MANDEL'BAUM, Ya.A.; MEL'NIKOV, N.N.; BAKANOVA, Z.M.; ZAKS, P.G.

Organic insecticide-fungicides. Part 61: Synthesis of some mixed ethyl mercaptoethyl thiophosphates. Zhur.ob.khim. 31 no.12:3947-3949 D '61. (MIRA 15:2)

1. Nauchnyy institut po udobreniyam i insektofungitsidam im. Ya.V.Samoylova, Moskva.
(Phosphothioic acid)
(Insecticides)

MEL'NIKOV, N.N.; MANDEL'BAUM, Ya.A.; BAKANOVA, Z.M.

Organic insecticide-fungicides. Part 63: Synthesis of some derivatives of phosphinic acids. Zhur.ob.khim. 31 no.12:3953-3955 D '61. (MIRA 15:2)

1. Nauchnyy institut po udobreniyam i insektofungitsidam imeni Ya.V. Samoylova, Moskva.
(Phosphinic acid)
(Insecticides)

MEL'NIKOV, N.N.; MANDEL'BAUM, Ya.A.; LOMAKINA, V.I.

Repellents based on indalone and dimethyl karbate. [Trudy] NIUIF no.171:143-150 '61. (MIRA 15:7)
(Insect baits and repellents)

MANDEL'BAUM, Ya.A.; LOMAKINA, V.I.; MEL'NIKOV, N.N.

Amides of acids as repellents. [Trudy] NIUIF no.171:151-158 '61. (MIRA 15:7)
(Insect baits and repellents) (Amides)

MANDELBAUM, YA.A., ZAKS, P.G., MELNIKOV, N.N.

New method of synthesizing esters of thiophosphoric acid.

Khimiya i Primeneniye Fosfororganicheskikh Soyedineniy (Chemistry and application of organophosphorus compounds) A. YE. ARBUZOV, Ed. Publ. by Kazan Affil. Acad. Sci. USSR, Moscow 1962, 632 pp.

Collection of complete papers presented at the 1959 Kazan Conference on Chemistry of Organophosphorus Compounds.

MANDEL'BAUM, Ya.A.; BAKANOVA, Z.M.; MEL'NIKOV, N.N.

Organic insectofungicides. Part 71: Synthesis of mixed esters of phosphoric and thiophosphoric acids. Zhur.ob.khim. 33 no.12:3819-3822 D '63. (MIRA 17:3)

1. Nauchno-issledovatel'skiy institut udobreniy i insektofungitsidov.

ROSLAVTSEVA, S.A.; MANDEL'BAUM, Ya.A.

Promising insecticides of the organophosphorus compound group. Med. paraz. i paraz. bol. 32 no.3:338-340 My-Je'63 (MIRA 17:3)

1. Iz laboratorii toksikologii (zav. - K.A. Gar) Vsesoyuznogo nauchno-issledovatel'skogo instituta khimicheskikh sredstv zashchity rastenii (ispolnyayushchiy obyazannosti direktora - prof. N.N. Mel'nikov), Moskva .

L 35527-65 EWI(m)/EPF(c)/T Pr-4 DJ S/0286/65/000/005/0057/0058

ACCESSION NR: AP5008180

AUTHORS: Mandel'baum, Ya. A.; Mel'nikov, N. N.; Petyakina, Ye. I.; Vinogradova, I. E.; Pil'menshteyn, I. A.

TITLE: A method for obtaining an antiabrasion additive for lubricating oils. Class 23, No. 168828

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 5, 1965, 57-58

TOPIC TAGS: abrasion, wear resistance, dialkyl ester, dithiophosphoric acid, dinonyl ester, hexachlorcyclopentadiene

ABSTRACT: This Author Certificate presents a method for obtaining an antiabrasion additive for lubricating oils. The additive is based on dialkyl esters. To improve the quality of the additive, dialkyl esters of dithiophosphoric acid, such as dinonyl ester of dithiophosphoric acid, are subjected to interaction with hexachlorcyclopentadiene.

ASSOCIATION: none

SUBMITTED: 28Mar62 ENCL: 00 SUB CODE: GC, FP, MT

NO REF SOV: 000 OTHER: 000

Card 1/1

L 63869-65 EWT(1)/EWA(j)/EWT(m)/EWA(b)-2 RO/RM

ACCESSION NR: AP5021555 UR/0286/65/000/013/0020/0020

547.419.1.07+632.952

AUTHOR: Mandal'baum, Ya. A.; Mel'nikov, N. N.; Bakanova, Z. M.

TITLE: A method for producing new organophosphorus insecticide-amides of O-alkyl-S-arylthiophosphoric acid. Class 12, No. 172323

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1965, 20

TOPIC TAGS: insecticide, organic amide, organic phosphorus compound, chlorinated organic compound

ABSTRACT: This Author's Certificate introduces a method for producing new organophosphorus insecticide-amides of O-alkyl-S-arylthiophosphoric acid by interacting chlorothiophosphates and amines in the presence of a hydrogen chloride acceptor. Insecticidal preparations are produced by using O-alkyl-S-arylchlorothiophosphate.

ASSOCIATION: none

SUBMITTED: 14Jun62 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 000 OTHER: 000

Card 1/1

L 2940-66 EWI(m)/EPF(c)/T DJ

ACCESSION NR: AP5024388 UR/0286/65/000/015/0068/0068
621.892.8

AUTHOR: Mel'nikov, N. N.; Mandel'baum, Ya. A.; Petyakina, Ye. I.; Vinogradova, I. E.

TITLE: Preparative method for an anti-wear additive to lubricating oil. Class 23, No. 173368

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 68

TOPIC TAGS: lubricating oil, antiwear additive, lubricant additive

ABSTRACT: An Author Certificate has been issued for a preparative method for an anti-wear additive to lubricating oils which is based on salts of dialkyl thiophosphates. To improve the quality of the additive, the salt is treated with hexachlorocyclopentadiene. [SM]

ASSOCIATION: none

SUBMITTED: 28Mar62 ENCL: 00 SUB CODE: FP

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4110

Card 1/1 PC

L 1433-66 EWT(1)/EWA(j)/EWA(b)-2 RO

ACCESSION NR: AP5024420 UR/0286/65/000/015/0121/0121
632.954

AUTHOR: Mel'nikov, N. N.; Mandel'baum, Ya. A.; Lomakina, V. I.; Stonov, L. D.; Yakimova, N. F.; Sergeyeva, T. A.

TITLE: A method of plant-growth regulation. Class 45, No. 173535

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 121

TOPIC TAGS: defoliant, phosphonacetamide

ABSTRACT: Dialkoxyphosphonacetamides can be used as defoliants to control plant growth, in conjunction with herbicides. [VS]

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy (All-Union Scientific Research Institute of Chemicals for Protection of Plants)

SUBMITTED: 14Mar64 ENCL: 00 SUB CODE: LSOC

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4100

Card 1/1

MANDEL'BAUM, Ya.A.; GRAPOV, A.F.; ITSKOVA, A.L.

Determination of phosphorus in organic compounds by photometry. Zhur. anal. khim. 20 no.8:873-874 '65. (MIRA 18:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy, Moskva.

LOMAKINA, V.I.; VORONKOVA, V.V.; MANDEL'BAUM, Ya.A.; MEL'NIKOV, N.N.

Organic insectofungicides. Part 84: Interaction of trialkyl phosphites with thiol monochloroacetates. Zhur. ob. khim. 35 no.10:1752-1759 O '65. (MIRA 18:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy.

VORONKOVA, V.V.; LOMAKINA, V.I.; MANDEL'BAUM, Ya.A.; MEL'NIKOV, N.N.

Organic insectofungicides. Part 88: Reaction of trialkyl phosphites with thiol monochloroacetates. Zhur.ob.khim. 35 no.12:2209-2216 D '65. (MIRA 19:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy. Submitted October 2, 1964.

L 26058-66 EWT(1)/T JK

ACC NR: AP5025125 (N) SOURCE CODE: UR/0079/65/035/010/1752/1759

AUTHOR: Lomakina, V. I.; Voronkova, V. V.; Mandel'baum, Ya. A.; Mel'nikov, N. N.

ORG: All-Union Scientific Research Institute of Chemical Agents for Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)

TITLE: From the organic insecto-fungicide field; LXXIV. The reaction of trialkylphosphites with thiolmonochloroacetates

SOURCE: Zhurnal obshchey khimii, v. 35, no. 10, 1965, 1752-1759

TOPIC TAGS: insecticide, fungicide, organic phosphorus compound, chromatography, ester, organic synthetic process, chlorinated organic compound, IR spectrum, chemical precipitation

ABSTRACT: By the reaction of trialkylphosphites with esters of thiolmonochloroacetic acid a number of compounds were synthesized which possess strong insecticide activity. In analogizing the reaction of trialkylphosphites with esters of monochloroacetic acid, it was suggested that the compounds obtained have a structure which corresponds to the classical schematic of the Arbuzov reaction. In addition to knowing that the structure of products of the trialkylphosphite reaction with thiolmonochloroacetic acid esters is very interesting in studying the mechanism of the insecticide reaction of organic phosphorous compounds, it was interesting to

Card 1/2 UDC: 542.955.2:547.5

L 26058-66

ACC NR: AP5025125

study this reaction in detail and to determine all the products which are derived. In studying the triethylphosphite reaction with ethylthiolmonochloroacetate, ø,ø-diethyl-ø-(1-ethylthio)vinylphosphate and diethoxyphosphonthiolacetate were precipitated. In order to separate the products of the trialkyphospite reaction with the thiolmonochloroacetates the laminated column chromatography method was used. All the substances precipitated from the reaction products were identified not only by analysis and constant determination but also by infrared spectra. The authors thank A. F. Vasil'yev for taking spectra of all compounds. Orig. art. has: 2 fig. and 3 tables.

