October 9, 1959

Card 4/4

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGLODEK, T.; WINCZAKIEWICA, A.; PIELA, W.

A contribution on the determination of B- and Y-cellulose in rayon-cellulose pulps. p. 693.

CHEMIA ANALITYCZNA. (Komisja Analitczna Polskiej Akademii Nauk i Naczelna Organizacja Techniczna) Warszawa, Poland, Vol. 3, no. 3/4 1958.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 7, July 1959.

Uncl.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PARFESSA, G.I.; PODGAYETSKIY, V.V.; GORDAN', G.N.

Sulfide interlayers in welded joints. Avtom.svar. 18 no.11:12-14 N '65. (MIRA 18:12)

1. Institut elektrosvarki im. Ye.O.Patona AN UkrSSR. Submitted March 1, 1965.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, Vladimir Vladimirovich [Pidhaiets'kyi, V.V.], kand. tekhn. nauk; KUSHNEROV, D.M.[Kushner'ov, D.M.], kand. tekhn. nauk, retsenzent

[Fluxes for automatic welding; a welder's library] Fliusy dlia avtomatychnoho zvariuvannia; biblioteka zvarnykh. Kyiv, Derzhmekhvydav URSR, 1963. 117 p. (MIRA 18:6)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, V.V.; ILYUSHENKO, V.M.

Effect of alkali metal weldments on the porosity of joints welded under flux. Avtom. svar. 17 no.10:26-30 O '64 (MIRA 18:1)

1. Institut elektrosvarki imeni Ye.O.Patona AN UkrSSR.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, Vladimir Vladimirovich; FRUMIN, I.I., doktor tekhn. nauk, otv. red.; FURER, P.Ya., red.

[Welding slags] Svarochnye shlaki. Kiev, Naukova dumka, 1964. 74 p. (MIRA 18:2)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

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L 39765-65 EPA(s)-2/EWT(m)/EPF(c)/EWA(d)/EWP(v)/EPR/T/EWP(t)/EWP(k)/EWP(b)/
EWA(c) Pf-4/Pr-4/Ps-4 IJP(c) JD/HM/JW/JG/WB

ACCESSION NR: AP4047225 S/0125/64/000/010/0026/0030

AUTHORS: Podgayetskiy, V.V.; Ilyushenko, V.M.

TITLE: The effect of alkali-metal compounds on weld porosity during submerged arc welding

SOURCE: Avtomaticheskaya svarka, no. 10, 1964, 26-30

TOPIC TAGS: corrosion, porosity, submerged arc welding, hydrogen fluoride, sodium fluoride

ABSTRACT: Stabilizing properties are improved in certain types of fluxes by adding Na_2O. However, alkalis conspicuously reduce the porosity strength of the welds. Alkaline compounds have a similar effect on weld porosity when low-silicon manganese flux is employed. The introduction of silicon and certain low-silicon sodium fluoride fluxes enhance the resistance of welds to corrosion porosity, while the separation of the slag skin and the weld formation improve. The effect of sodium fluoride is attributed to its intensive evaporation from the surface of flux grain during heating. The sodium atoms which are excited in the welding arc destroy hydrogen fluoride, whose vapors are stable at high temperatures.

Card 1/2

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ACCESSION NR: AP4047225

Their beneficial action is, apparently, explained by the drop in the partial hydrogen pressure as a result of the formation of hydrogen fluoride and dilution. The orig. art. has: 1 figure and 6 tables.

ASSOCIATION: Institut elektrosvarki im. Ye.O. Patona AN UkrSSR (Electroslag Welding Institute, Academy of Sciences UkrSSR)

SUBMITTED: 24Jan64 ENCL: 00 SUB CODE: MM

NR REF SOV: 009 OTHER: 002

Card 2/2

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, V.V.; GALINICH, V.I.

Effect of the kind and polarity of the current on nitrogen and hydrogen absorption by the welding bath. Avtom. svar. 16 no.11:25-30 N '63. (MIRA 17:1)

1. Institut elektrosvarki imeni Ye.O. Patona AN UkrSSR.

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

GERASIMENKO, L.A.; PODGAYETSKIY, V.V.

Silica activity in welding fluxes. Avtom. svar. 16 no.12: 25-28 D '63. (MIRA 17:1)

1. Institut elektrosvarki imeni Patona AN UkrSSR.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, V.V.

Hydrogen oxidation reaction in the atmosphere of an arc. Avtom. svar. 16 no.9:7-12 S '63. (MIRA 16:10)

1. Institut elektrosvarki im. Ye.O.Patona AN UkrSSR.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, V.V.; PARFESSA, G.I.; MANZHELEY, G.P.

Investigating the composition and from of sulfides in weld joints. Avtom. svar. 16 no.8:34-37 Ag '63. (MIRA 16:8)

1. Institut elektrosvarki imeni Ye.O. Patona AN UkrSSR.
(Welding--Testing) (Sulfides)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, V.V.; MANZHELEY, G.P.

Intercrystallite silicate layers and the danger of hot cracking. Avtom.svar. 15 no.10:50-56 O '62. (MIRA 15:11)

1. Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im. Ye.O. Patona AN UkrSSR.
(Steel--Welding) (Welding--Defects)

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OSTROVSKIY, S.A., kand. tekhn. nauk; RABKIN, D.M., kand. tekhn. nauk; MAKARA, A.M., kand. tekhn. nauk; SHEVERNITSKIY, V.V., kand. tekhn. nauk; ASNIS, A.Ye., kand. tekhn.nauk; POKHODNE, I.K., kand.tekhn. nauk; PODGAYETSKIY, V.V., kand.tekhn.nauk; PATON,B.Ye., laureat Leninskoy premii, akademik, doktor tekhn. nauk; BEL'FER,M.G., inzh.; MANDEL'BERG,S.L., kand.tekhn.nauk; MEDOVAR,B.I., doktor tekhn.nauk; GUREVICH,S.M., kand.tekhn.nauk; LATASH,Yu.V., kand.tekhn.nauk; KIRDO, I.V., kand.tekhn.nauk; SOROKA,M.S., red.; GORNOSTAYPOL'SKAYA, M.S., tekhn.red.

[Technology of electric fusion welding]Tekhnologiia elektricheskoi svarki plavleniem. Moskva, Mashgiz, 1962. 663 p. (MIRA 15:12)

1. Nauchnyye sotrudniki Instituta elektrosvarki imeni Ye.O.Patona (for all except Soroka, Gornostaypol'skaya).
(Electric welding)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, Vladimir Vladimirovich[Pidhaiets'kyi, V.V.]; NOVIK, O.M., red.; STARODUB, T.O., tekhn. red.

[Fluxes for mechanized electric welding]Fliusy dlia mekhanizovannoho elektrozvariuvannia. Kyiv, Derzhtekhvydav URSR, 1961. 134 p. (MIRA 16:2)
(Electric welding--Equipment and supplies)
(Flux (Metallurgy))

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, V.V.

Origin of nonmetallic inclusions in steel joints made by electric arc welding. Avtom. svar. 15 no.8:44-55 Ag '62. (MIRA 15:7)

1. Ordena Trudovogo Krasnogo Znameni institut elektrosvarki imeni Ye.O. Patona AN USSR.
(Steel—Inclusions) (Electric welding)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, V.V.; DZHEVAGA, I.I.

Effect of addition elements on the weldability of copper under flux. Avtom. svar. 15 no.6:54-62 Je '62. (MIRA 15:5)

1. Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki imeni Ye.O.Patona AN USSR (for Podgayetskiy). 2. Nikolayevskiy zavod imeni I.I.Nosenko (for Dzhevaga).
(Copper alloys--Welding)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, Vladimir Vladimirovich; ROSSOSHINSKIY, A.A., kand. tekhn. nauk, retsenzent; PELEVIN, N.N., inzh., red.; GORNOSTAYPOL'SKAYA, M.S., tekhn. red.

