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state. (4) Potassium zirconyl trifluoride has in wet state the composition $KZrF_3(OH)_2 \cdot H_2O$, after drying at 200°C the composition $KZrOF_3$. It follows that: (a) the interaction of the zirconium compounds with F^- ions depends on their dissolving rates. Zr^{2+} does not react with F in dry state. The reaction occurs:

$$\underset{\text{solid}}{ZrO^{2+}} \xrightarrow[\text{I}]{+H_2O} \underset{\text{solut.}}{ZrO^{2+}} \xrightarrow[\text{II}]{+H_2O} Zr(OH)_2^{2+} \xrightarrow[\text{III}]{+KF} ZrF_2^{2+} + 2OH^-.$$

The reaction rate depends on the rate of stage I. (5) Titration of the Ba, Na, and NH_4 salts of the zirconyl oxalic acid gave ~1.3-1.7 g-equiv. OH^-/g-atom Zr. Titration of $ZrOCl_2$ also gave 1.4-1.7 g-equiv. OH^-/g-atom Zr. The solution of the pyridonium salt remains neutral because the OH^- are neutralized by $C_5H_5NH^+$:

$$2C_5H_5N + H_2[Zr(OH)_2(C_2O_4)_2] \rightarrow (C_5H_5NH)_2[Zr(OH)_2(C_2O_4)_2]$$
$$(C_5H_5NH)_2[Zr(OH)_2(C_2O_4)_2] + 2KF \rightarrow K_2[ZrF_2(C_2O_4)_2] + 2C_5H_5NH^+ + 2OH^-$$
$$2C_5H_5NH^+ + 2OH^- \rightarrow 2H_2O + 2C_5H_5N$$
$$H_2[Zr(OH)_2(C_2O_4)_2] + 2KF \rightarrow K_2[ZrF_2(C_2O_4)_2] + 2H_2O$$

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S/078/62/007/004/004/016
B101/B144

AUTHORS: Zaytsev, L. M., Bochkarev, G. S.

TITLE: Peculiarities of the behavior of zirconyl in solutions

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 7, no. 4, 1962, 795-802

TEXT: The hydrolysis of zirconium compounds was studied for the purpose of determining the different behavior of zirconyl and zirconium-hydroxyl compounds. The OH groups were liberated by KF at pH 8-8.2 and titrated with 0.1 N HCl. It was found: (1) Titration of freshly precipitated $Zr(OH)_4$ in the presence of KF gave 4 g-equiv. OH^-/g-atom Zr. In aged zirconiumhydroxide only 2 g-equiv. OH^- per g-atom Zr were titrable within 5 min; the other OH^- groups could be titrated only after many hours stirring in water. Thus, aging takes place owing to dehydration of $Zr(OH)_4$ to $ZrO(OH)_2$ and finally to ZrO_2. (2) Titration of zirconyl oxalate shows that the compound precipitated in methanolic solution does not contain OH groups. More than 1 g-equiv. OH^-/g-atom Zr was titrated in zirconyl oxalate precipitated from aqueous solution. (3) No OH groups were found in zirconyl peroxide, $ZrOO_2 \cdot 2H_2O$, irrespective of its dry or wet

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ALYAVIYA, M.K.; ZAYTSEV, L.M.

Synthesis and thermographic analysis of complex compounds of cadmium halides with anabasine. Zhur. neorg. khim. 6 no.7: 1599-1603 Jl '61. (MIRA 14:7)
(Cadmium compounds) (Anabasine)

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of hydrated plutonium ions of various oxidation states. Physicochemical properties of plutonium compounds in aqueous solutions are examined along with the plutonium oxalates, phosphates of Pu (IV) and Pu (VI), and acetates of Pu (VI). The synthesis and properties of complex compounds of tri-, tetra-, and hexavalent plutonium are described along with the insoluble plutonium compounds such as the plutonium oxalates, hydroxides, peroxides, and dioxides. The formation of americium, curium, berkelium, californium, einsteinium, fermium, and mendelevium complexes are also covered. The use of complex compounds for the separation of transuranium elements is discussed along with prevailing methods such as coprecipitation, extraction, ion exchange, and fractional distillation. The authors thank Candidates of Chemical Sciences P.I. Artyukhin and L. Ye. Drabkin. There are 108 references: 54 English, 46 Soviet, 4 Swedish, 2 German, and 2 French.

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Ch. I. Formation of Neptunium Complexes in Aqueous Solutions 5
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ZAYTSEV, L.M.

PHASE I BOOK EXPLOITATION SOV/5301

Gel'man, Anna Dmitriyevna, Doctor of Chemical Sciences; Apollinariy Ivanovich Moskvin, Candidate of Chemical Sciences; Lev Mikhaylovich Zaytsev, Candidate of Chemical Sciences; and Mayya Pavlovna Mefod'yeva, Candidate of Chemical Sciences

Kompleksnyye soyedineniya transuranovykh elementov (Complex Compounds of Transuranium Elements) Moscow, Izd-vo AN SSSR, 1961. Errata slip inserted. 4,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut fizicheskoy khimii.
Ed. of Publishing House: E.S. Dragunov, Tech. Ed.: P.S. Kashina.

PURPOSE: This book is intended for chemists interested in the complex compounds of transuranium elements, and specifically for young scientific workers and aspirants doing research in this field.

COVERAGE: The book deals with the complex compounds of transuranium elements. It describes the formation of complex compounds of neptunium (including oxalates, carbonates, acetates, and fluorides), and plutonium in aqueous solutions. Types of such solutions are described along with the hydrolysis

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SOV/78-4-12-6/35

Simple and Complex Carbonate Compounds of Plutonium (IV)

according to G. G. Tsurinov's method (Ref 4). The compound $(NH_4)_6[Pu(CO_3)_5]nH_2O$ splits off one ammonium carbonate molecule at 58°. Partial dehydration occurs at 70°. At 80° the compound $(NH_4)_4[Pu(CO_3)_4].4H_2O$ decomposes to form $PuO_2.PuOCO_3$, and at 110° the basic oxycarbonate decomposes to yield PuO_2. The slow decomposition of plutonium tetracarbonate in the air, however, leads to the compound $PuOCO_3.2H_2O$. When heating the solutions of the Pu complex compounds, the compound $2.5PuO_2.PuOCO_3.5.5H_2O$ is precipitated. The normal plutonium carbonate $Pu(CO_3)_2.nH_2O$ could not be obtained. There are 4 figures, 10 tables, and 4 references, 3 of which are Soviet.

SUBMITTED: September 9, 1958

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

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SOV/78-4-12-6/35

Simple and Complex Carbonate Compounds of Plutonium (IV)

ascribed to it. To prevent rapid decomposition of the green complex salt, it was stored in the exsiccator in the presence of ammonium carbonate and thus only partially decomposed to form the compound $(NH_4)_4[Pu(CO_3)_4]\cdot nH_2O$. When the hexavalent Pu compound is reduced in ammonium carbonate solution of high concentration (30% at 35°), the compound $(NH_4)_8[Pu(CO_3)_6]\cdot nH_2O$ is formed, which is also green. All of the three resulting complex compounds form green solutions in water, which decompose after a few minutes to separate green amorphous plutonium hydroxide. When studying the compound $(NH_4)_4[Pu(CO_3)_4]\cdot 4H_2O$ it was found that the change in the pH of its aqueous solution sets in only after 5-8 min. Meanwhile it was possible to measure the apparent molecular weight and electrical conductivity. The complex dissociated to form 5 ions, the apparent molecular weight being 113.0. Since the calculated molecular weight is 623, this dissociation was confirmed. The deviation (623 : 113 ≈ 5.5) is caused by the beginning decomposition. The complex compounds can be longer stored in ammonium carbonate solutions than in pure water. Thermal analysis was carried out at low temperature

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66298

SOV/78-4-12-6/35

~~5(2)~~ 5.2200 (A)

AUTHORS: Gel'man, A. D., Zaytsev, L. M.