SUB CODE: 06, 07/SUBM DATE: 18May64/ ORIG REF: 010/ OTH REF: 006

Card 2/2

L 25606-66 EWT(1) RO

ACC NR: AP6016702 SOURCE CODE: UR/0079/65/035/012/2209/2216

AUTHOR: Voronkova, V. V.; Lomakina, V. I.; Mandel'baum, Ya. A.; Kel'nikov, N. N. 49 B

ORG: All-Union Scientific Research Institute of Chemical Means of Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)

TITLE: From the field of organic insectofungicides, 10 no. 88. Interaction of trialkylphosphites with thiolomonochloroacetates

SOURCE: Zhurnal obshchey khimii, v. 35, no. 12, 1965, 2209-2216

TOPIC TAGS: insecticide, fungicide, IR spectrum, organic phosphorus compound, chlorinated organic compound, organic sulfur compound

ABSTRACT: Upon studying the interaction of trialkylphosphites with thiolomonochloroacetates, it was found that the chief products of this reaction are dialkozyphosphonothioacetates, dialkyl-1-(Alkylthio)vinyl-phosphates and dialkoxyphosphonacetates. The latter compounds are the result of secondary processes occurring in the reaction. The supposition had been made that the formation of these compounds can occur in the interaction of trialkylphosphites with dialkoxyphosphonothioacetates:

$$(RO)_3P + (RO)_2P(O)CH_2COSR \longrightarrow (RO)_2PSR + (RO)_2P(O)CH_2COOR.$$

Card 1/2 UDC: 547.592

L 25606-66

ACC NR: AP6016702

To confirm this assumption experimentally the interaction of triethylphosphite with diethoxyphosphonethylthioacetate was studied where diethoxyphosphonethylacetate, which was characterized by physical constants, analysis and IR-spectrum, was isolated from this reaction. The second component of the reaction could not be separated in a pure form because its R_f value was close to that of the corresponding oxygen analog.
The R_f values for a great number of organic phosphorus compounds were determined. [JPRS]

SUB CODE: 07, 06 / SUBM DATE: 020ct64 / ORIG REF: 003 / OTH REF: 004

Card 2/2

L 38696-66 EWT(l)/EWT(m)/EWP(j) RO/RM

ACC NR: AP6021413 SOURCE CODE: UR/0413/66/000/011/0018/0018

INVENTOR: Mandel'baum, Ya. A.; Mel'nikov, N. N.; Zaks, P. G.; Roslavtseva, S. A.

ORG: none

TITLE: Organophosphorus insecticides with increased activity. Class 12, No. 182138 [announced by All-Union Scientific Research Institute of Chemicals for Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 18

TOPIC TAGS: insecticide, organophosphorus compound, synergist, insect control

ABSTRACT: An Author Certificate has been issued for a method of increasing the insecticide activity of organophosphorus preparations by addition of synergists. The method involves the use of trialkyl thiolphosphates [sic] as the synergist. [BO]

SUB CODE: 06/ SUBM DATE: 17Jul64

Card 1/1 UDC: 632.951.2.547.419.1

0917. 2297

L 38697-66 EWT(m)/EWP(j) RM

ACC NR: AP6021416 SOURCE CODE: UR/0413/66/000/011/0020/0020

INVENTOR: Mandel'baum, Ya. A.; Mel'nikov, N. N.; Itskova, A. L.

ORG: none

TITLE: Preparative method for higher dialkylphosphite. Class 12, No. 182151

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 20

TOPIC TAGS: dialkylphosphite, methyl alcohol, higher alcohol

ABSTRACT: An Author Certificate has been issued for a preparative method of higher dialkylphosphites involving the treatment of phosphorus trichloride with a mixture of 1 mol methyl alcohol and 2 mols higher alcohol. [BO]

SUB CODE: 07/ SUBM DATE: 14Jun62/

Card 1/1 UDC: 547.268'118.07

L 34128-66 EWT(m)/EWP(j) RM

ACC NR: AP6025527 SOURCE CODE: UR/0079/66/036/001/0044/0046

AUTHOR: Mandol'baum, Ya. A.; Zaks, P. G.; Mel'nikov, N. N.

ORG: All-Union Scientific Research Institute of Chemical Means of Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)

TITLE: New method for producing mixed dialkyl phosphites

SOURCE: Zhurnal obshchey khimii, v. 36, no. 1, 1966, 44-46

TOPIC TAGS: chemistry technique, alcohol, water, phosphorus chloride

ABSTRACT: A new one-step method has been developed for producing dialkyl phosphites with various radicals. A mixture consisting of two different alcohols and water, taken in equimolar tations, is treated with phosphorus trichloride. Constants are cited for 11 dialkyl phosphites synthesized by this method. Orig. art. has: 1 table. [JPRS: 35,998]

SUB CODE: 07 / SUBM DATE: 04Nov64 / ORIG REF: 008 / OTH REF: 003

Card 1/1 UDC: 661.718.1

L 31800-66 EWT(1) RO

ACC NR: AP6021671 SOURCE CODE: UR/0079/66/036/003/0447/0449

AUTHOR: Lomakina, V. I.; Mandel'baum, Ya. A.; Mel'nikov, N. N. 50 B

ORG: All-Union Scientific Research Institute of Chemical Agents for Plant Protection, Moscow (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)

TITLE: Organic insectofungicides. LXXXIX. Interaction of triethyl phosphite with amides of monochloroacetic acid

SOURCE: Zhurnal obshchey khimii, v. 36, no. 3, 1966, 447-449

TOPIC TAGS: insecticide, fungicide, organic phosphorus compound, organic amide, defoliant agent, chemical synthesis, systemic toxin

ABSTRACT: A number of amides of diethoxyphosphoneacetic acid, which had not been described in the literature, were synthesized by the reaction of triethyl phosphite with monochloroacetic acid amides in a search of new pesticides. Some of the compounds synthesized were found to possess physiological activity for plants and to be systemic acaricides. Some cause defoliation of cotton plants at the same standards of consumption as magnesium chloride. The n-butylamide of diethoxyphosphoneacetic acid in a 0.5% concentration causes 100% lethality for herbivorous mites. The authors thank P. V. Popov and L. D. Stonov for directing the biological experiments of the synthesized compounds. Orig. art. has: 1 figure and 1 table. [JPRS]

SUB CODE: 07, 06 / SUBM DATE: 01Jan65 / ORIG REF: 004 / OTH REF: 001

Card 1/1 UDC: 661.718:632.95

L 05185-67 EWT(m)/EWP(j) RM

ACC NR: AP7000739 SOURCE CODE: UR/0079/66/036/005/0857/0860

ZAKS, P. G., MANDEL'BAUM, Ya. A., MEL'NIKOV, N. N., IVANOV, V. V.,
All-Union Scientific Research Institute of Chemical Means of Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)

"Interaction of Trialkylthiolphosphates with Salts of O,O-Dialkylthiophosphoric Acid"

Moscow, Zhurnal Obshchey Khimii, Vol 36, No 5, 1966, pp 857-860

Abstract: Trialkylthiolphosphates were found to alkylate ammonium salts of O,O-dialkylthiophosphoric acids, forming the corresponding trialkylthiolphosphates and salts of O,S-dialkylthiophosphoric acids. The alkylation can be carried out with catalytic amounts of the trialkylthiolphosphates. In the alkylation of salts of dimethylthiophosphoric acid by various alkylating agents, such as esters, amides, and sulfamides of chloroacetic acid, the yield of alkylation products was very low in comparison with derivatives of other dialkylthiophosphoric acids. The cause of the low yield was found to be the high methylating ability of the products of this reaction, O,O-dimethyl-S-alkyl esters of thiophosphoric acid. The salts obtained are compared with the corresponding thione salts. Orig. art. has: 1 figure. [JPRS: 37,023]

TOPIC TAGS: alkylation, phosphate, organic phosphorus compound
SUB CODE: 07 / SUBM DATE: 07Apr65 / ORIG REF: 005 / OTH REF: 004

Card 1/1 vmb

0923 1907

ACC NR: AP6025588 SOURCE CODE: UR/0413/66/000/013/0020/0020

INVENTOR: Mandel'baum, Ya. A.; Belova, L. A.; Soyfer, R. S.; Mel'nikov, N. N.

ORG: none

TITLE: Preparation of alkylamino-O-alkyl-S-(N-alkylcarbamylmethyl)dithiophosphates. Class 12, No. 183205. [announced by the All-Union Scientific Research Institute of Chemicals for Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 20

TOPIC TAGS: pesticide, alkylaminodithiophosphate ester, mercaptoacetamide, phosphate

ABSTRACT:
In the proposed method for preparing alkylamino-O-alkyl-S-(N-alkylcarbamylmethyl)dithiophosphates with pesticidal properties, an alkylaminodithiophosphate is treated with alcoholic mercaptoacetamide or with sodium methoxide or sodium ethoxide, in alcohol, with subsequent removal of NaCl by evaporation, washing, and rectification. [W.A. 50; CBE No. 10]

SUB CODE: 07,06/ SUBM DATE: 08Jul65/

Card 1/1 UDC: 547.419.1.07

ACC NR: AP6030564 SOURCE CODE: UR/0413/66/000/016/0034/0034

INVENTOR: Mandel'baum, Ya. A.; Abramova, G. L.; Golovleva, L. M.; Mel'nikov, N. N.

ORG: none

TITLE: Preparation of O-ethyl S-phenyl dithiophosphoric acid n-butylamide. Class 12, No. 184861 [announced by All-Union Scientific Research Institute of Chemicals for Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 16, 1966, 34

TOPIC TAGS: ~~ethyl phenyl dithiophosphoric acid n-butylamide~~, triethylamine, alkyl chlorothiophosphoric acid, phosphoric acid, phenyl compound, chemical reaction

ABSTRACT: To increase the yield of O-ethyl S-phenyl dithiophosphoric acid n-butylamide in its preparation from thiophenol, O-alkyl chlorothiophosphoric acid amide, and triethylamine, the reaction is conducted with an eight-fold excess of triethylamine. [WA-50; CBE No. 11]

SUB CODE: 07/ SUBM DATE: 08Jul65/

Card 1/1 UDC: 547.419.1.07

ACC NR: AP6029025 SOURCE CODE: UR/0413/66/000/014/0025/0025

INVENTOR: Mandel'baum, Ya. A.; Abramova, G. L.; Golovleva, L. M.; Mel'nikov, N. N.

ORG: none

TITLE: Preparation of alkylamides of O-alkylchlorothiophosphoric acid. Class 12, No. 183753 [announced by All-Union Scientific Research Institute of Chemicals for Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)]

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 25

TOPIC TAGS: insecticide, ~~alkylchlorothiophosphoric acid amide~~ phosphoric acid, organic amide

ABSTRACT: To simplify the process of the preparation of alkylamides of O-alkylchlorothiophosphoric acid by the treatment of alkyl dichlorophosphates with alkylamines at temperatures ranging from -5 to -10°C, with subsequent distillation, the process is carried out in the presence of an aqueous alkali. [WA-50; CBE No. 11]

SUB CODE: 07/ SUBM DATE: 08Jul65/

Card 1/1 UDC: 547.419.1.07

ACC NR: AP6030277 (A,N) SOURCE CODE: UR/0394/66/004/008/0026/0027

AUTHOR: Roslavtseva, S. A.; Popov, P. V.; Mandel'baum, Ya. A.