[Nonmetallic inclusions in welded joints] Nemetallicheskie vkliucheniia v svarnykh shvakh. Moskva, Mashgiz, 1962. 83 p. (MIRA 15:7)

(Welding--Defects)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

38118
S/125/62/000/006/008/013
D040/D113

1.2300

AUTHORS: Podgayetskiy, V.V., and Dzhevaga, I.I.

TITLE: Effect of alloying elements on the weldability of copper by submerged arc

PERIODICAL: Avtomaticheskaya svarka, no. 6, 1962, 54-62

TEXT: Experiments were conducted to fill a gap in research data and select the best alloy elements for welds in submerged-arc welding of copper. Alloying was tried with Cr, Co, Fe, Ni, Mn, Cd, Zn, Sn, Al, Si, Ti, Nb, Mg, Pb, Bi, Sb, P, Te and As. Welds were produced in 10-12 mm thick copper plates with grooves imitating joints, into which powdered alloy elements were put. A 3 mm copper electrode wire, 450÷470 amp, 30÷35 v revearsed polarity d.c., and an АН-20 (AN-20) flux were used. The composition of the latter is (%): 31.0 CaF_2, 29.2 Al_2O_3, 20.9 SiO_2, 13.1 MgO, 2.5 CaO, 2.4 K_2O, 0.9 FeO. Cr and Zn proved to be the best additives. Cr refined the weld metal structure, raised the resistance to hot cracks, deoxidized the welding pool, only slightly affected the thermal and electric conductivity, but, however, increased the tendency

Card 1/3

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to porosity. Zn reduced the porosity and affected the thermal and electric conductivity slightly more than Cr. The drawback of Zn is the toxicity of its oxides. Wire containing a fair amount of Cr is required to obtain welds with over 1% Cr; special experiments were conducted, since no such wire is produced industrially. It is recommended to add Zn by using wire with 5% Zn which can be produced from standard Л 96 (L96) brass. A detailed discussion of experimental data, constitution diagrams and tables are included. Conclusions: Alloying with over 1.2% Cr, over 3.3% Co, or over 2.8% Fe results in the structure of the weld metal being fine due to the segregation of a refractory phase during crystallization. This phase is a solid solution of copper in Cr, Co, or Fe. Content of 0.7% and more P, 2% and more Sb, and 0.1% and more Bi causes hot cracks due to an extended crystallization temperature range and the prolonged presence of liquid layers between growing crystallites. Content of 1% and more Cr, 4% and more Mn, 0.8% Nb, 0.1% Mg, and 1.4% Pb causes porosity of the weld metal. Good welds can be obtained on copper and some copper alloys when Cr or Zn is introduced into the welding pool with welding wire. There are 11 figures and 3 tables.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

Effect of alloying elements S/125/62/000/006/008/013
D040/D113

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im.Ye.O.Patona AN USSR (Electric Welding Institute "Order of the Red Banner of Labor" im.Ye.O.Paton, AS UkrSSR) (Podgayetskiy, V.V.); Nikolayevskiy zavod im. I.I.Nosenko (Nikolayev Plant im. I.I.Nosenko) (Dzhevaga, I.I.)

SUBMITTED: August 4, 1961

Card 3/3

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, V.V.; GALINICH, V.I.

Attainability of thermodynamic equilibrium in electric arc welding. Avtom. svar. 14 no.8:3-12 Ag '61. (MIRA 14:9)

1. Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki imeni Ye.O. Patona AN USSR.
(Electric welding) (Thermodynamics)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

MALEVSKIY, Yu.B.; RODGAY [illegible], V.V.

Connection between the speed of welding and the distribution of nonmetallic inclusions in the weld metal. Avtom. svar. 14 no.12:12-15 D '61. (MIRA 14:11)

1. Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki imeni Ye.O.Patona AN USSR.
(Welding--Defects)
(Metallography)

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31439

S/125/61/000/012/002/008
D040/D112

1.2300

AUTHORS: Malevskiy, Yu.B.; Podgayetskiy, V.V.

TITLE: The connection between the welding speed and the distribution of nonmetallic inclusions in the weld metal

PERIODICAL: Avtomaticheskaya svarka, no. 12, 1961, 12-15

TEXT: The effect of the welding speed on the distribution of nonmetallic inclusions was studied in steel welds made at different welding speeds. The examination was carried out with the aid of an electron microscope on film-copies prepared by dusting carbon on to the microsections. Welds were produced by the submerged-arc method in low-carbon steel using Св -08 (Sv-08) wire and АН-60 (AN-60) flux. The composition of this flux which produces a very high quantity of nonmetallic inclusions, is the following: (%) 44.2 SiO_2, 39.4 MnO, 5.4 CaF_2, 7.5 CaO, 2.4 Al_2O_3, 0.4 Fe_2O_3, 6.6 MgO, 0.06 S and 0.04 P. Multilayer welds were welded at 220 m/hr by two arcs, and at 3 m/hr by one arc. Photomicrographs of the welds are shown. It was found that in welds made at 220 m/hr, the inclusions were located mainly within the crystallites; moreover, there were only a few of these inclusions and hardly any intercrystalline layers on the boundaries. After welding at 3 m/hr, a con-

Card 1/2

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The connection between ...

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D040/D112

siderable quantity of round nonmetallic inclusions was present on the grain boundaries, and thickened intercrystalline layers were observed. Conclusions (1) The welding speed has a noticeable effect on the distribution of nonmetallic inclusions within single crystallites in the weld metal. At high welding speed, the inclusions are located predominantly within the crystallites, and at a low welding speed they are present in considerable quantities on the boundaries. (2) This effect of the welding speed is due to the fact that they are forced outwards during the crystallization. At high welding speeds, crystallization is rapid and so the inclusions have no time to float to the surface of the metal pool or move to the grain boundary. When the welding speed is low, the inclusions do have time to pass from the metal into the slag, or to move to the grain boundary. (3) The quantity of nonmetallic inclusions is higher at high welding speed than at low welding speed, but the distribution of the inclusions at high welding speed is more advantageous. There are 6 figures and 3 Soviet references.

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im. Ye.O. Patona AN USSR (Electric Welding Institute "Order of the Red Banner of Labor" im. Ye.O. Paton, AS UkrSSR)

SUBMITTED: February 1, 1961

Card 2/2

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, V.V.

Utilization of slag scale. Avtom. svar. 14 no.6:93-94 Je '61.
(Slag) (MIRA 14:5)

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1.8000 2708

27379
S/125/61/000/003/003/016
A161/A133

AUTHORS: Kolisnyk, V.N.; Podgayetskiy, V.V.

TITLE: Effect of carbon and phosphorus on the cold brittleness of joints welded by the submerged arc process on carbon steel

PERIODICAL: Avtomaticheskaya svarka, no. 3, 1961, 18 - 26

TEXT: The results are given of an experimental investigation that was necessary in view of the high cold brittleness of welded joints produced in automatic process on carbon steel by the submerged arc process with АН-348А (AN-348A) flux. References are made to Soviet and English language publications with data on the causes of cold brittleness in carbon steel welds and the effect of separate alloy elements and their combinations, but no sufficient data for the particular case of automatic submerged arc welding with the most frequently used high-silicon manganese fluxes are available. [Abstracter's note: The chemical composition of the AN-348A flux is not given.] The effect of carbon and phosphorus was determined by the notch toughness of V-weld test specimens according to ГОСТ (GOST) 6996-54 at +20, -20, -30, -40 and -60°C. The notch for the impact tests was produced along the weld axis in view of the phenomenon observed by D.J. Snyder -

Card 1/3

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that cross notches give a 15° higher critical brittleness temperature (Ref. 10: D.J. Snyder, Effect of notch orientation on weld-metal impact properties. Welding Journal, August 1956). One-pass welds only were tested, for data of other Soviet studies proved that cold brittleness of multilayer welds is determined mainly by the properties of the layer deposited last and not more subjected to heat of the following layers. The results of notch toughness measurements of welds are given in four tables including the C, P, Mn, Si and S contents in metal. C content varied between 0.04 and 0.26%, the content of P between 0.017 and 0.182%. An increased C-content reduced the notch toughness regularly; a reduction in Mn to 0.4% increased the cold brittleness; a high P-content caused brittle fractures with large columnar crystals. The microstructure of specimens with different contents of P but equal content of C was practically similar. The fact is mentioned that the U.S. standard test specifications for carbon steel welds require a higher notch toughness than the Soviet. The obtained data confirm the negative effect of carbon and phosphorus on cold brittleness in carbon steel welds and indicate its variations at certain contents of carbon and phosphorus. It is emphasized that the data are only relative for the work of real welded structures is different from laboratory specimen tests. There are 6 figures, 4 tables and 14 references: 11 Soviet-bloc and 3 non-Soviet-bloc. The three references to the

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27379
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A161/A133

Effect of carbon and phosphorus on the cold....