TITLE: Simple and Complex Carbonate Compounds of Plutonium (IV)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 12, pp 2688-2696 (USSR)

ABSTRACT: In an earlier paper (Ref 3) the authors reported on potassium- and sodium-plutonium carbonates. The present article treats of the corresponding complex ammonia compounds of tetravalent Pu. The soluble carbonate complexes of Pu(IV) were obtained by reducing the Pu(VI) tricarbonate with H_2O_2 in 10% ammonium carbonate solution. When pouring the solution into 75-80% methyl- or ethyl alcohol the green complex was precipitated in the form of sirup and could be dried by decantation and washing with absolute alcohol. Complete dehydration failed as decomposition occurred. The analysis had therefore to be made by means of an aqueous substance. It showed the composition $(NH_4)_6[Pu(CO_3)_5]nH_2O$. Storing in alcohol for some time or drying in air effected decomposition with brown coloring. Thermal analysis of the decomposed product indicated the absence of hydroxyl groups so that the composition of $PuO_2 \cdot PuOCO_3 \cdot 3H_2O$ was

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SOV/78-3-10-7/35

The Interaction of Zirconyl With Anthranilic Acid and Dimethyl Glyoxime

There are 8 figures, 14 tables, and 12 references, 4 of which are Soviet.

SUBMITTED: May 5, 1958

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

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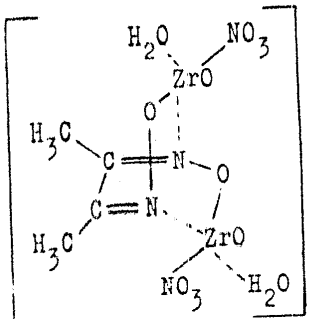
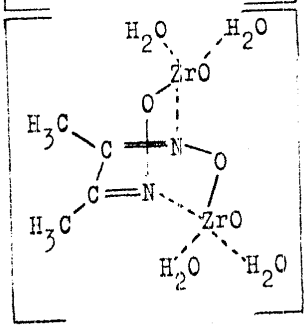
The Interaction of Zirconyl With Anthranilic Acid and Dimethyl Glyoxime



(2)



$(OH)_2$ (3)

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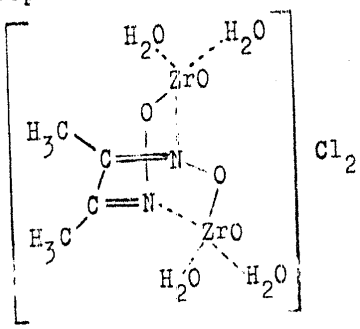
The Interaction of Zirconyl With Anthranilic Acid and Dimethyl Glyoxime

picric acid in the aqueous solution. This compound has a yellow-orange color and is insoluble in water and organic solvents. A greenish-yellow precipitate, containing dimethyl glyoxime, is produced by the action of ammonia on aqueous solutions of zirconyl-chloride-glyoxy-amino complex and zirconyl-nitrate-glyoxy-amino complex. The precipitate is a mixture of hydroxy-glyoxime-amino-zirconyl and zirconyl hydroxide. The following structural formulae were suggested on the basis of the chemical and physico-chemical properties of the glyoxime-zirconyl complexes:



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temperature. The existence of zirconyl-dichloro anthranilic acid is possible in concentrated aqueous solutions. The acid is hydrolyzed when the solution is very much diluted. The interaction of zirconyl with dimethyl glyoxime was investigated. The synthesis was carried out in the alcoholic solution of zirconyl chloride and dimethyl glyoxime, the initial components having a ratio of from 1:1 to 1:20. A light-yellow precipitate is obtained from the alcoholic solution by addition of ether, for which the chemical analysis presents the following formula: $D(ZrOCl)_2 \cdot 4\text{-}6\ H_2O$ (D = dimethyl glyoxime). Thermographic analyses demonstrated the appearance of two effects: an endothermic effect at 100-120°C, and an exothermic effect at 260-280°C. The chemical and physico-chemical analyses confirmed the complex character of this compound. Zirconyl nitrate, zirconyl oxalate, zirconyl acetate or zirconyl sulfate may be used as initial components for the production of this complex. It was shown that zirconyl sulfate, zirconyl oxalate, zirconyl nitrate and zirconyl acetate do not react upon dimethyl glyoxime. The complex

$$\left[D(ZrO.2H_2O)_2\right](OH)Picr$$

 is produced from a solution of hexamine-zirconyl nitrate with

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AUTHORS: Zaytsev, L. M., Bochkarev, G. S. SOV/78-3-10-7/35

TITLE: The Interaction of Zirconyl With Anthranilic Acid and Dimethyl Glyoxime (Vzaimodeystviye tsirkonila s antranilovoy kislotoy i dimetilglioksimom)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 10, pp 2261-2271 (USSR)

ABSTRACT: The interaction of zirconyl chloride with anthranilic acid and dimethyl glyoxime was analyzed, and the formation of coordination was determined by means of synthetized products. Zirconyl chloride combined with anthranilic acid was displaced by methyl alcohol and other organic solvents, such as acetone and chloroform. The precipitate has the following composition:

$$H\left[ZrOCl_2 \cdot C_6H_4NH_2COO\right] \cdot 5\ H_2O.$$

The complexes formed by this acid together with the organic bases pyridine, aniline, quinoline and β-naphthol quinoline, were analyzed. The determination of the electric conductivity of alcoholic solutions of these salts shows that the complex consists of two ions. The thermographic analyses carried out have shown that the thermal effect of water loss and the beginning of decomposition of these compounds appear at almost the same

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III. Mixed Oxalate-Carbonate Compounds of Plutonium (IV) SOV/ 78-3-7-16/44

solution complicated complex compounds occur which decompose with separation of the solid phase.

The aqueous solutions are unstable. As a result of the decomposition of the complexes plutonium-hydroxide is precipitated. Several problems connected with the structure of the products investigated are explained. There are 16 tables.

SUBMITTED: November 15, 1957

1. Complex compounds--Synthesis 2. Complex compounds--Chemical analysis 3. Complex compounds--Properties 4. Plutonium hydroxide --Precipitation

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

SOV/ 78-3-7-16/44

AUTHORS: Gel'man, A.D., Zaytsev, L.M.

TITLE: III. Mixed Oxalate-Carbonate Compounds of Plutonium (IV) (III. Smeshannyye oksalatno-karbonatnyye soyedineniya plutoniya (IV))

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 7, pp 1555-1564 (USSR)

ABSTRACT: Mixed oxalate-carbonate compounds of plutonium (IV) were synthetized and investigated. The following compounds were produced: $K_2[Pu(CO_3)_2C_2O_4]\cdot nH_2O$; $Na_4[Pu(CO_3)_2\cdot(C_2O_4)_2]\cdot 3H_2O$; $Na_4[Pu(CO_3)_3\cdot(C_2O_4)]\cdot nH_2O$; $K_4[Pu(CO_3)_3\cdot C_2O_4]\cdot nH_2O$; $K_6[Pu(C_2O_4)_3\cdot C_2O_4]\cdot nH_2O$; $K_{10}[Pu(C_2O_4)_4(C_2O_4)_3]\cdot nH_2O$; $K_{12}[Pu(CO_3)(C_2O_4)_7]\cdot nH_2O$.

By crystal optics and X-ray analysis it is shown that the production and composition of the aforementioned complex compounds depend on the concentration of the sodium carbonate. The complex compounds existing in the solution depend on the concentration of the oxalate- and carbonate ions. It is shown that in the

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II. Sodium.Plutonylcarbonates SOV/78-3-7-15/44

It was found that at 300-400°C 3 mol H_2O and 2 mol CO_3 are separated. The crystals retain their shape. The second compound produces large green crystals which, when being dehydrated, go over into a fine greenish-yellow crystal powder. The third compound is more stable. There are 3 figures and 3 tables.

SUBMITTED: November 15, 1957

1. Complex compounds--Solubility 2. Complex compounds--Chemical analysis 3. Complex compounds--Properties 4. Plutonium--Properties Sodium--Properties

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

SOV/78-3-7-15/44

AUTHORS: Gel'man, A. D., Zaytsev, L. M.