ORG: All-Union Scientific Research Institute of Chemicals for Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)

TITLE: Selection of synergists for organophosphorus insecticides

SOURCE: Khimiya v sel'skom khozyaystve, v. 4, no. 8, 1966, 26-27

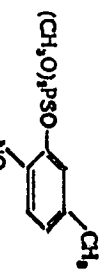
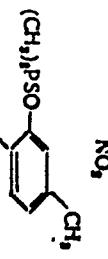
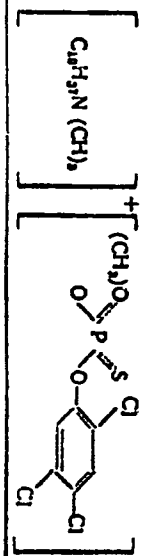
TOPIC TAGS: insecticide, synergist, organophosphorus compound

ABSTRACT: The selection of synergists for organophosphorus insecticides was based on the selective reactivity of the insecticides and the synergists towards acetylcholinesterase and aliesterase. The relative antialiesterase activity (I_{50} acetylcholinesterase/I_{50} aliesterase ratio) of the

Card 1/4 UDC:632.951:661.718.1

ACC NR: AP6030277

Table 1. Synergism coefficients of various organophosphorus compounds

Compound no.	Compound, tested as synergist
1	
2	
3	$(C_2H_5O)(ClC_6H_4S)PSNHCH_3$
4	$(CH_3O)_2PS$
5	$(C_2H_5O)_2PS$
6	$(C_2H_5O)(CH_3O)PS$
7	$(CH_3O)_2PSCl$
8	$(C_2H_5O)(C_6H_5S)PSCl$
9	$4\text{-}ClC_6H_4OCH_2COOC_2H_5$
10	$2,4\text{-}Cl_2C_6H_3OCH_2COOC_2H_5$
11	$2,4,6\text{-}Cl_3C_6H_2OCH_2COOC_2H_5$
12	

Card 2/4

ACC NR: AP6030277

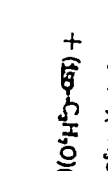
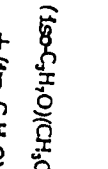
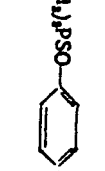
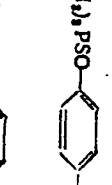
Table 1 cont.

Relative antiali-esterase activity	Insecticides: Metaphos	Thiophos	Methylethyl thiophos	Methyl-mercapto-phos	Methyl-acetophos
87	1,6	1,8	1,7	—	—
—	—	—	2,0	—	-
—	—	—	2,0	—	—
>1,2	1,2	—	—	>1,4	—
15	—	>1,4	>1,4	—	
—	—	—	>1,0	—	—
>3000	2,8	—	—	1,8	—
>72	—	—	1,9	—	—
>1,0	—	—	1,0	—	>0,8
>1,0	—	—	>0,7	—	>0,9
—	—	—	>1,1	—	
1,2	—	—	0,8	—	—

Card 3/4

ACC NR: AP6030277

compounds and the synergism coefficients are given in the table. Synergism coefficients were also detailed for the following non-insecticide mixtures:

Binary mixtures	Synergism coefficient
	>0.7
	1.1
	1.3
	1.5
	1.6
	1.4
	

Orig. art. has: 1 table

SUB CODE: 07/ SUBM DATE: 11Apr66/ ORIG REF: 003 - [WA-50; CBE No. 14]

Card 4/4 [PS]

ACC NR: AP6029025 SOURCE CODE: UR/0413/66/000/014/0025/0025

INVENTOR: Mandel'baum, Ya. A.; Abramova, G. L.; Golovleva, L. M.; Mel'nikov, N. N.

ORG: none

TITLE: Preparation of alkylamides of O-alkylchlorothiophosphoric acid. Class 12, No. 183753 [announced by All-Union Scientific Research Institute of Chemicals for Plant Protection (Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh sredstv zashchity rasteniy)]

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 25

TOPIC TAGS: insecticide, ~~alkylchlorothiophosphoric acid amide~~ phosphoric acid, organic amide

ABSTRACT: To simplify the process of the preparation of alkylamides of O-alkylchlorothiophosphoric acid by the treatment of alkyl dichlorophosphates with alkylamines at temperatures ranging from -5 to -10°C, with subsequent distillation, the process is carried out in the presence of an aqueous alkali. [WA-50; CBE No. 11]

SUB CODE: 07/ SUBM DATE: 08Jul65/

Card 1/1 UDC: 547.419.1.07

MANDELBERG, I R

RUMANIA/ Analytical Chemistry. General Problems. G-1

Abs Jour: Referat. Zhur. - Khimiya, No. 8, 1957, 27113.

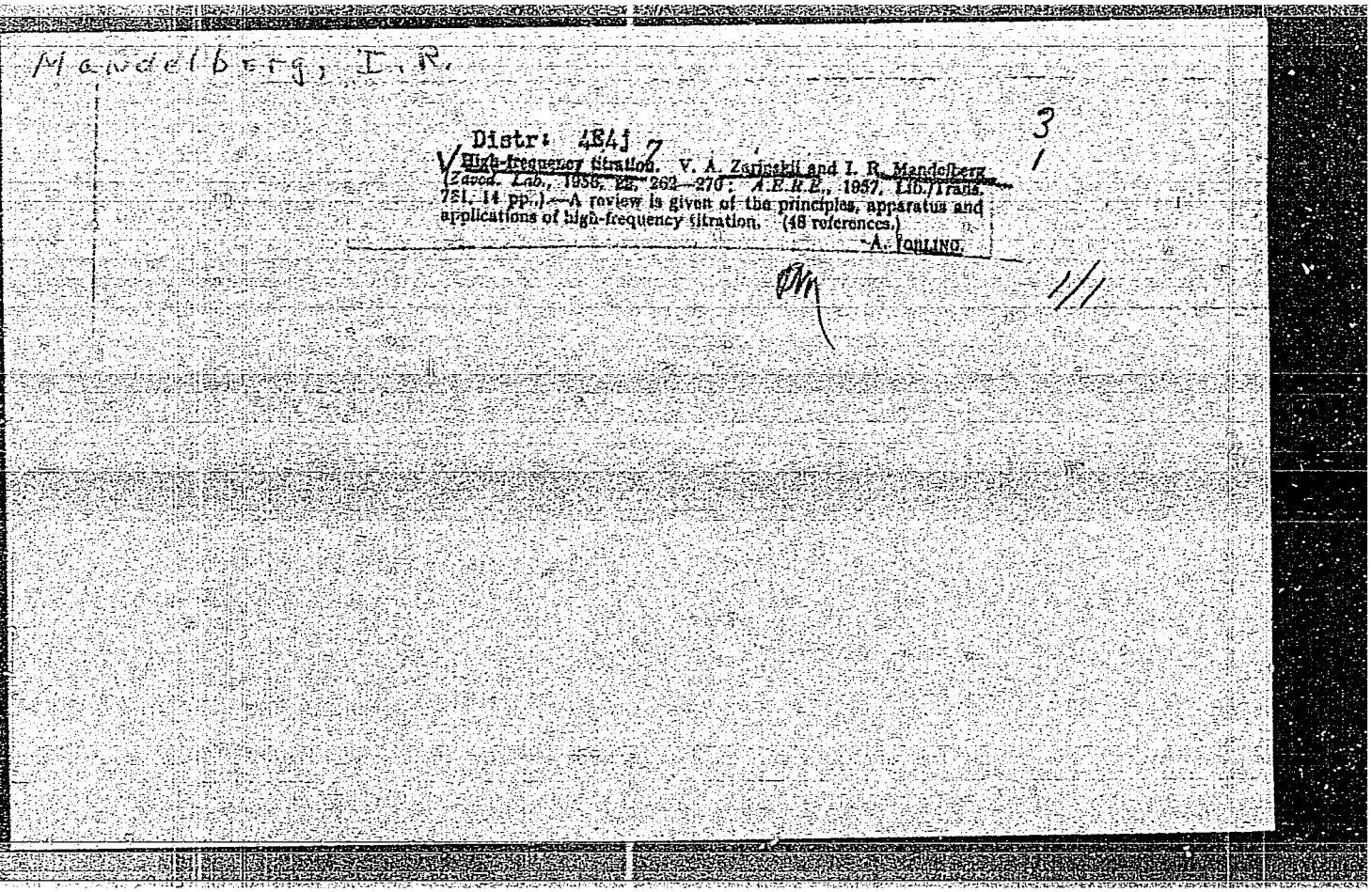
Author : V. A. Zarinski, I.R. Mandelberg.

Title : High Frequency Titration.

Orig Pub: An. Rom.-Sov. Metalurgie si constr. masini, 1955, 10, No. 3, 134 - 145.

Abstract: Translation. See RZhKhim, 1956, 58354.

Card 1/1



Mandelberg, I. R.

Distr: 4E4j 7

3
1

High-frequency filtration. V. A. Zavinskii and I. R. Mandelberg. (Zavod. Lab., 1956, 22, 262–270; A.E.R.E., 1957, Lib./Trans. 751, 14 pp.)—A review is given of the principles, apparatus and applications of high-frequency filtration. (48 references.)

A. POLLING.

1/1

MANDEL'BERG, I. R.

AUTHORS: Zarinskiy, V. A., Mandel'berg, I. R. 32-2-10/60

TITLE: A High-Frequency Apparatus for Physical and Chemical Investigations and its Application (Vysokochastotnoye ustroystvo dlya fiziko-khimicheskikh issledovaniy i yego primeneniye)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 2, pp. 148-153 (USSR)

ABSTRACT: The apparatus described makes possible the determination of concentrations of substances in aqueous and non-aqueous binary solutions, the carrying out of titrations, as well as other physical and chemical, investigations; with all this it satisfies to operation control conditions. It is portable and thus can be used for laboratories and commercial enterprises; it also works for a wide range of concentration with sufficient sensitivity. The main parts of this apparatus are: a generator with a frequency of 5 mega cycles, a stabilized rectifier, a differential detector with a milliamperemeter as indicator, as well as an operational oscillation circuit and a compensation oscillation circuit.