English-language publications read as follows: M.E. Shank, A critical survey of brittle failure in carbon plate steel structures other than ships. Welding Research Council Bulletin, series no. 17, New York, January 1954; C.E. Hartbower, Effect of metallurgical variables on transition behavior in Charpy slow-bend and impact tests. Welding Journal, Sepetember 1957, 4,015 - 4,095; D.J. Snyder, Effect of notch orientation on weld-metal impact properties. Welding Journal, August 1956, 381 - S - 382 -S.

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im. Ye.O. Patona AN USSR (Electric Welding Institute "Order of the Red Banner of Labor" im. Ye.O. Paton AS UkrSSR)

SUBMITTED: April 11, 1960

Card 3/3

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

GALINICH, V.I.; PODGAYETSKIY, V.V.

Effect of nitrogen on the porosity of joints in argon and carbon dioxide-shielded steel welding. Avtom. svar. 14 no.2:24-32 F '61. (MIRA 14:1)

1. Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki imeni Ye.O. Patona AN USSR.

(Gases in metals) (Steel--Welding)

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27029
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A161/A133

1.2300 2808 1573 2515 2708

AUTHORS: Galinich, V.I., Podgayetskiy, V. V.

TITLE: The effect of nitrogen on the porosity of welds in argon and carbon dioxide steel welding

PERIODICAL: Avtomaticheskaya svarka, no. 2, 1961, 24-32

TEXT: The purpose of the described experiments was to determine the shielding properties of different gas medii against nitrogen. The welding tests were carried out in a sealed vacuum chamber with a rotating steel disk and sealed wire holder, using direct current and inverse polarity. The chamber was evacuated to 10^{-2} mm Hg and filled with argon of different purity, oxygen and nitrogen, alimentary CO_2, and especially prepared carbon and nitrogen oxides. Commercial argon proved not suitable, for pores appeared in welds when more than 5% N_2 was present in the gas. Oxygen added to such gas (argon with N) augmented the porosity. The data are different from those obtained by Ludwig (Ref. 3: H. C. Ludwig, Nitrogen effects in argon arc welding atmospheres, "The Welding Journal", no. 9, 1955, 4095-4145) who recommended argon with maximum 1% N_2, i.e. a higher N-content appears permissible. In combination with CO_2, already 1% N_2 in gas caused

Card 1/3

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pores. The absorption of N by the weld metal from argon and from CO_2 was very different, and CO_2 is obviously no neutral solvent for N for it raises the solubility of N in the weld pool. Slag formed on the weld, and its composition was a proof of the oxidizing effect of CO_2. Contrary to data of H. Schenck, G. Frohberg and H. Graf [Ref. 5: "Archiv fuer das Eisenhuettenwesen", Heft 6, 329-337; (II)30 (1959)], oxygen had apparently no effect at all on the N absorption by the liquid metal. Metal deposited in a NO atmosphere was very porous. The more intensive N-absorption by the pool from CO_2 with N-content compared to argon with N-content is explained by the oxidizing reaction

$$CO_2 + N \rightleftarrows CO + NO$$

where N - atomic nitrogen formed through dissociation of molecular nitrogen in the arc. The data show that the permissible N-content in argon is ten times that of the permissible N in CO_2. The following conclusions are drawn: The higher the oxidizing effect of gas the more N is dissolved in the welding pool; the main cause of the rising nitrogen solubility in the welding pool with the increasing oxidizing properties of gas is the formation of gaseous NO, and the N content in the weld metal is higher after welding in NO than in N; the permissible N content in CO_2 is 0.1%; CO has an oxidizing as well as a

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The effect of nitrogen on the porosity ...

carbonizing effect on the welding pool. There are 5 figures, 6 tables and 10 references: 5 Soviet-bloc and 5 non-Soviet-bloc. Three references to English, language publications read as follows: H. C. Ludwig, Nitrogen effects in argon arc welding atmospheres, "The Welding Journal", no. 9, 1955, 4095-4145; F. R. Hensel, Westinghouse Research Reports, R-74191, 1932; N. W. Krase, B. Mackey, Journal Phys. Chem. 1928 (32), 1488 (Gmelins Handbuch, B. 4, Stickstoff, 1936).

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im. Ye. O. Patona AN USSR (Electric Welding Institute "Order of the Red Banner of Labor" im. Ye. O. Paton AS UkrSSR)

SUBMITTED: July 4, 1960

Card 3/3

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

KOLISNYK, V.N.; PODGAYETSKIY, V.V.

Effect of carbon and phosphorus on the cold brittleness of joints in carbon steel made by welding under flux. Avtom. svar. 14 no.3: 18-26 Mr '61. (MIRA 14:2)

1. Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im.Ye.O. Patona AN USSR.
(Steel—Welding) (Welding—Testing)

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A161/A130

AUTHORS: Podgayetskiy, V.V., and Malevskiy, Ya.B.

TITLE: Intergranular Layers in Welds

PERIODICAL: Avtomaticheskaya svarka, 1960, No. 9, pp. 33-37

TEXT: No method has been found yet to separate intergranular layers from iron alloys for investigation of their chemical composition, but these layers apparently affect the weld metal properties, and data obtained in investigations (Ref. 1-13) could not be positively confirmed. The Electric Welding Institute imeni Ye.O. Paton investigated submerged-arc welds produced by low-carbon CB-08A (Sv-08A) welding wire and flux with different SiO_2 and MnO content using an electron microscope. The preparation of carbon films shown in the article had been described previously (Ref. 14). Three photographs (Fig. 1-3) show films from welds made under AH-348A (AN-348A) flux (42% SiO_2; 37% MnO; 5.5% CaF_2; 5.5% MgO; 5.0% CaO; 4.0% Al_2O_3; 1.0% FeO). Welds produced with AH-20 (AN-20) flux had less developed layers, but thick layers were also observed (the AN-20 flux composition:

Card 1/5

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Intergranular Layers in Welds

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21.7% SiO_2, 32.0% Al_2O_3, 19.8% CaF_2, 9.7% MgO, 16.4% CaO, 1.0% FeO). In welds made under fluoride flux АНФ-1П (ANF-1P) thicker intergranular layers were practically absent. It was concluded that: 1. The length of grain boundaries filled with intergranular layers depends on the flux composition and is the longer the more SiO_2 and MnO is present in the flux; 2. The layers are joined with globular non-metallic inclusions and obviously originate from them; in places the layers have been deformed by growing dendrites of weld metal; 3. The chemical composition of the intergranular layers is close to that of the non-metallic inclusions, and it can be concluded that in welds made under AN-348A and AN-20 flux the layers consist mainly of manganese silicates, and their fusion temperature is 1,100-1,160°C in AN-348A, and about 1,300° in AN-20 flux; 4. Drop of impact resistance of weld metal produced under high-silicon manganese flux is apparently due mainly to the presence of the layers. The authors express their gratitude to Candidate of Technical Sciences B.A. Movchan for valuable advice in the work. There are 8 figures and 15 references of which 11 are Soviet and 4 German.