TITLE: II. Sodium Plutonylcarbonates (II. Plutoniykarbonaty natriya)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol. 3, Nr 7, pp. 1551-1554 (USSR)

ABSTRACT: The sodium plutonylcarbonate complex was produced and the dependence between the concentration of the solvents and the composition of the obtained complex compounds was determined. The optimum conditions for the production are an 18-20% soda solution and alcohol of 55-60%. In the alcoholic solution mentioned the sodium plutonylcarbonate complex compound has its lowest degree of solubility. By analysis of the solid phase it was found that the ratio Pu : CO_2 : Na is 1:4:4 and 1:5:6. Three sodium carbonate complex compounds of plutonium were prepared and investigated. The respective formulae are:
1. $Na_4[Pu(CO_3)_4]\,3\,H_2O$; 2. $Na_6[Pu(CO_3)_5]\,2\,H_2O$;
3. $Na_6[Pu(CO_3)_5]\,4\,H_2O$.
In the course of the thermal decomposition of $Na_4[Pu\,(CO_3)_4]\,3H_2O$

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Carbonate and Carbonate Oxalate Complexes of Plutonium-(IV) 78-3-6-5/30
I. Potassium Plutonium Carbonate

The investigations of the electric conductivity of the solutions show that the complex compound $K_{12}[Pu(CO_3)_8] \cdot nH_2O$ occurs in dissolved state.
It was found that the coordination number of the plutonium carbonate complex compounds is 8.
There are 8 tables and 15 references, 4 of which are Soviet.

SUBMITTED: November 15, 1957

AVAILABLE: Library of Congress

1. Plutonium compounds--Synthesis 2. Complex compounds--Production
3. Complex compounds--Synthesis

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

78-3-6-5/30

AUTHORS: Gel'man, A. D., Zaytsev, L. M.

TITLE: Carbonate and Carbonate Oxalate Complexes of Plutonium-(IV) I. Potassium Plutonium Carbonate (Karbonatnyye i karbonatno-oksalatnyye kompleksnyye soedineniya plutoniya (IV) I. Plutoniykarbonaty kaliya)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 6, pp. 1304-1311 (USSR)

ABSTRACT: The synthesis for the production of solid carbonate complex compounds of plutonium-(IV) in greatest purity was elaborated. Solid plutonium-(IV)-oxalate was dissolved in potassium-, sodium-, and ammonia-carbonate as initial components. The solid complex compounds were isolated by ethyl alcohol. Also four carbonate complex compounds of plutonium-(IV) with potassium were investigated and the following formulae were determined for the compounds: $K_4[Pu(CO_3)_4].nH_2O$; $K_6[Pu(CO_3)_5]$. $(3-4).H_2O$; $K_8[Pu.(CO_3)_6]$. nH_2O; $K_{12}[Pu(CO_3)_8]$. nH_2O. The microscopic investigations of the potassium carbonate complex compounds of plutonium confirm the crystalline structure of these compounds.

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ZAYTSEV, L.M.

FEDOROV, I.A.; ZAYTSEV, L.M.

Investigating the thermal properties of cadmium phenylenediamines. (MIRA 11:3)
Zhur. neorg. khim. 2 no.8:1812-1828 Ag '57.
(Cadmium compounds) (Phenylenediamine) (Thermal analysis)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

ZAYTSEV, L.M.; BOCHKAREV, G.S.

Electric conductivity of salts in methyl alcohol. Zhur. neorg. khim. 2 no.8:1748-1752 Ag '57. (MIRA 11:3)
(Salts--Electric properties) (Methanol)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

ZAYTSEV, L.M.

USSR/Inorganic Chemistry - Complex Compounds.

Abs Jour : Ref Zhur - Khimiya, No 9, 1957, 30303

Author : Zaytsev, L.M.

Inst :

Title : Carbonate Compounds of Iron

Orig Pub : Zh. neorgan. khimii, 1956, 1, No 10, 2425-2427

Abst : To prove the existence of carbonate compounds of Fe(3+) a study was made of the interaction of the salts of Fe(3+) with solutions of the carbonates of Na, K and NH_4. It was found that 10-15% solutions of the carbonates cissolve the salts of Fe(3+), while in saturated solutions there are formed transparent solutions of yellow to dark-red coloration which contain, in the opinion of the author, complexes of the type $[Fe(CO_3)_n A]^{x-}$, where A -- OH, H_2O. On interaction of $Fe(NO_3)_3$ with a solution of $(NH_4)_2CO_3$ there is formed a dark-red solution from which, on treatment with 96% C_2H_5OH, was isolated a

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

ZAYTSEV, L. M.

AID P - 931

Subject : USSR/Chemistry

Card 1/1 Pub. 152 - 22/22

Authors : Zaytsev, L. M. and Shubochkin, L. K.

Title : The pyrometer of N. S. Kurnakov, by G. G. Tsurinov

Periodical : Zhur prikl. khim., 27, no. 5, 575-576, 1954

Abstract : Review

Institution : None

Submitted : No date

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

DUDROVIN, Ze.N.; KAYTSER, L.K.; TURCHIKHIN, E.Ya.

[illegible] problem. Avt.dor. 28 no.8:21-23 Ag '65. (MIRA 18:11)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

DUBROVIN, Yevgeniy Nikolayevich; ZAYTSEV, Leonid Konstantinovich; TURCHIKHIN, Emmanuil Yakovlevich; SOSYANTS, V.G., red.; LYUBINA, R.M., red.izd-va; KHENOKH, F.M., tekhn. red.

[The economics and the organization of the building and maintenance of city roads] Ekonomika i organizatsiia stroitel'stva i ekspluatatsii gorodskikh dorog. Moskva, Izd-vo MKKh RSFSR, 1963. 233 p. (MIRA 16:10)

(Roads)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

report presented at the 1st All-Union Congress of Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb '60.

122. J. Dvorak (Prague): The state of stress and deformation of the turbine blades.

123. V. M. Emir (Kharkov): On some new forms of the general solution of the three-dimensional problem of the theory of elasticity expressed in harmonic functions.

124. A. A. Dertsachev (Stalinabad): Generalization of the method of steepest descent in structural mechanics.

125. B. V. Zarizgin (Moscow), S. V. Nersin (Leningrad): Surface phenomena in the mechanics of clays.

126. A. Z. Zaqov (Moscow): Experimental data concerning the propagation of vibrations of different frequencies in concrete structures.

127. G. Ia. Dzhanelidze (Leningrad): Almansi's problem.

128. M. T. Zlatanch (Kiev): A finite difference analysis of cylindrical shells with rectangular holes.

129. M. T. Zlatanch (Kiev): Generalization of Mohr's method of determining the displacements in problems of the theory of elasticity.

130. M. P. Galberg (Kharkov): The construction of solutions of the equations of structural mechanics by means of special uniformly convergent series.

131. L. S. Draghin (Leningrad): A method of investigating the states of stress and strain and the slip lines in anisotropic multilayer metals.

132. A. V. Dzatiev (Dnepropetrovsk): The stability of an obliquely bent beam.

133. L. I. Dzatlovitskii, L. S. Rabinovich (Kiev): A problem concerning elastic bodies whose configuration changes in the course of loading, with application to the erection of structures.

134. P. P. Evdokimov (Leningrad): On the shear strength of structural rock foundations.

135. P. P. Evdokimov (Leningrad): On friction in sandy soils and their shear strength.

136. K. E. Egorov (Moscow): The deformation of the ground under an annular foundation.

137. S. S. Elmanovich (Moscow): On stresses and strains of thin-walled rods of variable cross section at normal and elevated temperatures.

118. Zh. S. Erzhanov (Dnepropetrovsk): Determination of the pressure on a tunnel facing taking account of the hereditary creep of soils.

119. Zh. S. Erzhanov (Dnepropetrovsk): The integral operator method of determining the creep characteristics of soils from observations in situ.

120. I. P. Ershov (Gorki): The elastic-plastic bending of a bar.

121. A. N. Zhukov (Moscow): Elastic properties of a plastically deformed metals under combined loading.

122. F. A. Zhuravlev, A. F. Lakhtorovich, N. P. Nyrkov (Leningrad): Application of the method of characteristics to the determination of the tension in the cable of a mine elevator.

123. M. A. Zadoian (Erevan): On the propagation of plastic zones in a beam under impulsive loading.

124. L. I. Zaitsev (Moscow): On the surface-head-wave.

125. B. V. Zvorykov, Sh. N. Kats (Leningrad): An experimental study of creep-rupture characteristics of tubes under combined stresses.