Card 1/3

A High-Frequency Apparatus for Physical and Chemical Investigations and its Application

32-2-10/60

The sensitivity of the microamperemeter is controlled by two resistances. Some cell types of different capacity are mentioned for the investigation of liquids, as well as different titrations. A schematic representation of the apparatus as well as of the cells was made. Two different kinds of determination are mentioned, a socalled Q-metric operation value and a reactive operation value. A formula for the determination of maximum sensitivity is mentioned as well as for the operational range of the cells. In collaboration with S. L. Lel'chuk and A. M. Shtifman a method was develope which was acknowledged by the Ministry for Chemical Industry. By means of the high-frequency apparatus the content of e.g. melamin-formaldehyde resin in hydrochloric acid solutions can be determined. This was found in collaboration with B. T. Ivanova and A. M. Afanas'yeva (NIIGoznak), L. M. Shtifman determined the concentration of hydrogen peroxide in aqueous solution. This is not possible with low-frequency conductometry as hydrogen peroxide decomposes if it is contacting metals. The presence of polar liquids in non-polar ones (e.g. nitrobenzene in benzene, acetone in carbon-tetrachloride etc.) increases the dielectric constant of the

Card 2/3

mixture and thus makes possible a determination from the calibrationcurve. In collaboration with T. S. Sokolova (laboratory of the "Red Hero" Works) the dry residue in lacquer CK6 was determined. The analysis lasted for 1 minute and had an error limit of ± 0,3 %. The investigation of hydrochloric acid in silicium-organic liquids was carried out by S. V. Syavtsillo and L. M. Shtikhman, while A. A. Nemodruk investigated the end points in the titration of paranitroaniline. There are 4 figures, 1 table, and 6 references, 4 of which are Slavic.

ASSOCIATION: Institute for Geochemistry and Analytical Chemistry im. V. I. Vernadskiy AN USSR (Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo Akademii nauk SSSR)

AVAILABLE: Library of Congress

1. Microamperemeters 2. Ammeters 3. Titrations

LIFSHITS, A.S.; MANDEL'BERG, I.N.

Protection of manometers in measuring pulsating pressures. Izm. tekh. no. 6:20-22 Je '60. (MIRA 14:2)
(Manometer—Safety measures)

L 24842-66 EWI(1)/EWA(h)

ACC NR: AP6007664 SOURCE CODE: UR/0413/66/000/003/0033/0033

AUTHOR: Mandel'berg, I. R.

ORG: none

TITLE: An alternating voltage functional converter. Class 21, No. 178408

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 3, 1966, 33

TOPIC TAGS: alternating voltage, signal shape, electronic circuit, functional converter

ABSTRACT: This Author Certificate presents an alternating voltage functional converter made in the form of a circuit with shunting control elements and resistances connected in series. The design increases the precision and reliability of the converter. Each shunting element is based on four diodes connected in a bridge circuit. A shunting resistor and a reference voltage source in phase with the input signal are connected to the points of the bridge circuit where the diodes are joined with opposite sign electrodes. The other two points of the bridge circuit are connected to the load resistors for shaping the positive half wave and negative half wave of the input signal or the reference signal.

SUB CODE: 09/ SUBM DATE: 22Jan62

Card 1/1

UDC: 621.314.2

MANDEL'BERG, S. L.

25760

Avtomaticheskaya svarka pod flyusom na naklonnoy plodskosti. Trudy po avtomat. svarke pod flyusom. (In-t elektrosvarki im. Patona), sb 6, 1949, s. 91-97.

SO: Letopis' No. 34

MANDEL'BERG, S. L.

[redacted]

[redacted] Periodical Abstract

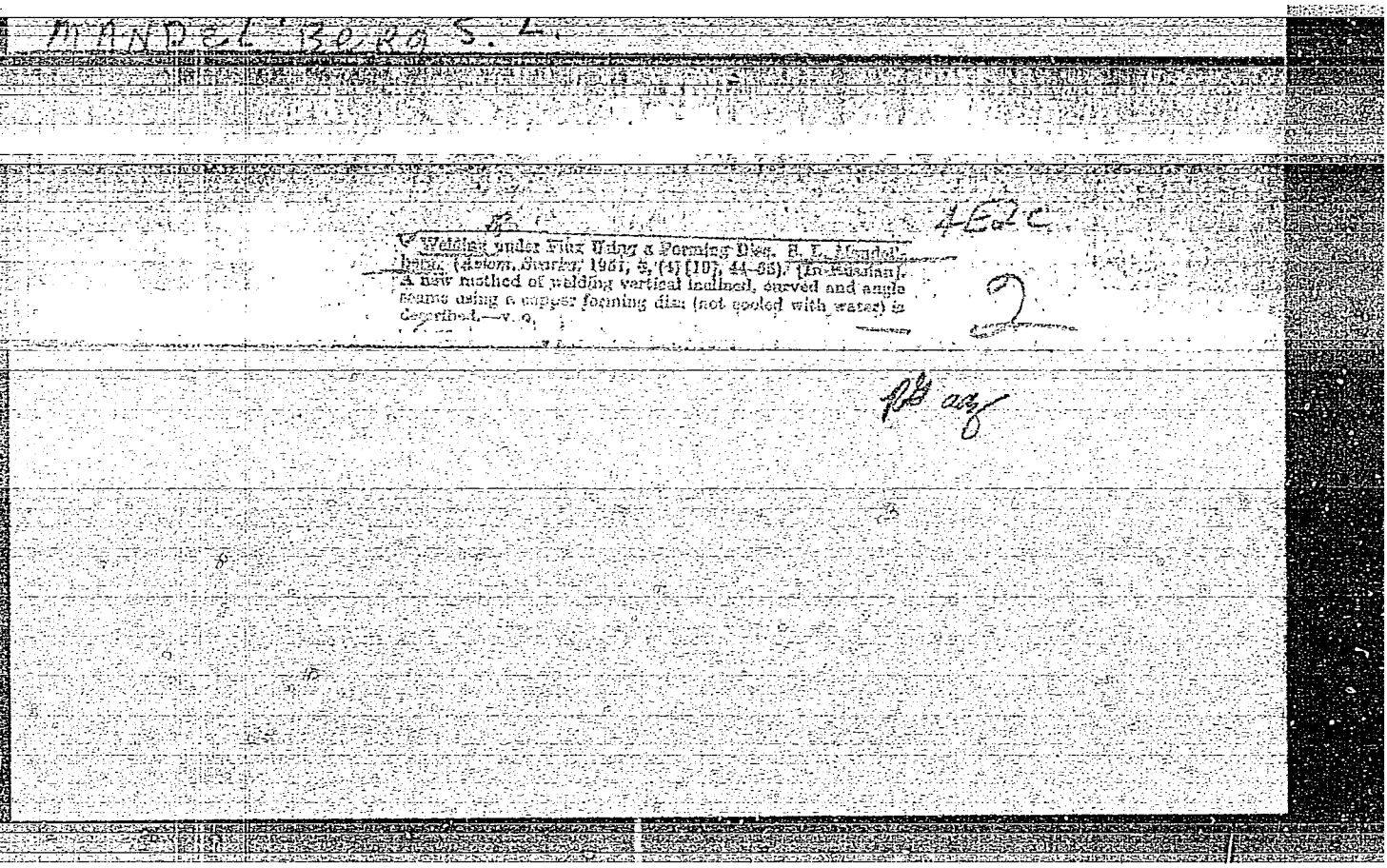
USSR/Engineering - Welding, Methods 1951

"Automatic Welding of Field Joints of Solid H-Beams," S. L. Mandel'berg, Engr

"Avtomat Svarka" No 1 (16), pp 27-36

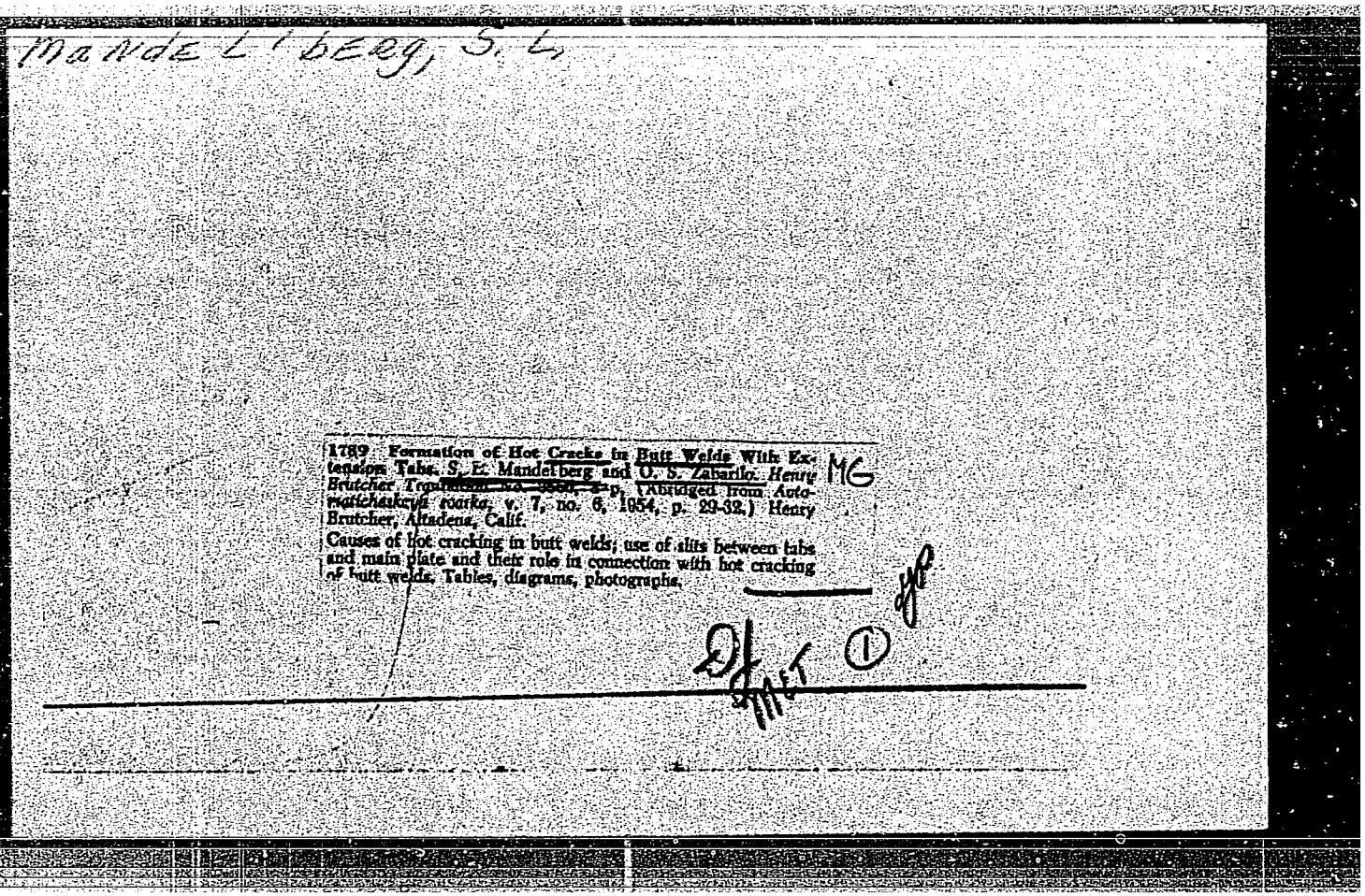
Discusses problems of technology and equipment for automatic welding of vertical web joints and horizontal flange joints of solid H-beams in the process of mounting bridge structures. Joint with 2 inserts was accepted as most rational construction of field joint for H-beams, permitting mechanization of basic welding operations. Presents results of mech testing.