Card 2/5

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Intergranular Layers in Welds

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A161/A130

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni institut elektrosvarki im. Ye.O. Patona AN USSR (Electric Welding Institute "Order of the Red Banner of Labor" of the Academy of Sciences of the UkrSSR)

SUBMITTED: February 9, 1960

Card 3/5

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

Intergranular Layers in Welds

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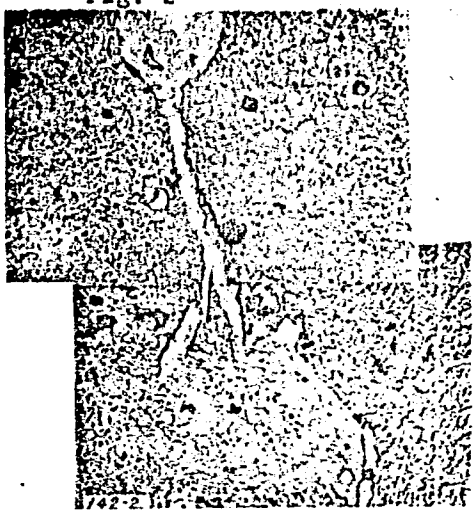
Fig. 1

Fig. 2



Card 4/5

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Intergranular Layers in Welds

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A161/A130

Fig. 3

Card 5/5

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A161/A133

AUTHORS: Podgayetskiy, V.V., and Gerasimenko, L.A.

TITLE: New Data on the Electric Conductivity of Fluxes

PERIODICAL: Avtomaticheskaya svarka, 1960, No. 10, pp. 93-95

TEXT: The electric conductivity of molten flux in electro-slag process is a major factor, but no information is available. Measurements have been carried out to get such data. The method had been described previously (Ref.1) and included the use of an iron crucible. The low melting point of the crucible material limited the maximum possible temperature at 1,400°C, and the results had to be extrapolated for real processes at 2,000°C. A series of АНФ (ANF) type fluxes, АН-25 (AN-25), commercial sodium fluoride, and 48-ОФ-10 (48-OF-10) flux were tested. The composition of the ANF fluxes (in %) and their melting interval are given:

Card 1/4

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	CaF_2	CaO	Al_2O_3	MgO	SiO_2	Fe_2O_3	NaF	TiO_2	Melting temperature in C^o
ANF-5	80.6	-	-	-	-	2.4	17.4	-	1160-1180
ANF-6	54.1	-	29.6	-	-	6.4	-	-	1260-1280
ANF-7	63.2	1.0	32.6	-	1.7	1.5	-	-	1200-1220
ANF-8	51.8	20.5	24.0	-	-	3.5	-	-	1240-1260
ANF-14	53.8	11.8	9.4	11.9	12.6	2.3	-	-	1140-1160
AN-25	31.4	14.1	2.4	1.2	7.9	4.2	-	38.4	1180

The measured conductivity curve showed a bent (Fig.1) at the flux melting temperature. The composition of 48-OF-10 flux is not given; the Fe_2O_3 content in it and in sodium fluoride after the conductivity measurements were 3.0 and 2.7%, respectively; the conductivity is shown in curves (Fig.2). Engineer B.I. Maksimovich participated in the experiments. There are 2 figures and 2 Soviet-bloc references.

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A161/A133

New Data on the Electric Conductivity of Fluxes

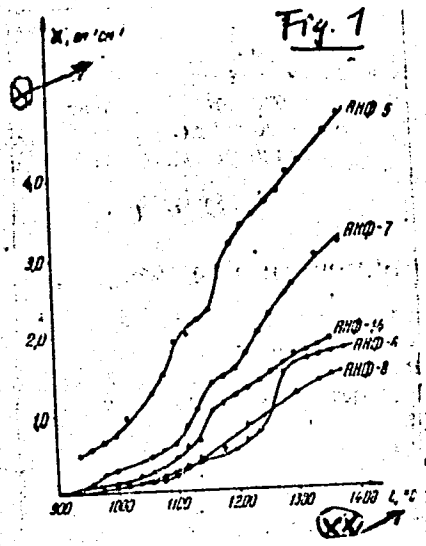

Figure 1

The electric conductivity - to - temperature ratio ANF-7, ANF-8 and ANF-14. (x - $ohm^{-1} \cdot cm^{-1}$; xx - temperature in C^{o})

Card 3/4

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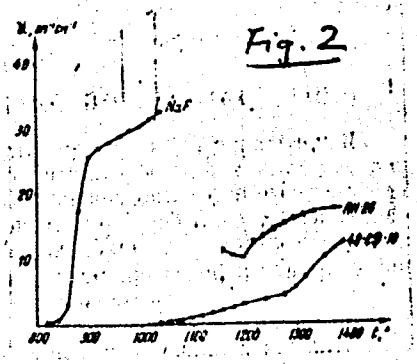
New Data on the Electric Conductivity of Fluxes

Figure 2:

The electric conductivity - to - temperature ratio in AN-25 and 48-OF-10 flux and sodium fluoride



Card 4/4

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PODGAYETSKIY, V.V.; GERASIMENKO, L.A.

New data on the electric conductivity of fluxes. Avtom. svar. 13 no. 10:93-95 O '60. (MIRA 13:10)
(Flux (Metallurgy)--Electric properties)

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PODGAYETSKIY, V. V.

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Akademiya nauk URSR, Kiyev. Instytut elektrozvaryuvannya

Vnedreniye novykh sposobov svarki v promyshlennost'; sbornik statey. vyp. 3. (Introduction of New Welding Methods in Industry; Collection of Articles. v. 3) Kiyev, Gos. izd-vo tekhn. lit-ry UkrSSR, 1960. 207 p. 5,000 copies printed.

Sponsoring Agency: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki imeni akademika Ye. O. Patona Akademii nauk Ukrainskoy SSR.

Ed.: M. Pisarenko; Tech. Ed.: S. Matusevich.

PURPOSE: This collection of articles is intended for personnel in the welding industry.

COVERAGE: The articles deal with the combined experiences of the Institut elektrosvarki imeni Ye. O. Patona (Electric Welding Institute imeni Ye. O. Paton) and several industrial enterprises in solving scientific and engineering problems in welding technology. Problems in the application of new methods of mechanized welding and electroslag welding in industry are discussed. This is the third collection of articles published under the same title. The Foreword was written by B. Ye. Paton, Academician of the Academy of Sciences Ukrainian SSR and Lenin prize winner. There are no references.

TABLE OF CONTENTS:

Mayevskiy, G. V. [Candidate of Technical Sciences and Lenin Prize Winner, Electric Welding Institute imeni Ye. O. Paton], V. Ya. Mayevskiy [Chief Engineer, Ukrglavneftesbyt (Ukrainian SSR Main Administration for Petroleum Marketing)], and Ye. F. Martinson [Nach.stroitel'no-montazhnogo upravleniya No. 70 (Chief of Building and Erection Administration No. 70) Trest 7, Ministerstva stroitel'stva RSFSR (Trust 7 of the Ministry for Construction, RSFSR)]. Introducing the Method of Rolling-Up Welded Structures in the Petroleum Industry 84

Zaruba, I. I. [Candidate of Technical Sciences], and A. G. Potap'yevskiy [Senior Engineer, Electric Welding Institute imeni Ye. O. Paton]. Experience in Introducing Automatic and Semiautomatic Carbon-Dioxide Shielded Welding 90

Medovar, B. I., A. G. Potap'yevskiy, F. A. Ratin [Senior Engineer], S. V. Yunger [Head of Welding Laboratory, Stalingradskiy filial Giproneftemasha (Stalingrad Branch of the State Design and Scientific Research Institute for Petroleum Machinery)], and S. A. Zandberg [Chief of Welding Bureau, Stalingradskiy mashinostroitel'nyy zavod imeni Petrova (Stalingrad Machine-Building Plant imeni Petrov)]. Development and Introduction of New Techniques in the Automatic Shielded Flux-Welding of Steel With Chrome Stainless Cladding 99