126. E. V. Zylinskii (Moscow): The propagation of an elastic wave due to an underground explosion.

127. A. F. Kalmin (Moscow): On the state of stress in compression and its effect on the construction of Mohr's circles.

128. V. K. Iliova, Ia. B. Fridman (Moscow): The laws of deformation and rupture kinetics.

129. F. L. Ivanov (Leningrad): Flow of water-saturated soils under dynamic loading

130. V. S. Ivanova (Moscow): The hypothesis of energetic similarity in fatigue fracture and the melting of metals.

131. B. D. Iviev (Voronezh): On the anisotropy of elastic and plastic bodies.

132. L. M. Iagov, Yu. I Iagi (Leningrad): Plastic tension and torsion of thin-walled nickel tubes that have become anisotropic through prior plastic deformation.

133. Ia. M. Ilenko, B. P. Sosnov (Moscow): Investigation of elastic strains and vibrations in aircraft structures by means of electronic computers.

24 ЛТ530 Л. I.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

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MERKULOV, Yefim Afanas'yevich, dots., kand. tekhn. nauk; DUBROVIN, Yevgeniy Nikolayevich, dots., kand. tekhn. nauk; TURCHIKHIN, Emmanuil Yakovlevich, dots., kand. tekhn. nauk; YUDIN, Vasiliy Aleksandrovich, dots., kand. tekhn. nauk; Prinimali uchastiye: SLAVUTSKIY, A.K., dots., kand. tekhn. nauk; ZAYTSEV, L.K., inzh.; ZAMAKHAYEV, M.S., red.; OVSYANNIKOVA, Z.G., red. izd-va

[Examples of the design of roads and public transportation systems in cities] Primery proektirovaniia dorog i setei passazhirskogo transporta v gorodakh. [By] E.A.Merkulov i dr. Moskva, Gos. izd-vo "Vysshaia shkola," 1962. 265 p. (MIRA 16:2)
(Road construction) (Rapid transit)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

ZAYTSEV, L.A., otvetstvennyy red.; SUSHKEVICH, V.I., tekhn. red.

[Instructions for accounting of transfer operations in post offices and communication offices] Instruktsiia po bukhgalterskomu uchetu perevodnykh operatsii v pochtamtakh i kontorakh sviazi. Moskva, Sviaz'izdat, 1957. 62 p. (MIRA 11:7)

1. Russia (1923- U.S.S.R.) Glavnoye pochtovoye upravleniye. (Postal service--Accounting) (Telecommunication--Accounting)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

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TITCHENKO, Maksim Pavlovich; AYOLLO, Mikhail Gustavovich; NEZHIVOY Nikolay Yakovlevich; PEROV, Viktor Yakovlevich; ZAYTSEV, L.A., otv. red.; SAKHAROVA, Ye.D., red.

[Accounting and balance analysis in the communication system] Bukhgalterskii uchet i analiz balansa v khoziaistve sviazi. Moskva, Sviaz', 1965. 303 p. (MIRA 18:8)

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TURCHIKHIN, E., dotsent; ZAYTSEV, L., starshiy prepodavatel'

Connection with life. Zhil.-kom. khoz. 13 no.4:19-20 Ap '63. (MIRA 16:5)

(Municipal services--Study and teaching)

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ZAYTSEV, L.

The role of public funds in the development of workers' welfare. Okhr.truda i sots.strakh. no.9:12-16 S '59. (MIRA 13:1)

(Public welfare)

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ZAYTSEV, I.I.

[Course for technicians in higher mathematics] Kurs vysshei matematiki dlia tekhnikumov. Moskva, Gostekhizdat, 1954. 356 p. (MLRA 8:10)

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ZAYTSEV, K.Z., inzhener.

Analyzing the voltage drop in a cascade circuit. Elektrichestvo 74-76 My '57. (MLRA 10:6)

1. Vsesoyuznyy elektrotekhnicheskiy institut im. V.I. Lenina.
(Electric generators)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

ZAYTSEV, K.V.

Protecting fresh waters of artesian basins from pollution of oilfield waste waters. Neft.khoz. 37 no.2:60-64 F '59. (MIRA 12:4)

(Sewage disposal)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

ZAYTSEV, K.T.; AYUKOV, A.S.; DOLMATOV, V.A.

Blast furnace trial operation with raw Atasu ore. Stal' 21 no.12:1059-1062 D '61. (MIRA 14:12)

1. Karagandinskiy metallurgicheskiy zavod.
(Blast furnaces)
(Atasu region--Iron ores)

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SOV/113-59-5-9/21

Experience in Testing Automobile Transmissions on Test Stands

a rate of six shifts per minute. As an example for a more complete utilization of these test stands, the authors mention the investigation of transmissions, containing parts made of different types of steel 12KhN^{Z}A, 18KhGT, 30KhGT and 15KhGNTA, whereby the best results were obtained with the latter steel. However, the proper temperature conditions must be selected when hardening parts made of steel 15 KhGNTA. It is possible to use steel-steel sliding friction bearings in YaMZ transmission, in case one of the bearing parts is parkerized. Steel and cast iron are not suitable for manufacturing tapered synchronizer rings since they have too high a wear and disturb the normal work of synchronizers . Further, the selection of the proper lubricant is of importance. There are 3 photographs.

ASSOCIATION: Yaroslavskiy motornyy zavod (Yaroslavl' Engine Plant)

Card 2/2

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SOV/113-59-5-9/21

12(2)

AUTHORS: Zaytsev, K.S.; Khapov, V.S.

TITLE: Experience in Testing Automobile Transmissions on Test Stands

PERIODICAL: Avtomobil'naya promyshlennost', 1959, Nr 5, pp 24-25 (USSR)

ABSTRACT: The authors describe briefly three types of test stands used for investigating the functioning of automobile transmissions at the Yaroslavl'Engine Plant. A torsion test stand for determining the static strength of assembled transmission components is shown by photograph, Figure 1. A test stand for wear and fatigue tests of transmissions is shown by photograph, Figure 2. With this device two transmissions may be tested simultaneously, while a third one serves as a reductor. A test stand for transmission gear shift mechanisms is shown by photograph, Figure 3. Gear shifting is performed automatically by a pneumatic device at

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ZAYTSEV, Khaim Pinkhusovich; MACHKOVSKIY, Abram Isaakovich; GOKHMAN, I.S., red.; DASHEVSKIY, Ya.I., red.; KHUTORSKAYA, Ye.S., red.izd-va; ISLENT'YEVA, P.G., tekhn.red.

[Organization and planning of operations in sintering plants] Organizatsiia i planirovanie proizvodstva na aglomeratsionnykh fabrikakh. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1959. 204 p. (MIRA 12:1)
(Sintering)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

ZAYTSEV, KH.P.

MOSHKEVICH, I.Ye., kandidat tekhnicheskikh nauk; ZAYTSEV, Kh.P., kandidat ekonomicheskikh nauk.

Operational planning, organization and control in open-hearth furnace plants. Stal' 17 no.8:749-753 Ag '57. (MLRA 10:9)

1. Dneprovetrovskiy metallurgicheskiy institut.
(Metallurgical plants) (Industrial management)
(Open-hearth process--Quality control)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

ZAYTSEV, Kh.P., kandidat ekonomicheskikh nauk; KAGAN, I.S., kandidat ekonomicheskikh nauk.

"Methods for the reduction of the manufacturing costs of steel." A.V. Leskov. Reviewed by Kh.P.Zaitsev, I.S.Kagan. Stal'15 no.2:188-190 F '55. (MIRA 8:5)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Steel--Costs) (Leskov, A.)

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1470 Zakrepleniye peschanykh gruntov khimicheskimi i emulsionnymi metodami v usloviyakh Polesya. Minsk, 1954. 7 s. 22 sm. (M-yo vysah. obrazova-niya SSSR. Belorus. politekhn. in-t im. I. V. Stalina. Kafedra gidrotekhn. stroitelstva). 100 ekz. B. ts.- (54-52876

SO: Knizhaya Letopis', vol. 1, 1955

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ZAYTSEV, K. P.

Silos

Making silage in movable framework. Korm. baza. 3 No. 8, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

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2. USSR (600)

7. "Concerning the Question of Bank Ensilage", Trudy Vsesoyuzn. Nauch.-Issled. In-ta S.-Kh. Mikrobiologii (Works of the All-Union Science-Research Institute of Agricultural Microbiology), Vol II, No 2, 1951, pp 98-105.