202T49



MANDEL'BORG S. L.

Welding under Flux Using a Forming Disc. S. L. Mandel'borg. (Avtom. Svarka, 1961, 5, (4) [10], 44–56). (In Russian). A new method of welding vertical inclined, curved and angle seams using a copper forming disc (not cooled with water) is described.—v. o.



Mandel'berg, S. E.

1789. Formation of Hot Cracks in Butt Welds With Extension Tabs. S. E. Mandel'berg and O. S. Zabarilo. *Henry Brutcher, Translation No. 3501, 8 p.* (Abridged from *Avtomaticheskaya svarka*, v. 7, no. 6, 1954, p. 29-32.) Henry Brutcher, Altadena, Calif.

Causes of hot cracking in butt welds; use of slits between tabs and main plate and their role in connection with hot cracking of butt welds. Tables, diagrams, photographs.

MG

MANDEL'BERG, Simon L'vovich

OSTROVSKAYA, Sofiya Arkad'yevna, kandidat tekhnicheskiy nauk; MANDEL'BERG, Simon L'vovich, kandidat tekhnicheskikh nauk; PATON, B.Ye., redaktor; SAMOKHVALOV, Ya.A., redaktor; RAKHLINA, N.P., tekhnicheskiy redaktor

[Welding bridge spans] Svarka proletnykh stroenii mostov. Kiev, Izd-vo Akademii nauk USSR, 1955. 217 p. (MLRA 9:1)

1. Chlen-korrespondent AN USSR (for Paton)
(Bridges, Iron and steel--Welding)

AID P - 5419

Subject : USSR/Engineering

Card 1/2 Pub. 11 - 9/13

Author : Mandel'berg, S. L.

Title : Improving welding quality of large gas and petroleum pipelines.

Periodical : Avtom. svar., 5, 66-72, My 1956

Abstract : The author discusses improvements in longitudinal seams of pipes used for gas and petroleum transport, welded with a low-content siliceous flux, and using two-arc submerged welding with the Sv 08 (GOST 2246-54) electrode wire. He tells about measures against hot longitudinal cracks in the seams and against the surplus formation of slag and/or other matter. Several practical suggestions are given. Two macro-pictures, 3 drawings, 1 graph and table; 8 Russian references (1948-54).

AID P - 5419

Avtom. svar., 5, 66-72, My 1956

Card 2/2 Pub. 11 - 9/13

Institution : Electrowelding Institute im. Paton

Submitted : 27 F 1956

ASHIS, A.Ye., kandidat tekhnicheskikh nauk; KHAYZHINSKIY, Z.O.; MANDEL'BERG, S.L.; KASICH-PILIPENKO, N.Ye., inzhener; ANDREYEV, I.I.

New methods of mechanical testing for predelivery control of large diameter, straight-welded joint pipes for main gas and petroleum pipelines. Avtom.svar. 9 no.2:76-82 Mr-Ap '56. (MLRA 9:8)

1. Institut elektrosvarki imeni Ye.O. Patona AN USSR, Vsesoyuznyy nauchno-issledovatel'skiy trubnyy institut i Khartsyzskiy trubnyy zavod.

(Pipes--Welding) (Welding--Testing)

MANDEL'BERG, S.L.

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-

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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 vysshaye 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.

MANDEL'BERG, S.L.

AUTHORS: Mandel'berg, S.L. and Zabarilo, O.S. 125-1-9/15

TITLE: Some Problems Relating to Flux Welding of Large Diameter Straight-Seamed Gas Oil Pipes of Extra Resistant Steel (Nekotoryye voprosy svarki pod flyusom pryamoshovnykh gazonefteprovodnykh trub bol'shogo diametra iz staley povyshennoy prochnosti)

PERIODICAL: Avtomaticheskaya Svarka, 1958, # 1, pp 56 - 62 (USSR)

ABSTRACT: The article contains a description of new technologies for welding under flux, ensuring increased seam resistance against crystallization cracks, higher welding rate and a considerable economy of welding materials.

The authors investigated three different methods of double-arc speed welding with a different arrangement of electrodes, shown in figure 1. The most marked results were obtained by variant III when the seam shape was retained and its width reached optimum size. This arrangement of electrodes proved to be efficient for the welding of tubes.

The new technology was tested and put into use in the workshops of the Chelyabinsk and Khartsyzsk pipe plants.

Tests and investigations of the new technology carried out during the production of a series of test pipes led to the

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Some Problems Relating to Flux Welding of Large Diameter Straight-Seamed Gas Oil Pipes of Extra Resistant Steel

following conclusions:

The seams and welded junctions of the pipes have high mechanical qualities and meet the given requirements. The new technology, when applied to the welding of 14ХГС and 19Г steel pipes ensures a strong resistance of the seams against heat cracks, and if applied together with АН-60 high silicon flux, it provides for a higher resistance against heat cracks than the low silicon flux of the АН-11 type. Deficiencies in the pipe seams were eliminated, entailing a decrease of repairs, and the bursting of pipes due to expanding, was reduced. The welding efficiency was considerably increased. At present, the welding rate attains 95 - 100 m/hour on external seams and 80-90 m/hour on internal seams, these figures exceeding by 20 - 25% the previous welding rates. The reduction of the welding arc power reached by the new technology saves 30% of the welding flux, electrodes and electric power.

There are 4 figures, 5 tables and 3 Russian references.

ASSOCIATION: Institute of Electrowelding imeni Ye.O. Paton (Institut elektrosvarki imeni Ye.O. Patona) of the Ukrainian Academy of Sciences.

SUBMITTED: 16 November, 1957
AVAILABLE: Library of Congress

SOV-135-58-9-10/20

AUTHORS: Mandel'berg, S.L., and Kryazhinskiy, Z.O., Candidates of Technical Sciences

TITLE: Production Technology for Welded Straightseam Gas and Oil Pipes of Large Diameter (Tekhnologiya proizvodstva svarnykh pryamoshovnykh gazo- i nefteprovodnykh trub bol'shogo diametra)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 9, pp 32-36 (USSR)

ABSTRACT: Information is presented on experimental investigations carried out at the Institute of Electric Welding imeni Ye.O. Paton, TsNIICHMET, VNITI and the Chelyabinsk Plant, in developing production technology for large diameter high-pressure gas pipes at the Khartsyzsk and Chelyabinsk Plants. Technology and new high-strength steel grades ("14KhGS" and "19G" - composition given in table 3 were developed for two production methods; 1) the forming of the pipes on rollers and the subsequent straightening of them; 2) the forming of the pipes on presses and their subsequent widening. Information includes technology of two-side two-arc welding

Card 1/2

Production Technology for Welded Straightseam Gas and Oil Pipes of Large Diameter

under flux with increased speed, ensuring high mechanical properties of weld joints and pipes. There are 4 tables, 1 diagram, 1 graph, 3 photos and 3 Soviet references.

ASSOCIATION: Institut elektrosvarki imeni Ye. O. Patona AN USSR (Institute of Electric Welding imeni Ye. O. Paton, AS UkrSSR) and VNITI.

1. Pipes--Arc welding 2. Pipes--Production 3. Steel --Physical properties--Tables

MANDEL'BERG, S.L.

PHASE I BOOK EXPLOITATION SOV/4091

Kasatkin, Boris Sergeyevich, and Simon L'vovich Mandel'berg

Elektrodugovaya svarka nizkolegirovannykh staley (Electric-Arc Welding of Low-Alloy Steels) Moscow, Mashgiz, 1959. 68 p. (Series: Biblioteka svarshchika) 9,000 copies printed.

Editorial Board: A.Ye. Asnis, A.A. Kazimirov, B.I. Medovar, B.Ye. Paton (Resp. Ed.), and V.V. Podgayetskiy; Ed. of this Publication: A.Ye. Asnis, Candidate of Technical Sciences; Chief Ed. (Southern Division, Mashgiz): V.K. Serdyuk, Engineer; Ed. of Publishing House: V.V. Mayevskiy, Engineer.

PURPOSE: This booklet is intended for welders.

COVERAGE: The booklet deals with the characteristic features of manual (unshielded), automatic flux, and gas-shielded arc welding of low-alloy structural steels. Specifications for the types of steel most commonly used are given. The mechanical properties of welded joints made by different welding methods are described.

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Examples of weldments of low-alloy steels are included. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress (TA 478 .K37)

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8-10-60

MANDEL'BERG, S.L.

25(1) PHASE I BOOK EXPLOITATION SOV/3421

Akademiya nauk URSR, Kiyev, Institut elektrosvarki imeni akademika Ye.O. Patona

Vnedreniye novykh sposobov svarki v promyshlennost', vyp. 2 (Introduction of New Welding Methods in Industry; Collection of Articles, No. 2) Kiyev, Gos. izd-vo tekhn. lit-ry Ukrainskoy SSR, 1959. 194 p. Errata slip inserted. 3,000 copies printed.

Ed.: V. Gartsman; Tech. Ed.: S. Matusevich.

PURPOSE: This book is intended for workers in the welding industry.

COVERAGE: The book contains a discussion of welding techniques and problems by groups of scientists and welders. Much attention is given to problems in the application of new methods of mechanized welding and electro-slag welding. This is the second collection of articles under the same title prepared and published by the Institut elektrosvarki imeni Ye.O. Patona (Institute of Electric Welding imeni Ye.O. Paton). The preface is written by B.Ye. Paton, Academician of the Ukrainian Academy of Sciences and Winner of the Lenin Prize. There are no references.

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)

PHASE I BOOK EXPLOITATION SOV/5078

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:

25(1)

SOV/125-60-1-1/18

AUTHORS: Paton, B.Ye., Mandel'berg, S.L., Lashkevich, R.I., Markov, V.P.