Podgayetskiy, V. V. [Candidate of Technical Sciences], G. K. Pokhodnya [Candidate of Technical Sciences], V. P. Subbotovskiy [Senior Engineer], I. I. Frumin, [Candidate of Technical Sciences, Electric Welding Institute imeni Ye. O. Paton], V. P. Gorelov [Deputy Chief Mechanic], S. Ya. Shekhter [Chief of Shop, Alchevskiy metallurgicheskiy zavod imeni K. Ye. Voroshilova (Alchevsk Metallurgical Plant imeni K. Ye. Voroshilov)], N. A. Ryzhenko [Former Chief Mechanic, Magnitogorskiy metallurgicheskiy kombinat (Magnitogorsk Metallurgical Combine)], and N. A. Mal'tsev [Chief of Welding Department, Artemovskiy zavod "Tsvetmet" (The Artemovsk "Tsvetmet" Nonferrous Metallurgical Plant)]. Experience in the Introduction of Mechanized Surfacing in Metallurgy 115

15

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, V.V.; MALEVSKIY, Yu.B.

Interlayers between crystallites of a weld joint. Avtom. svar. 13 no.9:33-37 S '60. (MIRA 13:10)

1. Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im. Ye.O. Patona AN USSR.
(Electron microscopy) (Steel--Welding)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, V.V., OPANASENKO, S.I.

Comparison of methods of mechanized aluminum bronze deposition. Avtom. svar 13 no.8:58-66 Ag '60. (MIRA 13:8)

1. Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im. Ye.O. Patona AN USSR.
(Aluminum bronze)
(Hard facing--Equipment and supplies)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

ZHEMCHUZHNIKOV, Georgiy Vladimirovich; PATON, B.Ye., otv.red.; ASNIS, A.Ye., red.; KAZIMIROV, A.A., red.; MEDOVAR, B.I., red.; PODGAYETSKIY, V.V., red.; MANDEL'BERG, S.L., kand.tekhn.nauk, red. MAYEVSKIY, V.V., red.; GORNOSTAYPOL'SKAYA, M.S., tekhn.red.

[Welding of metal structures] Svarka metallokonstruktsii. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 73 p. (MIRA 14:1)

(Structural frames--Welding)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, V.V.; NOVIKOVA, T.P.

Separation of silicon fluoride during the heating of flux in the welding process and during drying. Avtom. svar. 13 no.6:19-22 Je '60. (MIRA 13:7)

1. Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im. Ye.O. Patona AN USSR.
(Electric welding) (Silicon fluorides)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

POTAP'YEVSKIY, Arkadiy Grigor'yevich; PATON, B.Ye., otv.red.; ASNIS, A.Ye., red.; KAZIMIROV, A.A., red.; MEDOVAR, B.I., red.; PODGAYETSKIY, V.V., red.; ZARUBA, I.I., kand.tekhn.nauk, red.vypuska; MAYEVSKIY, V.V., inzh., red.; GORNOSTAYPOL'SKAYA, M.S., tekhn.red.

[Welding in a protective atmosphere] Svarka v zashchitnykh gazakh. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 97 p. (MIRA 13:9)

(Welding) (Protective atmospheres)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

ZARUBA, Igor' Ivanovich; PATON, B.Ye., otv.red.; ASNIS, A.Ye., red.; KAZIMIROV, A.A., red.; MEDOVAR, B.I., red.; PODGAYETSKIY, V.V., red.; DUDKO, D.A., kand.tekhn.nauk, red.vypuska; MAYEVSKIY, V.V., red.

[Automatic and semiautomatic welding of sheet steel] Avtomaticheskaia i poluavtomaticheskaia svarka tonkolistovoi stali. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 62 p. (MIRA 12:11)
(Sheet steel--Welding) (Electric welding)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

MEDOVAR, Boris Izrailevich; PATON, B.Ye., akademik, otv.red.; ASNIS, A.Ye., red.; KAZIMIROV, A.A., red.; PODGAYETSKIY, V.V., red.; MAYEVSKIY, V.V., inzh., red.

[Electric arc welding under flux] Avtomaticheskaia elektrodugovaia svarka pod fliusom. Kiev, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 73 p. (MIRA 12:11)

1. AN USSR (for Paton).
(Electric welding)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

18(5) SOV/125-59-9-13/16

AUTHOR: Podgayetskiy, V.V., Candidate of Technical Sciences, and Kolisnyk, V.N., Engineer

TITLE: GOST on Welding Fluxes

PERIODICAL: Avtomaticheskaya svarka, 1959, Nr 9, pp 94-96 (USSR)

ABSTRACT: There was until lately no standardization of fluxes used in closed arc welding. The first attempt to compile a GOST on fluxes was made in 1952 by the TSNIITMASh. At that time, two fundamental principles, namely, standardization according to the quality of welds obtained, and according to the flux chemical composition, were advanced. Finally, the second method was accepted and confirmed by the GOST under 9087-59. Table 1 shows chemical composition of fluxes for general use. In Table 2, flux granulations are given. The chemical composition of fluxes must correspond to Table 1, granulation - to Table 2. Moisture admitted - not over 0.1%; weight - 1.3 to 1.7 kg/lit. Flux to be packed in 5-layer paper sacks; gross weight of a

Card 1/2

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

SOV/125-59-9-13/16

GOST on Welding Fluxes

sack not over 25 kg. There are 2 tables and 2 Soviet references.

Card 2/2

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, V.V.

ASNIS, Arkadiy Yefimovich; PATON, B.Ye., otv.red.; KAZIMIROV, A.A., kand.tekhn.nauk, red.vypuska; MEDOVAR, B.I., red.; PODGAYETSKIY, V.V., red.; RUDENSKIY, Ya.V., tekhn.red.

[Gas welding and cutting] Gazovaia svarka i rezka. Kiev, Gos. nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1958. 86 p. (MIRA 12:5)
(Gas welding and cutting)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

RABKIN, Daniil Markovich; GUREVICH, Samuil Markovich; BUGRIY, Filipp Semenovich; PATON, B.Ye., otv.red.; ASNIS, kand.tekhn.nauk, red.vypuska; KAZIMIROV, A.A., red.; MEDOVAR, B.I., red.; PODGAYETSKIY, V.V., red.; SERDYUK, V.K., inzh., red.

[Nonferrous metal welding] Svarka tsvetnykh metallov. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 69 p. (MIRA 12:7)

(Nonferrous metals--Welding)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

SOV/125-59-7-14/19

AUTHOR: Podgayetskiy, V.V., Opanasenko, S.I.

TITLE: Mechanized Building-up by Fusion of an Aluminum Bronze Layer

PERIODICAL: Avtomaticheskaya svarka, 1959, Nr 7, p 93 (USSR)

ABSTRACT: For the purpose of steel surfacing with aluminum bronze, the elctrode wire of the following chemical composition is used: 9-11% Al, 2-4% Fe, 1-2% Mn, the rest is copper. In combination with this wire, powder flux is used. The process is accomplished by means of reverse-polarity direct electric current. The wire is 6 mm in diameter; the speed of electrode movement is 75-90 m/hour; speed of the process 15-25 m/hour depending on the conditions applied, the thickness of the first layer 5-8 mm; of two layers 10-14 mm; of three layers 15-20 mm. The chemical composition of the first layer: 20-35% Fe, 6-9% Al, 1,8-2.6% Mn; second layer: 17-25% Fe, 8-11% Al, 1,5-2% Mn; third layer: 10-20% Fe 8-10% Al, 1-2% Mn. The built-up metal is compact;

Card 1/2

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SOV/125-59-7-14/19

Mechanized Building-up by Fusion of an Aluminum Bronze Layer

used on cylindrical or small-size flat surfaces, no cracks appear in it. In surfacing of larger work pieces, formation of cracks is possible, however their number can be reduced by preliminary heating of the work-piece up to 200°-400°C. The bond between the built-up and the base metal is generally very strong. The surfaced layers of metal can be easily worked by usual metal-cutting tools.