9. Mikrobiologiya, Vol XXI, Issue 1, Moscow, Jan-Feb 1052, pp 121-132. Unclassified.

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ZAYTSEV, Konstantin Petrovich.

[Surface ensilage] Nazemnoe silosovanie kormov. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1957. 35 p. (MIRA 11:9)
(Ensilage)
(Silos)

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ZAYTSEV, Konstantin Petrovich

[Surface silos] Nazemnoe silosovanie kormov. Izd.2., ispr. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1959. 31 p. (MIRA 13:6)

(Silos)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

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SOV/1841

Organization and Planning of Production (Cont.)

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Soviet material was gathered by plant laboratories and other research institutions. No personalities are mentioned. There are 49 Soviet reverences.

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25(5) PHASE I BOOK EXPLOITATION SOV/1841

Zaytsev, Khaim Pinkhusovich, and Abram Isaakovich Machkovskiy

Organizatsiya i planirovaniye proizvodstva na aglomeratsionnykh fabrikakh (Organization and Planning of Production in Sintering Plants) Moscow, Metallurgizdat, 1959. 204 p. Errata slip inserted. 2,000 copies printed.

Eds.: I.S. Gokhman, and Ya. I. Dashevskiy; Ed. of Publishing House: Ye.S. Khutorskaya; Tech. Ed.: P.G. Islent'yeva.

PURPOSE: This book is intended for skilled workers, engineers, and technicians in ore sintering plants and may be used by students in institutes and technical schools.

COVERAGE: The book briefly describes the engineering and economic nature of ore sintering, and outlines the basis for and calculation of a production program. The authors cover: 1) production organization in the main sectors of a sintering plant 2) cost planning of the sinter, and 3) organization of production management. The text conatins data on Soviet and non-Soviet sintering practices.

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SOV/133-59-5-1/31

Blending of Iron Ores at Iron and Steel Works

content of ores charged to the furnaces can be reduced to ± 0.5 to ± 0.7%.

There are 6 figures and 2 tables.

ASSOCIATION: Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute)

Card 2/2

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SOV/133-59-5-1/31

AUTHORS: Zaytsev, Kh.P., Docent, Volokh, I.A. and Vorogushina, Z.N.

TITLE: Blending of Iron Ores at Iron and Steel Works (Usredneniye zheleznykh rud na metallurgicheskikh zavodakh)

PERIODICAL: Stal', 1959, Nr 5, pp 385 - 389 (USSR)

ABSTRACT: An investigation of the supply of ores to Ukrainian iron and steel works has been carried out. It was found that averaging the composition of ores by blending is, on the whole, insufficient. Disadvantages, in supplying a given works from a number of mines, are stressed as it was found that in some cases the variability in the composition of ores blended at the works was higher than that of deliveries from a given mine. Non-uniformity in deliveries of ores (in respect to quality and quantity) and insufficient ore stocks at works make blending problems more difficult. At works where the blending of ores is practised, the mean variation in the iron content of the ore burden is maintained within a range of ± 1%. If the deficiencies in the organisation of supplying works with ores are rectified, the variability in the iron

Card1/2

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ZAYTSEV, Kh.P., kand.ekonom.nauk; NASHKEVICH, I.Ye., kand.tekhn.nauk

Operational control and recording of automatic blast-furnace process. Mekh.i avtom.proizv. 16 no.12:47-49 D '62. (MIRA 16:1)

(Blast furnaces)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

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MOSHKEVICH, I.Ye.; ZAYTSEV, Kh.P.; SPASOV, A.A.

Industrial planning in metallurgical plant forge shops. Kuz.-shtam.proizv. 4 no.2:31-33 F '62. (MIRA 15:2)
(Forge shops--Production control)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

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LIKHACHEV, Ye.N.; ZAYTSEV, Kh.P.; MOSHKEVICH, I.Ye.

Improving methods of determining founding costs. Lit.proizv. no.2:9-12 F '62. (MIRA 15:2)

(Founding--Costs)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

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POKHIL'KO, K.D.; DEM'YANTS, L.A.; ZAYTSEV, Kh.P.; MOSHKEVICH, I.Ye.; PUZYR'KOV, P.I.

Centralized manufacture of spare parts for the equipment of metallurgical plants. Metallurg 5 no.2:33-35 F '60. (MIRA 13:5)

1. Dnepropetrovskiy sovnarkhoz i Dnepropetrovskiy metallurgicheskiy institut.
(Metallurgical plants--Equipment and supplies)

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MOSHKEVICH, I.Ye., dotsent, kand.tekhn.nauk; ZAYTSEV, Kh.P., sotsent, kand. ekonom.nauk

Centralized control in blast furnace plants with complete automation of the industry. Stal' 22 no.11:1048-1050 N '62. (MIRA 15:11)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Blast furnaces) (Automation)

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GLIKMAN, E.S., kand. tekhn. nauk; [illegible], Kh.P., kand. ekonomicheskikh nauk

Basic link in the organization of equipment repair. Met. i gornorud. prom. no.6:[illegible] N-D '64. (MIRA 18:3)

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ZAITSEV, K. N.

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ZAYTSEV, K. N.

24128 ZAYTSEV, K. N. Agrotekhnika ozimoy pshenitsy. V sb: Nauch. otchet Bezenchukak. selekts.-opyt. stantsii po agrotekhnike oroshayemogo zemledeliya za 1935-1947 GG (Kuybyshev), 1949, S. 124-38. - Bibliogr: 38 Nazv.

SO: Letopis, No. 32, 1949.

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24129 ZAYTSEV, K. N. Agrotekhnika grovoy pshenitsy. V sb: Nauch. otchet Bezenchuksk. selekts.-opyt. stantsii po agrotekhnike oroshayemogo zemledeliya za 1935-1947 GG. (Kuybyshev), 1949, S. 101-23.-Bibliogr: 73 nazv.

SO: Letopis, No. 32, 1949.

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ZAYTSEV, K. N.

24112 ZAYTSEV, K. N. Effektivnost' zapravochnykh udobreniy. V sb: Nauch. otchet Bezenchuksk. selekts.-opyt. Stantsii po agrotekhnike oroshayemogo zemledeliya za 1935-1947 GG. (Kuybyshev), 1949, S. 86-100. - Bibliogr: 31 nazv.

SO: Letopis, No. 32, 1949.

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24125 ZAYTSEV, K. N. O glubine osnovnoy obrabotki pochvy na obyknovennom chernozeme. V sb: Nauch. otchet Bozenchuksk. selekts.-opyt. stantsii po agrotekhnike oroshayemogo zemledeliya za 1935-1947 gg. (Kuybyshev), 1949, S. 54-61. - Bibliogr: 27 Nazv.

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24124 ZAYTSEV, K. N. Voprosy metodiki polevogo opyta (pri oroshenii). V sb: Nauch. otchet Bezenchuksk. Selekts.-opyt. stantsii po agrotekhnike oroshayemogo zemledeliya za 1935-1947 GG (Kuybyshev). 1949, S. 25-42. Bibliogr: 34 Nazv.

SO: Letopis, No. 32, 1949.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

ZAYTSEV, K. N.

24111. Zaytsev, K. N. Agrometeorologicheskaya kharakteristika zony bezenchukskoy stantsii. V sb: Nauch. otchet Bezenchuksk. selekts. -opyt. Stantsii po agrotekhnike oroshayemogo zemledeliya za 1935-1947 gg. (Kuybyshev), 1949, S. 16-27. - Bibliogr: 11 Nazv.

SO: Letopis, No. 32, 1949.

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S/135/61/000/004/007/012
A006/A101

Welding of the Internal Vinylplastic Shell of a Reinforced Concrete Tank

Figure 5:

Checking of the weld joints on the vinylplastic shell 1 - probes 2 - flaw deterotor

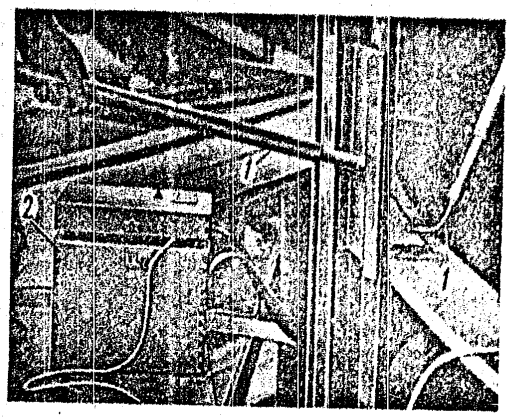

Рис. 5. Контроль сварных швов винипластовой оболочки: 1 — щупы; 2 — дефектоскоп.