TITLE: On the Choice of a Production Method for Manufacturing Straight-Seam Large-Diameter Welded Pipes

PERIODICAL: Avtomaticheskaya svarka, 1960, Nr 1, pp 2-14 (USSR)

ABSTRACT: Different methods of manufacturing welded pipes used abroad (USA, Canada, England, France and East Germany) and in the USSR are reviewed. The Chelyabinskiy trubo-prokatnyy zavod (Chelyabinsk Pipe-Rolling Plant) produces pipes of hot-rolled "19G" steel, a metal of approximately the same composition as that used in France and West Germany. However, sheet thickness tolerances are not so strict as abroad, and the selection of metal by its mechanical properties is neglected. This explains why the mechanical properties of completed pipes differ widely, particularly those produced from the expansion of "19G". The Khartsyzskiy

Card 1/4

On the Choice of a Production Method for Manufacturing Straight-Seam Large-Diameter Welded Pipes

trubnyy zavod (Khartsyzsk Pipe Plant) and the zavod im. Il'icha (Plant imeni Il'ich) use stamping presses and roller bending machines for bending pipe edges as is the practice at the Chelyabinsk plant. This technique varies from those used in the USA and at the German Mannesmann-Hoesch works where pipes are formed in three press operations. The authors recommend the use of this foreign technique in new Soviet plants. The pipe production-line at the Mannesmann-Hoesch plant turns out 30 pipe blanks per hour, while a similar line at the Chelyabinsk plant produces 60 to 70 in the same time. High welding rates of 120 - 140 m/hr for pipes with a 8 to 10 mm rim thickness have been achieved in the USSR by twin-arc welding. Such efficiency is due to the use of the special pumice-like "AN-60" flux. The order of welding the inside and outside pipe seams varies in different countries and plants. At the Chelyabinsk plant the outside seam is welded first.

On the Choice of a Production Method for Manufacturing Straight-Seam Large-Diameter Welded Pipes

On technical grounds, however, the authors recommend that inside welding should be completed first, provided that the new assembly-welding machines are used for this purpose. This new machine for the continuous assembly and welding of inner pipe seams (Figure 4) is being developed at the Elektrostal'skiy zavod tyazhelogo mashinostroyeniya (Elektrostal' Heavy Machine Building Plant). Brief general design information is given and the authors state that the first model of such a machine is under construction at the German "Mannesmann-Meer" works. For the expansion of pipes, the Chelyabinskiy plant uses expanders analogous to those in West Germany and France. The Chelyabinsk plant operates an inspection installation similar to the one in use at the German Phoenix Rheinrohr works for testing pipes by means of ultrasonic defectoscopes. It consists of a carriage with feelers on a hanger moving along the

SOV/125-60-1-1/18

On the Choice of a Production Method for Manufacturing Straight-Seam Large-Diameter Welded Pipes

pipe seam. Water is used to improve acoustic contact and the defects are indicated by a sound signal and a pulse visible on the defectoscope screen. There are 6 diagrams, 2 graphs, and 12 references, of which 4 are Soviet and 8 English.

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) (Paton, Mandel'berg, Lashkevich); Gipromez (Markov).

SUBMITTED: October 20, 1959

Card 4/4

S/137/62/000/005/136/150
A052/A101

AUTHOR: Mandel'berg, S. L.

TITLE: Raising welding speed in straight-seam pipe production

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 27, abstract 5E126 (V sb. "Avtomatiz. i mekhaniz. svarochn. proiz-va". Kiyev, 1961, 114 - 120)

TEXT: In the production of straight-seam pipes 529 - 1,020 mm in diameter for main pipelines, automatic flux welding is used. In order to investigate the possibility of increasing the speed at two-arc welding, tests with a high-temperature induction pre-heating were carried out at the Institute of Electric Welding im. Ye. O. Paton. It has been found that the high-temperature heating offers no solution of the problem, since it is connected with a considerable increase of power consumption and with a complication of the welding mill equipment. The problem of raising the welding speed to 220 m/hour has been solved by the application of 3-arc welding at which the arcs burn in a common fusion space. At this method the most stable quality of seam formation is achieved in the case

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S/137/62/000/005/136/150
A052/A101

Raising welding speed in straight-seam pipe production

when the first (in the direction of welding) electrode (see the figure) is arranged at an acute angle and the second and third at a blunt angle to the direction of welding. The distance between electrodes is determined depending on the magnitude of welding current, the thickness of welded metal and the welding speed. At a welding speed of 200 - 220 m/hour two arcs are fed with alternating current and the third with direct current. This increases the resistance to notches and to other defects of seam formation. At 3-arc welding АН -60 (AN-60) flux with grains up to 1.5 mm in diameter and a bulk weight of 0.8 - 1.1 g/cm^3 was used. At the Chelyabinsk pipe-rolling plant 300 Ст.3 (St.3) and 145 pipes of Ст.19 Г (St.19G) 720 x 8 mm x 12 m, were welded and investigated. It was found that besides a 30 - 35% increase of efficiency a high quality of welded joints was achieved.

V. Klyuchnikova

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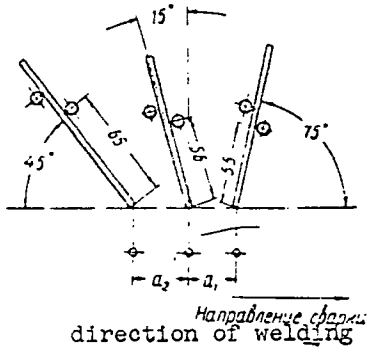
S/137/62/000/005/136/150
A052/A101

Raising welding speed in straight-seam pipe production

Figure.



direction of welding

[Abstracter's note: Complete translation]

Card 3/3

26486
S/125/61/000/009/011/014
D040/D113

1.2300

AUTHORS: Mandel'berg, S.L., and Gordonnyy, V.G.

TITLE: Unilateral two-layer argon-arc welding of thin sheet alloy steel

PERIODICAL: Avtomaticheskaya svarka, no. 9, 1961, 65-71

TEXT: Detailed information is given on experiments and a new argon-arc welding technology developed for hard-to-weld hardenable thin-sheet steel. The experiment metal was 30ХСНВФА (30KhSNVFA) medium-alloy steel, 1.5, 2.2 and 4.0 mm thick sheets. Welding was carried out with an АРК-1 (ARK-1) welding machine and a АДСВ-2 (ADSV-2) motor welder. The welding process is as follows: welding butt joints with two seam layers from one side, with tungsten electrode, with argon for shielding, without the conventional backing. The first and the second layer have to be welded as indicated in tables (Table 1 and 2):

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Unilateral two-layer argon-arc welding ....

Table 1 (first layer)

Sheet mm	Edges shape	Electrode diameter mm	Current amp	Current volt	Welding speed m/hr	Filler wire feed, m/hr	Filler wire diameter mm	Argon consumption, liter/min
1.5	Not shaped	3	120	9	20	-	-	8
2.2	Not shaped	3	120	9	11	-	-	8
4.0	Bevelled at 70°	3	160	10	8	12	2.0	9

Card 2/4

Unilateral two-layer argon-arc welding ....

Table 2 (second layer)

Sheet, mm	Electrode diameter, mm	Current amp	Current volt	Weld. Speed m/hr	Filler wire feed, m/hr	Wire diam. mm	Electrode swinging frequency swings/sec	Electrode oscillation amplitude, mm	Argon Consumption, liter/min
1.5	3	100	8	20.0	20.0	1.2	4-6	4-5	8
2.2	3	110	8	12	12	1.4	4-6	4-5	8

The electrode was oscillated with the use of an electric motor and a camshaft with replaceable cams. Cross swinging of the electrode was known before to have a positive effect in welding of aluminum and steel by submerged arc, but had not been tried hitherto in argon arc process. Experiments with magnetic control of the arc for swinging gave no satisfactory results. No electrode swinging was necessary for welding 4.0 mm thick sheets. The new techniques eliminate the necessity of turning over the metal for welding the second

Card 3/4

Unilateral two-layer argon-arc welding ....

seam from the other side, and the welds are fully sound, which was not possible to achieve up to now in welding from one side on copper backing. The crack resistance of metal is higher than in welding by other methods, and the mechanical strength of joints after heat treatment equals the strength of base metal. Photographs of welds are included. There are 5 figures, 2 tables and 4 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: April 11, 1961

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)

34156
S/125/62/000/003/001/008
D040/D113

1.2300

AUTHORS: Mandel'berg, S.L., and Lopata, V.Ye.

TITLE: The effect of the magnetic field of the welding circuit on the shape of internal welds on tubes

PERIODICAL: Avtomaticheskaya svarka, no. 3, 1962, 1-6

TEXT: Results are given of experiments in which it was revealed that the magnetic field forming inside tubes strongly affects the depth and width of welds. The experiments were conducted in order to develop a technology and equipment for welding tubes with straight and spiral joints. Tubes, 529, 720 and 1020 mm in diameter and up to 11.0 mm thick, were moved towards or away from the welding rod. The depth and width of welds were different, depending on the direction in which the tubes were moved and the tube diameter. The data obtained explained difficulties experienced in welding internal welds on tubes on welding stands operating on the principle of moving the tube away from the welding rod. The following conclusions were drawn: (1) The magnetic field of the welding circuit affects the submerged

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The effect of the ...

arc inside the tube and deflects it in an axial direction. This phenomenon is characteristic of single-arc and multi-arc welding, particularly when one of the arcs is supplied with direct current; (2) the use of the welding system whereby the tube is moved towards the welding head, results in better weld shapes and a higher welding speed on longitudinal seams; (3) in welding spiral welds inside tubes, the arc is deflected by the magnetic field along the tube axis just as it is deflected on longitudinal straight welds, but the weld shape varies with the weld spiral angle and is poorest at small angles; (4) welding with a.c. is the simplest means of improving the shape of internal spiral welds; (5) the obtained data are of general significance and indicate practical means for the magnetic control of a powerful submerged arc. There are 5 figures, 1 table 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: November 5, 1961

Card 2/2

S/125/62/000/005/002/010
D040/D113

/2000

AUTHORS: Mandel'berg, S.L. and Gordonnyy, V.G.