Card 2/2

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

SEVBO, Platon Ivanovich; PATON, B.Ye., otv.red.; ASNIS, A.Ye., red.; KAZIMIROV, A.A., red.; MEDOVAR, B.I., red.; PODGAYETSKIY, V.V., red.; RUDENSKIY, Ya.V., tekhn.red.

[Equipment for welding under flux] Oborudovanie dlia svarki pod fliusom. Kiev, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry. 1958. 67 p. (MIRA 12:5)

(Electric welding--Equipment and supplies)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

MEDOVAR, Boris Izraylevich; PATTON, B.Ye., otv.red.; ASNIS, A.Ye., kand.tekhn. nauk, red.; KAZIMIROV, A.A., red.; PODGAYETSKIY, V.V., red.; RUDENSKIY, Ya.V., tekhred.

[Electric arc welding of austenitic steels] Elektrodugovaia svarka austenitnykh stalei. Kiev, Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1958. 97 p. (MIRA 12:2)
(Steel alloys--Welding)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PATON, Boris Yevgen'yevich,; ASNIS, A.Ye., red.; KAZIMIROV, A.A., red.; MEDOVAR, B.I., kand. tekhn. nauk, red.; PODGAYETSKIY, V.V., red.; RUDENSKIY, Ya.V., tekhn. red.

[Modern welding techniques] Sovremennaia svarochnaia tekhnika. Kiev, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1957. 98 p. (MIRA 11:11)

(Electric welding)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, V.V.; LANGER, N.A.; MALEVSKIY, Yu.B.; MANZHELNY, G.P.

Investigating nonmetallic inclusions in welds made under flux. Avtom. svar. 11 no.4:10-23 Ap '58. (MIRA 11:6)

1. Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im. Ye.O. Patona AN USSR.
(Electric welding--Testing)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, VLADIMIR VLADIMIROVICH

PHASE I BOOK EXPLOITATION 901

Podgayetskiy, Vladimir Vladimirovich

Kontrol' kachestva svarnykh soyedineniy (Quality Control of Welded Joints) Kiyev, Mashgiz, 1957. 52 p. (Series: Biblioteka svarshchika) 8,000 copies printed.

Sponsoring Agency: Akademiya nauk Ukrainskoy SSR. Institut elektrosvarki.

Ed.: Medovar, B. I., Candidate of Technical Sciences; Editorial Board of series: Asnis, A. Ye., Kazimirov, A. A., Medovar, B. I., Paton, B. Ye. (Responsible Ed.), Podgayetskiy, V. V.; Managing Ed. (Ukrainian Division of Mashgiz): Serdyuk, V. K., Engineer.

PURPOSE: This booklet is intended for welders and workers of technical control divisions (OTK) employed in the field of welding.

Card 1/3

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

COVERAGE: Various defects in arc, gas, and resistance welded connections are described and methods of quality control of welds and welding processes are presented, special emphasis is placed on nondestructive testing and inspection techniques which include magnetic, x-ray, gamma-ray, ultrasonic, and fluorescent and dye-penetrant methods. No personalities are mentioned. There are 7 Soviet references.

TABLE OF CONTENTS:

Introduction 3

1. Defects in Welds 3
   Incorrect preparation and assembly of welded parts 4
   Dimensional defects 5
   Defects produced by the welding process 7
   Structural discontinuities 9
   Warpage and distortions of welds 12
   Low mechanical, physical and chemical properties and structural defects in welds 12

2. Preliminary Inspection of Welding Materials and Control of the Welding Process 13

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Quality control of base materials 14
Quality control of electrode wire 14
Quality control of flux material 15
Quality control of electrodes 16
Quality control of welded parts and assembly 18
Control of the welding process 19

3. Quality Control of Welded Parts and Assemblies 20
Visual examination and dimensional check of welds 21
Testing for leaks 22
Ultrasonic inspection 25
Magnetic testing 30
X-ray and gamma-ray testing 36
Fluorescent and dye-penetrant testing 42
Mechanical testing of welds 43
Metallographic investigation 50
Testing of chemical composition 52
Corrosion tests 54

Bibliography 54

AVAILABLE: Library of Congress (TS227.P58) GO/wde
Card 3/3 11-26-58

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, V.V.

KIRDO, Ivan Viktorovich; PATON, B.Ye., otvetstvennyy red.; ASNIS, A.Ye., red.; KAZIMIROV, A.A., red.; MEDOVAR, B.I., red.; PODGAYETSKIY, V.V., red.; RUDENSKIY, Ya.V., tekhn red.

[Soldering of metals] Paika metallov. Kiev, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1957. 45 p. (MIRA 11:7)
(Solder and soldering)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, Vladimir Vladimirovich; PATON, B.Ye., otvetstvennyy red.; ASNIS, A.Ye., red.; KAZIMIROV, A.A., red.; MEDOVAR, B.I., kand. tekhn. nauk, red.; RUDENSKIY, Ya.V., tekhn. red.

[Quality control of welded joints] Kontrol' kachestva svarnykh soedinenii. Kiev, Gos. nauchno-tekhn. izd-vo mashino-stroit. lit-ry, 1957. 52 p. (MIRA 11:7)

(Welding--Testing)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, V.V.
Card 2

PHASE I BOOK EXPLOITATION 431

Akademiya nauk URSR, Kiyev. Instytut elektrozvaryuvannya

Rukovodstvo po elektrodugovoy svarke pod flyusom (Handbook of Flux-shielded Arc Welding) Kiyev, Mashgiz, 1957. 235 p. 11,000 copies printed.

Ed.: Paton, B. Ye., Corresponding Member, Ukrainian Academy of Sciences, Doctor of Technical Sciences; Reviewer: Trochun, I. P., Candidate of Technical Sciences; Ed. of Publishing House: Serdyuk, V. K.; Tech. Ed.: Rudenskiy, Ya. V.; Managing Ed. of the Ukrainian Branch of Mashgiz: Zalogin, N. S.

PURPOSE: This book is intended for the use of welders and welding foremen.

COVERAGE: The book presents the principles and methods of flux-shielded automatic arc welding. Automatic and semiautomatic welding machines of modern design are described, and instructions are given for their operation and adjustment. Peculiarities of welding and surfacing operations are described in detail. Specific instructions are given for the welding of low-, medium-, and high-

Card 1/8

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

carbon steels, low- and high-alloy steels, and nonferrous metals. Chapters I, II, IV, VI, X, and XI were written by B.I. Medovar, Candidate of Technical Sciences; Chapters III, VIII, IX, XII, and XIV by V.V. Podgayetskiy, Candidate of Technical Sciences; Chapters V and VII by S.L. Mandel'berg, Candidate of Technical Sciences; and Chapters XIII and IV by S.L. Zhemchuzhnikov, Candidate of Technical Sciences. It is stated that the modern method of flux-shielded arc welding, as currently practiced in the Soviet Union, was developed in 1940 at the Institut Elektrosvarki (Institute of Electric Welding), Ukrainian Academy of Sciences, under the leadership of Yevgeniy Oskarovich Paton, Academician. The Institute, which now has the by-name "imeni Paton", has collaborated for a number of years with TsNIITMASh (Tsentral'nyy nauchno-issledovatel'skiy institut mashinostroyeniya i metalloobrabotki: Central Scientific Research Institute for Machine Building and Metalworking), MVTU imeni Baumana (Moskovskoye vyssheye uchilishche imeni Baumana: Moscow Higher Technical School imeni Bauman), and the plant "Elektrik". This collective research is said to be responsible for the great increase in the use of welding in the USSR during recent years. There are 13 references, all Soviet.