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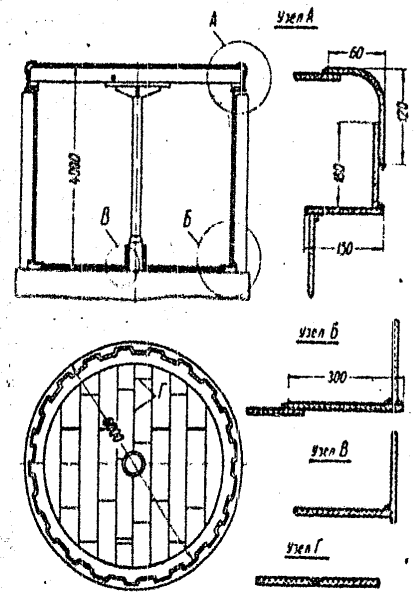
S/135/61/000/004/007/012
A006/A101

Welding of the Internal Vinylplastic Shell of a Reinforced Concrete Tank

Figure 4:

System of abraning the vinylplastic shell in the tank and the design of the welded assemblies.



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A006/A101

Welding of the Internal Vinylplastic Shell of a Reinforced Concrete Tank

Figure 3:

General view of an underground tank with vinylplastic shell prior to applying the gunite-concrete

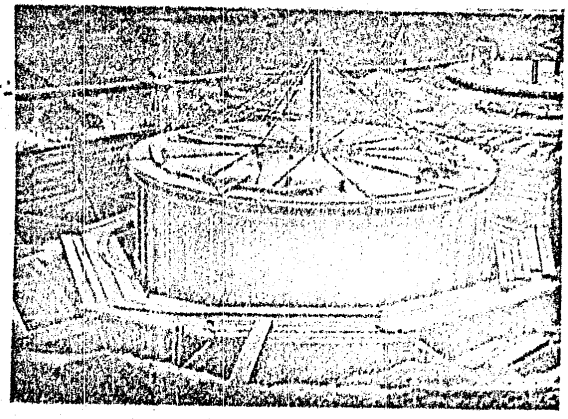

Рис. 3. Общий вид подземного резервуара с винипластовой облицовкой перед нанесением на нее торкрет-бетона.

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Welding of the Internal Vinylplastic Shell of a Reinforced Concrete Tank

Figure 1: General view of the VNIIST-2 unit for welding vinylplastics with hot air and filler rod; 1-air-blast device; 2-regulator; 3-welding burner; 4-auto-transformer.

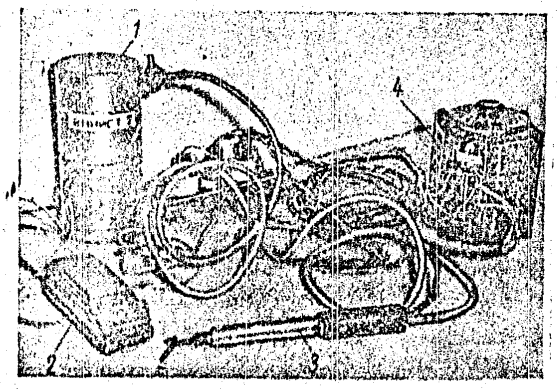
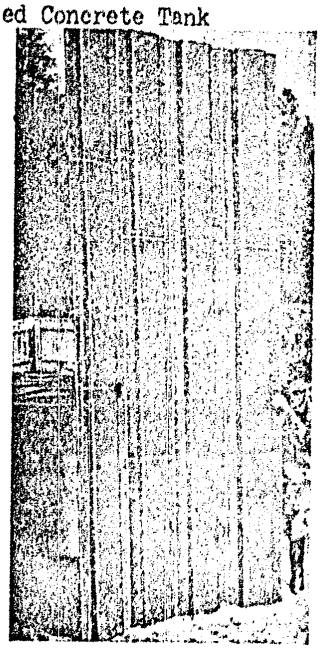


Figure 2: General view of a welded vinylplastic panel



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S/135/61/000/004/007/012
A006/A101

Welding of the Internal Vinylplastic Shell of a Reinforced Concrete Tank

were joined to 1.5 m wide panels, each panel consisting of 3 sheets. (Fig. 2) Furthermore a 350 wide ring was welded on the tank concrete bottom along the perimeter. The panels were joined to each other and were then welded onto the ring. The top of the wall was edged with a vinylplastic strip. (Fig. 3). The reinforced concrete cover of the tank was suspended on a column prior to starting the welding of the shell. After welding, the shell was bandaged with the reinforcement and gunited with the concrete. The plastic shell of the cover was made of non-shaped sheets and welded to the wall through vinylplastic rings. The bottom was insulated with vinylplastic strips previously welded and placed into the tank through an aperture in the cover. Inside the tank the strips were welded into one panel covering the bottom. The tightness of the joints was checked with the UA-B (ID-V) flaw detector designed at VNIIST for this purpose, operating by the electric spark method. (Fig. 5) There are 5 figures.

ASSOCIATION: VNIIST

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Welding of the Internal Vinylplastic Shell of a Reinforced Concrete Tank

ensuring 0.2 atm pressure and 1500 - 1600 l/m air consumption. The ventilator and the motor are located on the same axis and are arranged in the metallic case in such a manner that the air flow cools simultaneously the motor. The welding burner consists of a handle, the heating adapter and an exchangeable nozzle; the air enters the adapter, passes through the straight channels of the ceramic core containing a nichrome electric spiral, and escapes through the nozzle. The burner operates from a-c network at 40 - 50 v voltage and about 350 watt power. The welding process can be conducted by two operators on the VNIIST-3 unit. The best method of joining vinylplastic sheets is the butt welding process with closed chamfering the edges at an angle of 60°, using 3 mm filler rods. The outlet aperture of the burner nozzle should have a diameter of 3 mm; the air flow temperature at a distance of 6 - 8 mm from the nozzle tip should be 180 - 190°C. The temperature is controlled with a chromel-cupel thermocouple and regulated by the auto-transformer. The tightness of the weld joints was tested under 3 atm pressure for 3 days on a special device designed by EKB VNIIST, and in 5-liter-capacity containers filled with gasoline. The strength of welded butts during tension was 0.6 - 0.65 of the base metal strength, i.e., 300 - 325 kg/cm². The sheets

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20228

S/135/61/000/004/007/012
A006/A101

15.8340

AUTHOR: Zaytsev, K. I., Candidate of Technical Sciences

TITLE: Welding of the Internal Vinylplastic Shell of a Reinforced Concrete Tank

PERIODICAL: Svarochnoye proizvodstvo, 1961, No. 4, pp. 25 - 26

TEXT: New types of reinforced concrete tanks for the storage of petroleum and light oil products are being developed at the experimental designing office of VNIIST. For the internal shell of the tanks, 3 mm thick vinyl plastic was employed. The manufacture of such a shell for an experimental underground 100 m^3 capacity tank was carried out in three stages: 1) - preparing the vinylplastic sheets for welding and assembly; 2) - welding of the panels and 3) mounting the shell in the tank. Prior to welding the vinylplastic sheets were crimped on a special press designed at VNIIST and prior to pressing preheated in a thermostat for 4 - 6 minutes at 120 $\pm$ 5°C until uniform softening. Welding was carried out with hot air using filler rods, on a special welding machine (VNIIST-2) (Figure 1) composed of air-blast device 1, with regulator 2, welding burner 3 and autotransformer 4. The air blast device is a two-stage ventilator rotated by a motor and

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ZAYTSEV, K.I., kand.tekhn.nauk

Welding of internal vinyl plastic shells for reinforced concrete tanks. Svar. proizv. no.4:25-27 Ap '61. (MIRA 14:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po stroitel'stvu magistral'nykh truboprovodov.
(Plastics--Welding) (Tank vessels)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

ZAYTSEV, K.I., assistent

Explosion piercing of holes in manufacturing railroad cars. Izv. vys.ucheb.zav.; mashinostr. no.4:161-167 '61. (MIRA 14:6)

1. Khar'kovskiy aviatsionnyy institut.
(Forging)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

32242

Explosion piercing of holes in ... S/145/61/000/004/006/008
D221/D301

cessitated special tooling for these jobs. The silencers suppress the noise of the explosion and meet the requirements of safety regulations. There are 5 figures, 3 tables and 5 Soviet-bloc references.