TITLE: The weldability of thin-sheet 30KhSNVFA hardening steel during double and single two-pass argon-arc welding

PERIODICAL: Avtomaticheskaya svarka, no. 5, 1962, 5-8

TEXT: Welding experiments were conducted with 1.5, 2.2 and 4.0 mm thick 30ХСНВФА (30KhSNVFA) high-strength steel to compare the results of double argon-arc tungsten electrode welding without filler wire, and single two-pass argon-arc welding with filler wire — a new method previously described by the authors ("Avtomaticheskaya svarka", no. 9, 1961). The former method produces cracked welds and is too time-consuming. Welds produced by the new process consist of two layers (Fig. 1) the second being deposited by a shaking electrode to make it completely cover the first. The mechanical properties and cracking resistance of joints were tested on standard and special test specimens. The results showed that all welds were stronger than the base metal;

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this is apparently due to the structural features and higher purity of the weld metal. The causes of this phenomenon and improvement of other properties in the weld metal will still have to be studied. Conclusions: (1) The new process, compared with the double welding process, gives welds with higher cracking resistance; (2) the easier cracking of double welds is caused by the cold shot (Fig. 4) which produces a spot of stress concentration, and the smaller cross section area of the bead. There are 4 figures and 2 tables.

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: August 1, 1961

S/125/62/000/005/002/010
D040/D113

Fig. 1. A single two-pass weld

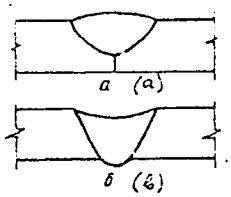

Fig.4 : The shape of the first weld :(a) in double welding; (b) in single two-pass welding

S/125/62/000/006/003/013
D040/D113

AUTHORS: Mandel'berg, S.L., and Semenov, S.Ye.

TITLE: The formation of shrinkage cavities on the weld surface in high-speed submerged multi-arc welding

PERIODICAL: Avtomaticheskaya svarka, 15, no. 6, 1962, 17-20

TEXT: The causes of shrinkage cavities forming on welds in two-arc high-speed welding of steel pipes were investigated. Such cavities, which never form during single-arc welding at 30-40 m/hr, appear during two-arc welding and their number and depth increase with increasing speed. The flux mesh used in submerged-arc welding also has a high effect. The quantity of cavities was minimal with medium grain-size flux in experimental welding, and increased abruptly when coarse-grain or dust flux was used. Oscillographs proved that arcs were never interrupted at the moment of cavity formation, hence this is not the cause of the phenomenon. It is concluded that the cavities form because of (1) the length of the welding pool which reaches 350 mm at 200 m/hr

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welding speed with two arcs, and (2) the steep side surfaces of the narrow pool. The angle between the side surfaces or walls is only 10°, and the gap closes easily in spots in the rear portion of the long pool, leaving separated pools of liquid metal which cannot be filled. It is recommended to use a less coarse flux than is currently used, and to reduce the length of the welding pool in developing new improved high-speed welding techniques. There are 4 figures.

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, ASUkrSSR)

SUBMITTED: October 17, 1961

S/125/62/000/009/001/008
A006/A101

AUTHOR: Mandel'berg, S. L.

TITLE: Magnetic arc control in submerged arc welding

PERIODICAL: Avtomaticheskaya svarka, no. 9, 1962, 3 - 13

TEXT: An investigation was made for the purpose of determining the possibility of controlling a d-c arc, burning under a flux layer under conventional conditions, by the effect of an independent magnetic field and with the use of magnetic control for technical purposes. The magnetic field in the arc zone is produced by an electromagnet (figure 1) whose coils are power supplied from a ПС-300 (PS-300) transformer through a ballast rheostat, with reverse polarity. Welding is carried out with a АБС(ABS) device electrode wire, 4 mm in diameter and АН-348А (AN-348A) flux. Under the effect of the transverse magnetic field the d-c arc changes its position, thus affecting the seam formation. The weld shape can be either improved or impaired by the combination of the electrode polarity, the direction of welding and of the magnetic field. The magnetic control makes it possible to increase the upper limit of the welding current and the speed of welding metals of different thickness. On the basis of this method, conditions were developed for

Magnetic arc control in submerged arc welding

S/125/62/000/009/001/008
A006/A101

single-arc welding of butt joints of 8 - 30 mm thick metal, on d-c; these conditions are given in a table and make it possible to increase twice the submerged-arc welding speed. The techniques and equipment for magnetic control welding must be selected in such a manner that the weld shape is least affected by the inevitable curvature and undulation of the welded metal. This condition can be assured if the welding process is conducted with an optimum gap, that was established preliminarily. There are 2 tables and 11 figures.

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. Patona, AS UkrSSR)

SUBMITTED: March 17, 1962

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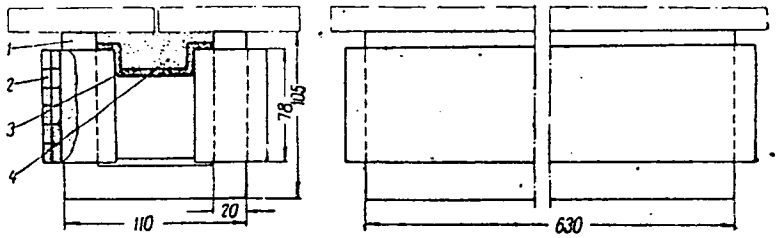
S/125/62/000/009/001/008
A006/A101

Magnetic arc control in submerged arc welding

Figure 1: Electromagnet, producing an independent transverse magnetic field in the arc zone. 1 - magnetic conductor; 2 - coiling; 3 - asbestos interlayer; 4 - flux pad.



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S/125/62/000/009/001/008
A006/A101

Magnetic arc control in submerged arc welding

Table 2

Толщина металла, мм 1)	Зазор между кромками, мм 2)	Порядок сварки швов 3)	Ампервитки электромагнита, а 4)	$I_{св}$, а 5)	$U_д$, в 6)	$V_{св}$, м/час 7)	Ширина шва, мм 8)	Глубина провара, мм 9)	Высота усиления, мм 10)	ψ
8,0	До 1,0 up to	1-й	768	950	40	92,0	17,0	5,5	2,5	3,0
		2-й	1440	950	40	92,0	17,5	6,0	2,5	2,9
12,0	2,0÷2,5	1-й	1056	1200	42	78,0	16,0	8,0	2,2	2,3
		2-й	1920	1200	42	78,0	16,0	8,0	2,2	2,14
20,0	2,5÷4,0	1-й	1392	1350	44	48,0	23,5	12,0	3,0	1,95
		2-й	2880	1350	44	48,0	23,5	12,0	3,5	1,95
28,0	4,0÷5,0	1-й	1680	1350	46	27	25,0	16,0	2,5	1,55
		2-й	4128	1350	46	27	25,0	16,5	3,0	1,51

Note: The gap between the electromagnetic poles and the surface of the welded metal is 1.0 mm.

Legend: 1 - Metal thickness, mm; 2 - Gap between the edges, mm; 3 - Order of welding the joints; 4 - Ampère-turns of the electromagnet, amp^v; 5 - I amp; 6 - U v; 7 - V m/h; 8 - Seam width, mm; 9 - Penetration depth, mm; 10 - Fillet height, mm

Card 4/4

MANDEL'BERG, S.L.; LOPATA, V.Ye.

Connecting welding transformers in high speed double arc welding. Avtom.svar. 15 no.10:85-86 O '62. (MIRA 15:11)

1. Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im. Ye.O. Patona AN UkrSSR.
(Electric welding--Equipment and supplies)

MANDEL'BERG, S.L.; KUSHNIRENKO, B.N.

Determining the structural strength of welds in thin-sheet high-strength hardenable steel. Avtom. svar. 17 no.7:90-91 Jl '64. (MIRA 17:8)

L 41054-65 EPA(s)-2/EWP(k)/EWA(c)/EWT(m)/EWP(b)/T/EWP(v)/EWP(t) Pf-4 JD/HM
ACCESSION NR: AP5005610 S/0125/65/000/002/0008/0013

AUTHOR: Mandel'berg, S. L. (Candidate of technical sciences)

TITLE: Multiarc speed welding with an electrode vibration across the weld

SOURCE: Avtomaticheskaya svarka, no. 2, 1965, 8-13

TOPIC TAGS: multiarc welding, welding electrode vibration

ABSTRACT: Results are reported of welding large straight-seam pipes by two flux-shielded arcs, with the first electrode vibrating. It was found that the optimal frequence of vibrations depended on the welding speed; with 200—240 m/hr, the best frequency was 15—18 cps; with 80—100 m/hr, 10—12 cps; vibration amplitude, 4 mm; electrode diameter, 4 mm; flux, AN-60. In 3-electrode welding, the most stable results were obtained when the third arc was d-c (reverse-polarity) supplied. With penetration depths of 5 mm and 7—8 mm, welding speeds of 260—290 m/hr and 225 m/hr were attained. Fine-grained flux

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L 41054-65
ACCESSION NR: AP5005610

permitted welding at a rate of 300—320 m/hr with a depth of 5 mm. Two-arc vibrating-electrode welding was introduced at the Chelyabinsk and Novomoskovskiy metal plants; the 1.5-year experience with this welding method corroborated the above-laboratory data. Far fewer weld defects were observed with the vibrating-electrode method. It was also found that this type of welding makes possible the use of vitreous AN-348-A flux at a welding speed attainable with the pumice-like AN-60 flux without electrode vibration. Orig. art. has: 8 figures and 4 tables.

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

SUBMITTED: 29Jul64 ENCL: 00 SUB CODE: MM

NO REF SOV: 011 OTHER: 000

Card 2/2

L 46570-66 EWT(m)/EWP(w)/EWP(v)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/HM

ACC NR: AP6020999 (A) SOURCE CODE: UR/0125/66/000/006/0006/0009

AUTHOR: Mandel'berg, S. L.; Semenov, S. Ye.