Card 2/8

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

Ch. II. Essentials of Flux-shielded Welding 25

1. Essentials of the method and its advantages 25
2. Types and methods of flux-shielded welding and surfacing 30

Ch. III. Fluxes and Welding Wire 32

1. The purpose of a flux 32
2. Characteristics and chemical composition of modern fused fluxes 40
3. Preparation of fused fluxes in flame and electric furnaces 43
4. Granular flux 47
5. Consumption of flux in semiautomatic and semiautomatic welding 49
6. Welding wire 50

Ch. IV. Shape and Size of the Weld in Flux-shielded Welding 52

1. Effect of welding conditions on size and shape of the weld 53
2. Effect of welding technique on size and shape of the weld 62
3. Determination of conditions for flux-shielded welding 65

Ch. V. Preparation and Assembly of Articles for Flux-shielded Welding 67

Ch. VI. Technique of Automatic Flux-shielded Welding of Butt and Corner Joints 71

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

1. Arc excitation and welding-up of the crater in automatic welding 71
2. Types of butt welds 73
3. Technique of butt-welding steel sheets over 4 mm. thick 76
4. Special cases of butt welding 83
5. Technique of automatic welding of corner joints 85
6. Measures for increasing output in the automatic flux-shielded welding of butt and corner joints 90

Ch. VII. Methods of Producing Vertical and Horizontal Welds in Field Welding 91

1. Nature and peculiarities of the automatic welding of vertical welds with accelerated cooling of puddle 91
2. Technique of welding vertical seams with accelerated cooling of puddle 94
3. Welding horizontal joints in vertical and inclined planes 97
4. Field welding in the flat position 99
5. Organization of operations in field welding 101

Card 5/8

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

Ch. VIII. Methods for the Semiautomatic Welding of Butt and Corner Joints 103

1. Butt welding 103
2. Corner welding 109
3. Spot welding of corner joints 113
4. Plug welding 114

Ch. IX. Surfacing 118

1. Techniques and conditions for single-arc surfacing of flat and cylindrical surfaces 119
2. Other methods of surfacing 123

Ch. X. Welding of Carbon and Alloy Steels 126

1. Basic characteristics of carbon steels 126
2. Properties of welded low-carbon steel joints 128
3. Instructions for welding medium- and high-carbon steels 132
4. Basic characteristics of alloy structural steels 137
5. Instructions for welding alloy structural steels 138

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

Ch. XI. Welding of High-alloy and Clad Steels 143

1. Characteristics of high-alloy steels 143
2. Special features of welding austenitic chrome-nickel steels 148
3. Instructions for welding the commonest types of austenitic chrome-nickel steels 157
4. Basic characteristics of clad steels and special features in welding them 161
5. Instructions for welding clad steels 162

Ch. XII. Welding of Nonferrous Metals 166

1. Automatic welding of copper and its alloys 166
2. Automatic welding of aluminum 170

Ch. XIII. Welding Heads and Self-propelled Welders 173

1. Self-propelled welding heads 174
2. Self-propelled welders 181
3. Overhead welding heads 195

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

Ch. XIV. Semiautomatic Welding Machines 196

1. PSh-5 hose-equipped semiautomatic welder 196
2. PSh-54 hose-equipped semiautomatic welder 205
3. Care of equipment 210

Ch. XV. Standard Equipment for Flux-shielded Welding 215

1. Functions and basic elements of welding outfits 215
2. Classification and brief description of welding outfits 216
3. Basic units of welding outfits 221
4. Flux equipment 230

Bibliography 233

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Card 8/8

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APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, V. V.

PODGAYETSKIY, V.V.; POZNYAK, L.A.

Effect of flux composition on the distribution of phosphorus between slag and weld metal. Avtom.svar. 10 no.4:15-18 Jl-Ag '57. (MIRA 10:10)

1. Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki imeni Ye.O.Patona Akademii nauk USSR.
(Electric welding) (Phosphorus)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

BLITSHTEYN, Aleksandr Zinov'yevich; PATON, B.Ye., otv.red.; ASNIS, A.Ye., red.; KAZIMIROV, A.A., red.; MEDOVAR, B.I., red.; PODGAYETSKIY, V.V., red.; MAYEVSKIY, V.V., inzh., red.

[Electric plug and stud welding] Svarka elektrozaklepkami, privarka shpilek i shtiftov. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 45 p. (MIRA 13:1)
(Electric welding) (Rivets and riveting)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYETSKIY, V. V.

KASATKIN, Boris Sergeyevich; MANDEL'BERG, Simon L'vovich; ASMIS, A.Ye., kand.tekhn.nauk, red.vypuska; PATON, B.Ye., otv.red.; KAZIMIROV, A.A., red.; MEDOVAR, B.I., red.; PODGAYETSKIY, V.V., red.; MAYEVSKIY, V.V., inzh., red.izd-va

[Electric arc welding of low-alloy steels] Elektrodugovaia svarka nizkolegirovannykh stalei. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 68 p. (MIRA 13:3)
(Steel alloys--Welding)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

S/145/62/000/002/009/009
D262/D308

AUTHOR: Podgayevskiy, I.A., Assistant

TITLE: Seizing of metals in cutting operation with liquid nitrogen cooling

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroyeniye, no. 2, 1962, 179 - 181

TEXT: The seizing effect of the austenitic steel 1Х18Н9Т (1Kh18N 9T) with the hard alloy ВК-8 (VK-8) during cutting, without cooling and with liquid nitrogen cooling (at - 196°C) is examined. The results of the experiments with various cooling media (nitrogen, argon air, carbon dioxide, oxygen), recorded in form of graphs, show that the wear of the cutting instrument is reduced to a half when liquid nitrogen cooling is applied. It is concluded that the seizing effect can be reduced by lowering the temperature and introducing liquid nitrogen directly into the metals contact area. There are 2 figures.

ASSOCIATION: Dnepropetrovskiy khimiko-tekhnologicheskiy institut (Dnepropetrovsk Chemical and Technological Institute)

SUBMITTED: June 1, 1961

Card 1/1

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

S/184/60/000/004/015/021
A109/A029

AUTHOR: Podgayevskiy, I.A., Graduate Engineer

TITLE: The Use of Plated Steel for Chemical Machinery

PERIODICAL: Khimicheskoye Mashinostroyeniye, 1960, No. 4, pp. 43 - 44

TEXT: The economy achieved by the use of plated steel for chemical machinery instead of high-alloy acidproof steels is discussed. St. 2, St. 3, 10, 20, 15K (15K), 20K (20K), 12XM (12KhM) carbon steels comprise basic layers whereas 08X13 (08Kh13) stainless steel and 1X18H9T (1Kh18N9T), 1X18H12M2T (1Kh18N12M2T), 1X18H12M3T (1Kh18N12M3T) acidproof steels and nonferrous metals, copper, nickel, aluminum and their alloys, silver and titanium are used for plating. The usual thickness of plating is 5 - 10% of the total thickness or up to 20% for acidproof equipment operating at high temperatures. Plated sheets are obtained by hot rolling and their strength depends on the yield strength of their components, the relative thickness of basic and plating layers and the final thermal processing. Yield strength of steel-copper bimetal is 39.2 kg/mm (copper layer 10%), whereas the yield strength of steel-nickel bimetal is equal to that of carbon steel basic layer. Shearing strength between basic layer and plating is usually

Card 1/2

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

The Use of Plated Steel for Chemical Machinery

S/184/60/000/004/015/021
A109/A029

25 - 40 kg/mm^2 (Ref. 4). Adhesion of plated sheets proved equal to operation in corrosive media at increased temperatures. The expansion coefficient difference between basic metal and 18-8% type stainless steel causes an inner stress at varying temperatures, but laboratory tests proved that these have no adverse effect on adhesion. Thermal processing is carried out at 900 - 920°C for austenitic steel plating and 630- 650°C for ferritic steel plating. Plated steels respond well to mechanical processing and welding and the corrosion resistance is satisfactory. A suitable welding method is described. Specific use and advantages of the above-mentioned steels are given. In recent years silver-plated steel has been used for particularly high-resistant chemical equipment and the use of titanium-plated bimetals was introduced. To prevent brittle fractures protective layer plating is performed in a vacuum. There are 28 references: 16 Soviet, 3 German, 1 French, 5 English and 3 Swedish.