ASSOCIATION: Khar'kovskiy aviatsionnyy institut (Khar'kov Aviation Institute)

SUBMITTED: October 7, 1960

X

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

silencer. It is a high efficiency tool, permitting the piercing of 3-4 holes of 21 mm diam. in 18 mm thick components, per minute. The experiments have demonstrated that 1.5 - 3 grams of powder are sufficient for piercing with a punch weighing 0.85 kg. A press of 30-50 tons would be required for conventional punching, whereas the explosive tool weighs only 25 kg. The results of tests are tabulated. The retrieval of the punch is easy as a penetration to approximately 1/2 - 1/3 of the thickness is required for pushing out the slug. Investigation demonstrated the expediency of conical punches which increase the accuracy of pierced holes. The clearance with the die should be 3 - 10 % of the thickness of the material. The punch has a two-end working design and its taper permits many regrinds.. The diversity of work did not allow calculation of the tool life. The basic dimensions of the punch in relation to the work are quoted. The zone near the hole rim was examined under a МИМ-8м (MIM-8m) microscope, and no cracks were noticed. Consequently the high-speed piercing localizes the deformation of the material, and the strength characteristics of components are improved. The particular conditions of railroad car construction ne-

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S/145/61/000/004/006/008
D221/D301

1.1110

AUTHOR: Zaytsev, K.I., Assistent

TITLE: Explosion piercing of holes in the manufacturing of railroad cars

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroyeniye, no. 4, 1961, 161 - 167

TEXT: Investigation of the explosive piercing of holes in thick plates by the method which bears the registration certificate no. 17,666, dated December 31, 1959, given to V.G. Kononenko and K.I. Zaytsev, is described. The various steels used during the experiments are tabulated. The characteristic of the process, namely the speed of the punch, was measured by a specially designed electronic circuitry, quoted by the above inventors (Ref. 2: Vzryvnaya besshumnaya probivka otverstiy (Noiseless Piercing of Holes by Explosion), Kuznechno-shtampovochnoye proizvodstvo, no. 12, 1959). On the basis of the study, a transportable prototype hammer was manufactured. The charge is placed in a chamber provided with a

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S/182/62/000/002/004/006
D038/D112

The design and calculation .....

heat treated to RC 52-56 hardness. The authors conclude that the high-speed punching unit is more durable than conventional perforating dies. Descriptive technical data is also included. S.I. Gubkin, S.D. Ponomarev and A.V. Gadolin are mentioned. There are 7 figures and 10-Soviet-bloc references.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

S/182/62/000/002/004/006
D038/D112

AUTHORS: Kononenko, V.G. and Zaytsev, K.I.

TITLE: The design and calculation of equipment for explosive hole punching

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, no. 2, 1962, 20-25

TEXT: The article deals with the results of investigations on high-speed explosive hole punching, during which it was demonstrated that together with fine technological indices, i.e. high precision and quality of punching, satisfactory tool stability and absence of cracks, the process possesses fine power indices. The punching unit, used in machine-building plants, comprises: a cartridge chamber with a lock, a barrel, a silencer, frames, and male and female dies. It weighs about 25 kg and has a 50-15 cm capacity. The following gunpowder grades can be used in it: pyroxylin, nitroglycerin and black powder. A 2 g gunpowder charge punches a hole up to 25 mm diam in 15-18 mm thick plate. A special installation developed on a ШИ-1 (SHI-1) noise tester provided with radio electronic equipment (Registration Certificate No. 23631 issued to the authors and D.A. Rayzman) was used in noise measurement tests. The punches and dies can be manufactured from У8А (U8A) tool steel

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ZAYTSEV, K.I., kand.tekhn.nauk

Welding of polyvinyl chloride films in the process of assembling. Svar. proizv. no.9:26-27 S '61. (MIRA 14:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov.

(Plastics--Welding)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

S/081/62/000/001/062/067
B119/B101

AUTHORS: Zaytsev, K. I., Samarina, G. P.

TITLE: Welding of a combined polyamide polyethylene film reinforced with caprone

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 1, 1962, 511, abstract 1P49 (Str-vo truboprovodov, no. 7, 1961, 30 - 31)

TEXT: The welding technology for the combined film and the ПС-1 (PS-1) press used for welding are described. [Abstracter's note: Complete translation.]

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KONONENKO, V.G.; ZAYTSEV, K.I.

Design and calculation of equipment for the explosion piercing of holes. Kuz.-shtam.proizv. 4 no.2:20-25 F '62. (MIRA 15:2)

(Sheet-metal work)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

ZAYTSEV, K.I., inzh.

Investigating and using explosion piercing. Mashinostroenie no.2: 40-42 Mr-Ap '62. (MIRA 15:4)

1. Khar'kovskiy aviatsionnyy institut.
(Drilling and boring)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

ZAYTSEV, K.I.; KRAYZEL'MAN, A.M.

The PAU mobile motor-mounted welding unit. Biul.tekh.-ekon. inform. no.1:20-22 '62. (MIRA 15:2)
(Electric welding--Equipment and supplies)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

S/182/62/000/012/004/005
D040/D112

AUTHOR: Zaytsev, K.I.

TITLE: Investigation of high-speed (explosive) punching with a rigid punch

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, no.12, 1962, 22-26

TEXT: Generalized data on the explosive punching process are presented on the basis of studies and the introduction of the process into the machinebuilding industry. Studies had been conducted in punching various steel grades, duralumin, B95 (V95) alloy and other metals with punch speeds of up to over 35 m/sec. The data include the laws of metal behavior at the punch, calculations of stress and strain, an equation for determining the optimum powder charge, and a practical example explaining the calculation of the basic process parameters. The calculation example is for the case of punching 21 mm holes in grade 45 steel of 12, 10, 8 and 5 mm thickness with a punch weighing 900 g and a 0.45 mm gap between the punch and the die. There are 2 figures and 4 tables.

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A006/A101

1.2300

2209

AUTHORS: Zaytsev, K. I., Candidate of Technical Sciences, Stolyarenko, V. D., Engineer, Mamontov, L. V., Technician

TITLE: Automatic machine for welding vinylplastics

PERIODICAL: Svarochnoye proizvodstvo, no. 2, 1963, 38

TEXT: Considering the low efficiency and labor consuming operations in welding plastic sheets with the use of rods, a machine was designed at VNIIST, for welding rigid thermoplastic sheets without rods. Thin sheets are overlap-welded without preparation; the edges of sheets over 2 mm thick are beveled at an angle of 65 - 70°. Hot air is supplied to the gap between the sheets at the overlap spot; as the surface of the sections to be welded softens to viscous state, the sheets are compressed and connected. The machine is intended to produce straight seams on 1.5 - 2.0 mm thick sheets. The welding speed depends upon the heat conditions, the sheet thickness, the overlap and the pressure, and may vary between 9.5 to 63.0 m/h. The weld joints show satisfactory strength. Their tightness corresponds to that of the base material. There is 1 figure.
ASSOCIATION: VNIIST

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ZAYTSEV, K.I.

Investigating high speed (explosive) hole punching with use of a hard punch. Kuz.-shtam.proizv. 4 no.12:22-26 D '62.
(MIRA 16:1)

(Explosives in sheet-metal work)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

ZAYTSEV, K.I., kand.tekhn.nauk; STOLYARENKO, V.D., inzh.; MAMONTOV, L.V., tekhn.

Machine for the automatic welding of vinyl plastics. Svar. proizv. no.2:38 F '63. (MIRA 16:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov.
(Plastics—Welding)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

ZAYTSEV, K.I., kand. tekhn. nauk

Welding of reinforced film. Svar. proizv. no.8:21-23 Ag '64. (MIRA 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po stroitel'stvu magistral'nykh truboprovodov.