ORG: Electric Welding Institute im. Ye. O. Paton (Institut elektrosvarki)

TITLE: Automatic submerged arc welding of 06N3 cold-resistant steel

SOURCE: Avtomaticheskaya svarka, no. 6, 1966, 6-9

TOPIC TAGS: steel, cold resistant steel, low alloy steel, nickel containing steel, chromium containing steel, steel welding, automatic welding, submerged arc welding, weld property / 06N3 steel

ABSTRACT: Experiments have been made with 06N3 austenitic, cold-resistant steel, designed for equipment working at cryogenic temperatures, to develop welding technology which would ensure a weld strength equal to that of the parent metal. The steel contains 0.06—0.08% C, 0.43—0.52% Mn, 0.29—0.30% Si, 3.65—3.89% Ni, 0.14—0.20% Cr, 0.009—0.0014% S and 0.008% P, and has a high ductility at room and cryogenic temperatures and a temperature of transition from plastic to brittle state of about -150C. The critical stresses for brittle cracking of 06N3 steel in tension are 5 and 14—15 kg·m/cm^2 at -180 and -130C, respectively, while at -60C, no cracks are formed even under a

Card 1/2 UDC: 621.791.756:669.15-194:669.24

L 46570-66
ACC NR: AP6020999

stress of 26—27 kg/mm^2. Steel plates 10—15 mm thick were butt-welded with an automatic submerged arc with high-alloy Sv-10Kh16N25M5 or Sv-13Kh25N18 welding wire and an AN-14 flux. A split electrode 3 mm in diameter or transverse vibration of a 4-mm electrode were used to improve formation of the weld. The welding was done with straight polarity direct current of 450—500 amp or 700—720 amp (for 15-mm plate) at 34—36 v and a speed of 27 m/hr. Welds (notched in the fusion zone) made with the Sv-10Kh16N25M5 wire had the highest impact toughness: 15.3—21.8, 1.9—8.0 (average 4.5) and 0.5—3.1 kg·m/cm^2 at 20, -150 and -190C, respectively. The corresponding figures for unnotched welds were: 20.2—24.2, 12.15—17.75, and 12.5—14.0 kg·m/cm^2. The strength and ductility of 06N3 steel welds made with Sv-10Kh16N25M5 wire were equal to those of the base metal; no welds had hot cracks, regardless of the welding wire used. The above technology produced welds with an austenitic structure, eliminated the necessity for complex heat treatment of the welded parts, and ensured the required weld ductility at temperatures up to -150C. Orig. art. has: 6 figures and 5 tables. [MS]

SUB CODE: 11, 13/ SUBM DATE: 29Jun65/ ORIG REF: 006/ OTH REF: 001
ATD PRESS: 5028

Card 2/2

L 04654-67 EWP(k)/EWT(m)/T/EWP(v)/EWP(t)/ETI JD/HM

ACC NR: AP6014433 (N) SOURCE CODE: UR/0125/65/000/012/0001/0005

AUTHORS: Mandel'berg, S. L.; Semenov, S. Ye. 36 12

ORG: Institute for Electro-Welding im. Ye. O. Paton, AN UkrSSR (Institut elektrosvarki AN UkrSSR)

TITLE: Some characteristics of poly-arc welding under flux at increased rates of welding 4

SOURCE: Avtomaticheskaya svarka, no. 12, 1965, 1-5

TOPIC TAGS: metal welding, arc welding, weldability, seam welding, steel, welding rod / 19G steel, 14KhGS steel, Sv-08GA welding rod

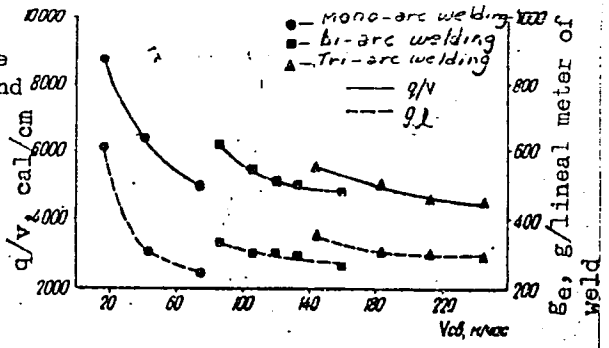
ABSTRACT: The energetics, properties of welds, and the length of the welding seams in high-speed poly-arc welding under flux were investigated. The investigation was carried out on steels 19G, and 14KhGS, using welding rods Sv-08GA and flux AN-60. Welding with single, double, and triple arcs was studied. The experimental results are summarized in graphs and tables (see Fig. 1). It was found that for increased rates of welding the application of poly-arc welding technique decreases energy losses. The chemical composition of the welds during high-speed welding remains practically unchanged. The use of poly-arc welding at high welding speeds decreases the porosity of the weld and yields welds with overall mechanical properties comparable to mono-arc welds obtained at ordinary welding speeds.

Card 1/2 UDC: 621.791.75.04

L 04654-67

ACC NR: AP6014433

Fig. 1. The dependence of the driving energy and specific welding rod expenditure g_e on the welding speed of a mono-, bi-, and tri-arc welding.



Orig. art. has: 2 tables and 7 graphs.

SUB CODE: 11, 13/ SUBM DATE: 27May65/ ORIG REF: 007

kh

Card 2/2

ACC NR: AP6036017 (A) SOURCE CODE: UR/0125/66/000/010/0044/0047

AUTHOR: Mandel'berg, S. L.; Lopata, V. Ye.; Semenov, S. Ye.; Rybakov, A. A.

ORG: Electric Welding Institute im. Ye. O. Paton AN UkrSSR (Institut elektrosvarki AN UkrSSR)

TITLE: Three-pass welding of helical joint tubes, 1020 mm in diameter, from both sides

SOURCE: Avtomaticheskaya svarka, no. 10, 1966, 44-47

TOPIC TAGS: ~~welding~~, helical joint tube, tube welding, steel ~~tube~~ welding, ~~submerged~~ arc welding, metal tube

ABSTRACT: Several variants of submerged-arc welding of helical joint 15G2S steel tubes, 1020 mm in diameter with walls 10—12 mm thick, have been tested. The best results were obtained with a three-layer weld applied from both sides. First, a "technological" weld is applied from inside in order to ensure and maintain a correct alignmnet of the faying edges. Then a half turn later, the second, outside weld and another half turn later the third, inside weld are deposited. The weld has a strength equal to that of the base metal. It had a yield strength of 35.3—50.0 kg/mm^2, a tensile strength of 55.5—53.5 kg/mm^2, an elongation of 20—29%, a reduction of area of 58.5—72.5% and a notch toughness of 3.1—8.7 kg/cm^2 at -40C. This method was introduced three years ago at the Zhdanov Metallurgical Plant im. Il'ich. Tubes

Card 1/2 UDC: 621.791.756

ACC NR: AP6036017

1020 mm in diameter are now successfully welded at a speed of 1.8 m/min. Despite some operational complexity, the application of this method is justified by its high welding speed, which is twice that of conventional two-sided welding of similar tubes and reduces risks of undercuts, porosity, slag inclusions and other defects. Orig. art. has: 6 figures and 1 table.

SUB CODE: 13/ SUBM DATE: 27May66/ ORIG REF: 005

Card 2/2

ACC NR: AP6021764 SOURCE CODE: UR/0413/66/000/012/0020/0020

INVENTOR: Paton, B. Ye.; Mandel'berg, S. L.

ORG: None

TITLE: A method for producing spiral tube. Class 7, No. 182663

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 12, 1966, 20

TOPIC TAGS: metal tube, seam welding

ABSTRACT: This Author's Certificate introduces a method for producing spiral tubes. The process consists of forming tube blanks and welding the edges on both sides. The welding rate is increased and the quality of the welded joints is improved by rough welding the edges in the zone of their initial alignment. The working seams are lapped successively each half-turn of the spiral and the seam which was lapped first is welded on the side opposite the rough seam while the working seam which remelts the rough seam is lapped last.

SUB CODE: 13/ SUBM DATE: 13Jul64

Card 1/1 UDC; 621.774.21;621.791.75

ACCESSION NR: AP4041864 S/0125/64/000/007/0090/0091

AUTHOR: Mandel'berg, S. L.(Candidate of technical sciences); Kushnirenko, B. N. (Engineer)

TITLE: Determining the structural strength of welded joints of thin sheet high strength hardened steel

SOURCE: Avtomaticheskaya svarka, no. 7, 1964, 90-91

TOPIC TAGS: welded joint, strength, high strength steel, constructional strength, test method, welding defect, butt welding

ABSTRACT: A time-saving method was worked out for testing the strength of welded joints of high strength sheet steel, especially high carbon (0.45%) and alloyed (7-8%) steels. Flat test pieces prepared as in fig. 1 were subjected to negative temperatures to increase the sensitivity of the joints. The 1-6 mm thick samples were insulated with asbestos or cotton tape and cooled in a ligroin (gasoline, benzene)-dry ice bath to -78C and tested at -75 to -70C. A 3 mm sample thus insulated remains in this temperature range for 3 min, long enough for testing. In a series of test pieces and models butt welded by 3 different techniques tested by this method, most of the test pieces had a structural strength coefficient,

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ACCESSION NR: AP4041864

compared to the base metal, of less than one. This method brought out the effect of small defects in the joints on structural strength that standard tests do not show. This method is proposed for preliminary evaluation of structural strength; test models should be made for final evaluation. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 01

SUB CODE: MM NO REF SOV: 000 OTHER: 000

Card 2/3

ACCESSION NR: AP4041864

ENCLOSURE: 01

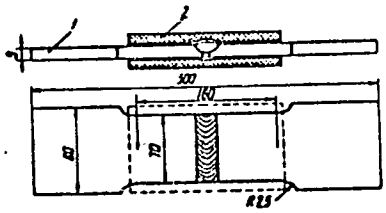

Fig. 1. Welded joint with an enlarged sectional view.
1--sample; 2--heat insulation

Card 3/3

BC MANDELBERG, YE.M.

9 II - 6

Luminescent decorative painting. E. M. Mandelberg. (*Bull. Acad. Sci. U.R.S.S., Sér. Phys.*, 1945, 9, 559—560).—A lecture.
R. T.

MANDEL'BERG, Ye. M.

"Luminescence in the Graphic Arts,"

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SUBJECT: USSR/Luminescence

AUTHOR: Mandel'berg Ye.M.

TITLE: On Luminescent Decorative Painting (O lyuminestsentnoy dekorativnoy zhivopisi)

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ABSTRACT: During the last 5 years, luminescent painting was used in two shows: the ballet "Sleeping Beauty" in the Gor'kiy Theater of Opera and Ballet, and the opera "Ruslan and Lyudmila" in the Kuybyshev Theater of Opera and Ballet. In both shows ultraviolet illumination was brought about by means of 12 to 16 illuminators of the PRK-7 type (12 to 16 kw) with powerful parabolic reflectors. In addition to this, additional illumination with visual light of the same capacity was also applied on the stage.

The moving panorama of about 800 m^2 in size, used in the "Sleeping Beauty", was fully painted with luminescent paints. During the 3 years of operation no restoration was necessary, whereas other decorations of this ballet, painted with conven-

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tional paints, were re-painted several times during this period. The stability of luminescent paints was due to an applied water-soluble binding material whose composition was as follows: 120 g of casein, 30 g of sodium or ammonium carbonate, 2 g of phenol, 20 cm^3 of an admixture of formalin with ammonia (in a ratio of 1 to 2) per 1 liter of boiled water.

In 1955, a large picture, 72 m^2 in size, was painted with luminescent paints. By changing illumination from visual to ultraviolet light, the subject of the picture was instantaneously transformed. This change was made automatically by means of an electromagnetic device and relay system remotely controlled.
The article contains two photos.
No references are cited.

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