Card 2/2

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

COUNTRY : USSR M-8
CATEGORY :

ABS. JOUR. : RZBiol., No. 19, 1958, No. 87202

AUTHOR : Podgayevskaya, A. A.; Moshkova, Ye. P.
INST. :
TITLE : Correct Pruning Increases Farm Profits

ORIG. PUB. : S. kh. Kubani. Inform. byul., 1957, No 2, 3-8

ABSTRACT : Data concerning the effects of different methods of pruning on productivity of apple, pear, plum, peach, and cherry trees.

CARD: 1/1

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYEVSKAYA, A.A.

VOROB'YEVA, N.N.; KOLESNIKOV, M.A., kand.sel'skokhoz.nauk; MOTOVILOV, B.A., kand.sel'skokhoz.nauk; PODGAYEVSKAYA, A.A., kand.sel'skokhoz.nauk; PRIYMAK, A.K., doktor sel'skokhoz.nauk; RYADNOVA, I.M., kand.sel'skokhoz.nauk; SERGEYEV, L.M., kand.sel'skokhoz.nauk; SNITKO, N.F., kand.sel'skokhoz.nauk; STOROZHENKO, Ye.M.; TRUSEVICH, G.V., kand.sel'skokhoz.nauk; ZANADVOROV, S.M., red.; KOFANOV, P.F., tekhn.red.

[Fruit culture] Plodovodstvo. Krasnodarskoe knizhnoe izd-vo, 1957. 267 p. (MIRA 12:5)

(Fruit culture)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYEVSKIY, I.A., assistent

Seizing of metals during the machining with liquid nitrogen cooling. Izv.vys.ucheb.zav.; mashinostr. no.2:179-181 '62. (MIRA 15:5)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
(Metal cutting) (Metals at low temperatures)

APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3"

"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYEVSKIY, I.A., assistent; GALEMINA, O.M., kand. tekhn. nauk, dots.

Friction welding of carbon and alloyed steels. Izv. vys. ucheb. zav.; mashinostr. no.11/12:186-190 '58. (MIRA 13:3)

1.Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
(Steel--Welding)

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STRIZHAK, V.I., kand. tekhn. nauk; YERMOLAYEV, I.V.; PODGAYEVSKIY, I.A.; LAVROV, A.M.

Improving the technology of pipe production for electric drilling. Met. i gornorud. prom. no.6:36-39 N-D '65. (MIRA 18:12)

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VELLER, V.N., kand.tekhn.nauk; ZHURAVLEVA, A.A., inzh.; PODGAYEVSKIY, V.L., inzh.

Simplest system of hydrodynamic control for the EBC turbines. Elek.sta. 29 no.8:30-37 Ag '58. (MIRA 11:11)
(Turbines) (Hydraulic control)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

SMIRNOV, V.; PODGAYEVSKIY, Yu.; IYENSEN, V., rabochiy; BELYAKOV, I.; PETROV, V., mashinist elektrovoza

Readers' letters. Sov.shakht. 10 no.6:27,28,29 Je '61. (MIRA 14:9)

1. Shakhta "Baydayevskiye uklony" Kemerovskogo sovnarkhoza (for Iyensen). 2. Shakhta No.1 tresta Cherepet'ugol' Tul'skoy oblasti (for Petrov).
(Coal mines and mining)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

SUKHENKO, F.T.; PODGAYNAYA, Ye.S.

Use of proline by certain dermatophytes and nondermatophytes. (MIRA 14:6)
Izv.Sib.otd.AN SSSR no.5:86-99'61.
(Proline) (Fungi)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

SUKHENKO, F.T., PODGAYNAYA, Ye.S.

Transformation of uric acid by certain fungi [with summary in English]
Biokhimiia 23 no.2:185-193 Mr-Ap '58 (MIRA 11:6)

1. Kafedra biokhimii Novosibirskogo medinstituta.
(URIC ACID, metabolism
transform. & growth by various fungi (Rus))
(FUNGI, metabolism
uric acid transform. & utilization by various fungi (Rus))

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYNAYA, Ye.S.; SUKHENKO, F.T.

Arginase activity of Microsporum lanosum, M. ferrugineum, Epidermophyton, and Fusarium. Izv.Sib.otd.AN SSSR no.11:73-80 '59. (MIRA 13:4)

1. Novosibirskiy meditsinskiy institut.
(Fungi) (Arginase)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

SUKHENKO, F.T.; PODGAYNAYA, Ye.S.

Use of arginine by certain fungi. Izv. Sib. otd. AN SSSR no.8:96-106 '59. (MIRA 13:2)

1. Novosibirskiy meditsinskiy institut.
(Arginine) (Fungi)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYNOV, V.A.; ALESHIN, I.Ya., instruktor peredovykh metodov truda

Best driver in the garage. Transp. stroi. 15 no.1:35-36 Ja '65. (MIRA 18:3)

1. Zamestitel' nachal'nika Kiyevskoy nauchno-issledovatel'skoy stantsii Orgtransstroya (for Podgaynov).

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PODGAYNOV, V.A.; SUVOROVA, Ye.V., inzh.

Using hydraulic fill methods in constructing the approaches of a bridge over the Dnieper River. Transp.stroi. 10 no.5: 22-23 My '60. (MIRA 13:7)

1. Zamestitel' nachal'nika Kiyevskoy nauchno-issledovatel'skoy stantsii Orgtransstroya.
(Hydraulic engineering) (Dnieper River--Railroad bridges)

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYNYY, A.Ye.

Evaluation of cavernotomy as a therapeutic method in giant cavities. Zdrav. Kazakh. 22 no.10:27-30 '62. (MIRA 17:5)

1. Iz Kazakhskogo instituta tuberkuleza (dir.-zasluzhennyy vrach respubliki D.U. Tulemisov) i kafedry gospital'noy khirurgii (zav.-prof. M.I. Bryakin) Kazakhskogo meditsinskogo instituta.

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"APPROVED FOR RELEASE: 07/13/2001 CIA-RDP86-00513R001341420012-3

PODGAYNYY, A.Ye.

Some problems in managing the postoperative period following resection of the lungs for tuberculosis. Zdrav.Kazakh. 22 no.6:13-17 '62. (MIRA 15:11)

1. Iz Kazakhskogo instituta tuberkuleza (dir. - D.U.Tulemisov) i kafedry gospital'noy khirurgii (zav. - prof. M.I.Bryakin) Kazakhskogo meditsinskogo instituta.
(TUBERCULOSIS) (LUNGS--SURGERY) (POSTOPERATIVE CARE)

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Levit, N. B.; Podgayny'y, V. K.

B+1

Automation (Avtomatika), Moscow, Voyenizdat M-va obor. SSSR, 1964, 400 p. illus. Errata slip inserted. 29,000 copies printed. Textbook for students of radio engineering schools.

TOPIC TAGS: automation, radar, relay circuit, dc amplifier

PURPOSE AND COVERAGE: This textbook is intended for students in radio engineering schools specializing in radio engineering and radar and for officers associated with the use of radio equipment. The book can be useful to students in civilian educational institutions of this profile. The book cites the problems of automation as applied to radio equipment. In particular, relay circuits, dc amplifiers, various radio systems of automatic regulation, synchronous transmission, and computers are considered. Basic emphasis is given to the physical processes in the circuits. Mathematics is as simple as possible. The book was written considering the audience to be at the secondary education level.

TABLE OF CONTENTS [abridged]:

Card 1/2

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