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ZAYTSEV, K.I., kand. tekhn. nauk; SHAMOVSKIY, E.Kh., kand. tekhn. nauk; TAMPOL'SKIY, D.Z., inzh.; GORBAN', P.N., inzh. (gorod Zlatoust).

Consultations. Svar. proizv. no.1:47-48 Ja '65.

(MIRA 18:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po stroitel'stvu magistral'nykh truboprovodov (for Zaytsev). 2. Sibirskiy metallurgicheskiy institut (for Shamovskiy).

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

ZAYTSEV, K.I.

Deformations in welding synthetic films with the use of hot presses. Avtom. svar. 18 no.10:31-34 O '65.

(MIRA 18:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po stroitel'stvu magistral'nykh truboprovodov.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

ZAYTSEV, K.I.

Joining pipes from polymer materials. Strot. truboprov. 10 no.9:4-6 S '65. (MIRA 18:9)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

ACCESSION NR: AP4043483

ASSOCIATION: VNIIST

SUBMITTED: 00

SUB CODE: MM, MT

NR REF SOV: 000

ENCL: 00

OTHER: 000

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

ACCESSION NR: AP4043483 S/0135/64/000/008/0021/0023

AUTHOR: Zaytsev, K. I. (Candidate of technical sciences)

TITLE: Welding of reinforced coatings

SOURCE: Svarochnoye proizvodstvo, no. 8, 1964, 21-23

TOPIC TAGS: reinforced plastic coating, welding, polymeric material, clad metal

ABSTRACT: The paper deals with the development of the technology of welding of a plastic layer consisting of polyamide, rubber, and polychlorvinyl reinforced with glass fiber. Such reinforced layer was found to be stable and applicable not only for hermetization of containers, but also, to some extent, in a construction experiencing a load, and for containers made of reinforced concrete. The methods of welding are discussed. The welds were tested for strength in various liquid media (gasoline, oil, water) and found that the weld strength did not change with time if tested under gasoline. There is a reduction of strength of about 15% in water. Orig. art. has: 3 figures.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001964100027-6

S/147/59/000/04/020/020
E031/E413

AUTHOR: Zolotukhin, V.K.

TITLE: The Scientific-Technical Conference at Khar'kov Aviation Institute

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Aviatsionnaya tekhnika, 1959, Nr 4, pp 161-163 (USSR)

ABSTRACT: In May 1959, the 16th Conference of Professorial and Teaching Staff took place.

Card 8/11 The Technology of Aircraft Construction and Metal Working Section. "A New Model of the Plasticity of Metals" by Instructor, Candidate of Technical Sciences Yu.N.Alekseyev; "The Forging Extrusion of Large Components from Sheet Metal" by Aspirant A.P.Barsukov; "On the Problem of Constructing Second Order Curves in Aircraft Construction" by Senior Instructor M.A.Zaydenverg; "The Electric Contact Welding of Thin Pieces of Metal" by Assistant N.M.Tarasov; "The Influence of Plastic Deformation on the Properties of Austenitic Stainless Steel at Various Temperatures" by Assistant N.V.Pisareva; "The Deformation of Non-Ferrous Metals and Alloys at Low Temperatures" by Assistant E.N.Lyalishev; "The Investigation of Phase Changes in Austenitic Steels Previously Deformed at Below Freezing Point Temperatures" by Candidate of Technical Sciences A.N.Chukhleb and Aspirant V.P.Martynov; "The Influence of the Temperature and Velocity of Deformation on the Phase Changes of Austenitic Steels" by Candidate of Technical Sciences A.N.Chukhleb and Fellow V.P.Martynov; "The Determination of Optimum Technical Grouping in the

Card 9/11 Design and Production of Aircraft" by Assistant Yu.A.Boborykin; "On the Use of Explosives in the Technology of Drop Forging" by Assistant K.I.Zavtsev; "Welding by Friction" by Assistant N.P.Ostrovskiy. Structure of Aircraft Section. "On the Problem of Protecting the Structure of Aircraft from Aerodynamic Heating" by Docent P.V.Dybskiy; "Passive Methods of Protection from Aerodynamic Heating" by Candidate of Technical Sciences F.G.Yesipenkiy; "The Influence of the Parameters of a Thermally Isolated Packet on Heat Transfer Characteristics" by Assistant A.A.Kobylyanskiy; "Aircraft Structures Made from Fibreglass Sheets" by Docent, Candidate of Technical Sciences S.I.Kuz'min; "An Apparatus for Investigating Repeated Static Loading and High Temperatures" by Assistant L.A.Malashenko; "The Approximate Calculation of the Weight Taking into Account the Technical Features of the Aircraft Structure" by Candidate of Technical Sciences L.D.Arson; "The Determination of Stresses in a Shell as a Result of Riveting" by Assistant

Card 10/11 Yu.G.Fursa; "The Ultrasonic Altimeter (Sounding Device)" The Scientific-Technical Conference at Khar'kov Aviation Institute and "The Radio-Control and Autopilot of an Experimental Model" by Engineer L.F.Teplov.

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Some Ways of Raising the Efficiency and Quality of the Pipe Welding in the Laying Pipelines The Experience of Welder-Innovators.

and winding the welding wire, heating and drying the butts in the work process, preparing the butts, deslagging, etc.) must be organized.

ASSOCIATION: VNIIST

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Some Ways of Raising the Efficiency and Quality of the Pipe Welding in Laying Pipelines. The Experience of Welder-Innovators.

work rate raise is limited by the power of the welding generators, permitting no more than 600 amps. The existing auxiliary equipment design (rotators, roller supports) must be improved. Remote control systems must be provided for the welding sets, and such processes as slag removal or chipping out the faulty weld spots must be mechanized. An editorial note to the article says that the major obstacle in the raising of the work efficiency in the field is the complete lack of care for the mechanization of the auxiliary operations, and the work conditions of the pipeline construction could be considerably improved. The quality of the roller supports could be better, and the costs thereof lower. Centralized production of auxiliary equipment and tools (for cleaning

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Some Ways of Raising the Efficiency and Quality of the Pipe Welding in Laying Pipelines
The Experience of Welder-Innovators.

such control circuit (built by operator S.V. Mankevich) eliminates the inertia and has been tested at VNIIST. In it, the generator excitation winding rheostat is placed directly on the control panel of the semi-automatic welding machine, and the operator can widely vary the welding current strength. It has roller supports (Fig 2) with long rollers and a two-arm yoke supporting the rollers and coupled with a spring making the roller roll smoothly along the longitudinal welding seam and preventing the shifting of the seam off the roller, and the sliding of the pipe. Another roller support design includes a spring which lifts automatic stops when a pipe section comes rolling on the supports with an impact, and fixes the yoke in its work position. Information is also given on the methods of welding the rotatable and the non-rotatable pipe joints used on the gas main, i.e. the automatic welding process for the rotatable joints, and semi-automatic where the pipes cannot be rotated. Some operators complete one non-rotatable joint in 50-55 minutes (the norm for such a joint on 720 mm pipes is 2.4 hours). It is said that a further

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AUTHOR: Zaytsev, K.I., Candidate of Technical Sciences

TITLE: Some Ways of Raising the Efficiency and Quality of the Pipe Welding in Laying Pipelines (Nekotoryye puti povysheniya proizvoditel'nosti i kachestva svarki trub pri sooruzhenii magistral'nykh gazoprovodov) The Experience of Welder-Innovators (Iz opyta svarshchikov-novatorov)

PERIODICAL: Svarochnoye proizvodstvo, 1959, Nr 3, pp 8-10 (USSR)

ABSTRACT: Information is given on the methods used by some welders in the construction of the 720 mm diameter gas main Stavropol' - Moscow, where they are using the "PT-56" semi-automatic welding unit and a pipe-rotation stand for pipe sections 36-48 meters in length, achieving 50-60 butt joints per work day (the work rate norm being 17-18 butt joints per day). An illustration is given of a remote control circuit used (Fig 1) by which an operator can change the welding current of a generator with a toggle switch placed on the welding head control panel. The generator, standing at a distance of 35-40 meters, has considerable inertia. Another

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KOMONENKO, V.G.; ZAYTSEV, K.I.

Hole piercing by means of noiseless detonation. Kuz.-shtam. proizv. 1 no.12:15-18 D '59. (MIRA 13:4)
(Punching machinery)

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