LYSENKO, YU. A.
USSR/Chemistry

Card 1/1

Authors : Lysenko, Yu. A., Osipov, O. A., and Feodosy'ev, N. N.

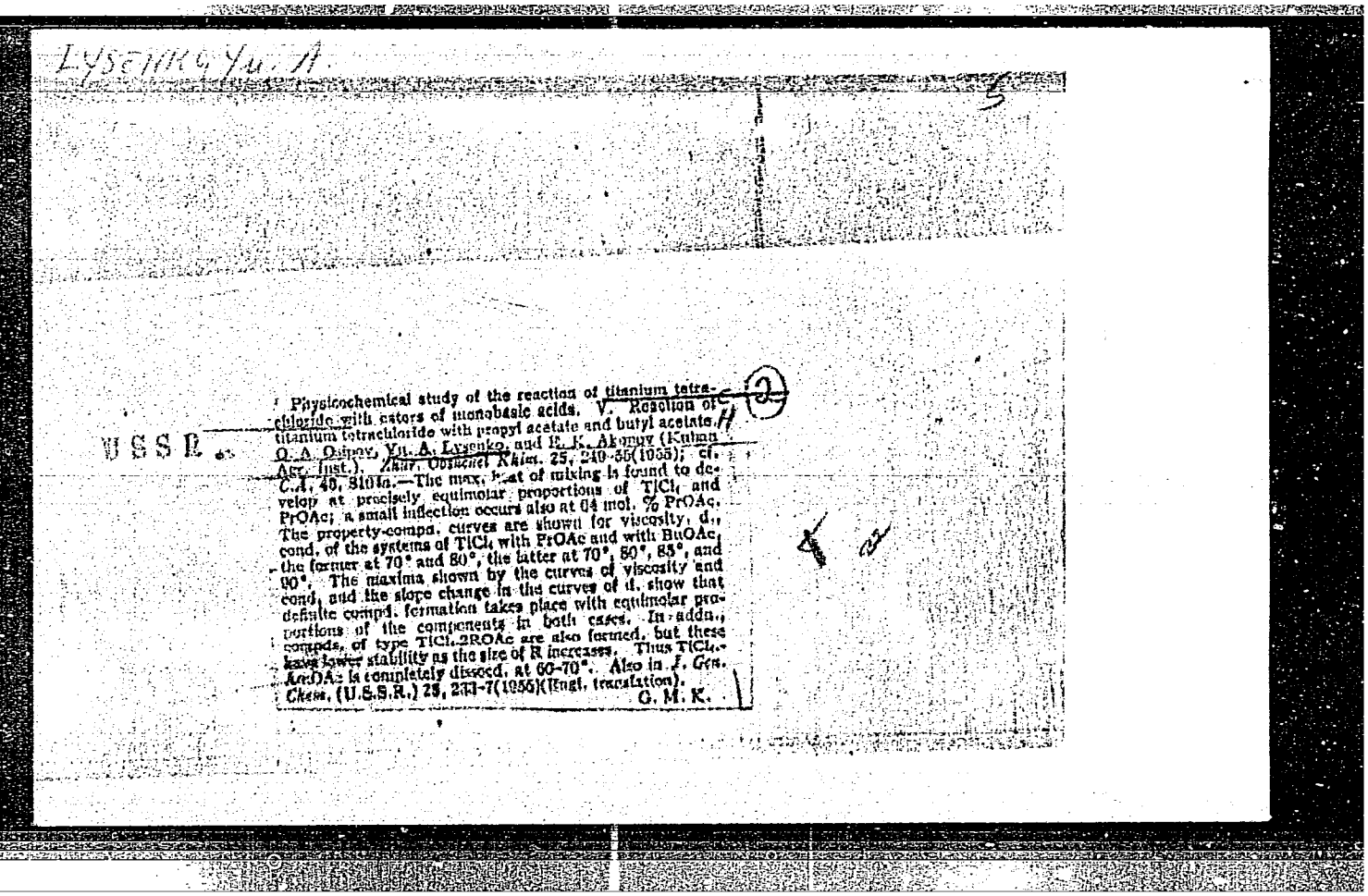
Title : Blending Temperatures for Systems Formed by a Titanium Tetrachloride with Ethylacetate and n-Butylacetate.

Periodical : Zhur. Fiz. Khim. Vol. 28, Ed. 4, 700-702, Apr 1954

Abstract : Formulas and calculation of the blending temperatures for $TiCl_4$ - $CH_3COOC_2H_5$ and $TiCl_4$ - $CH_3COOC_4H_9$ systems. According to the author of this article the heat effect in the $TiCl_4$ - $CH_3COOC_2H_5$ system is significantly higher than in the $SnCl_4$ - $CH_3COOC_2H_5$ system (8.93 kcal/mole as compared to 5.67 kcal/mole). Six references; graphs.

Institution : Rostov State University.

Submitted : June 26, 1953

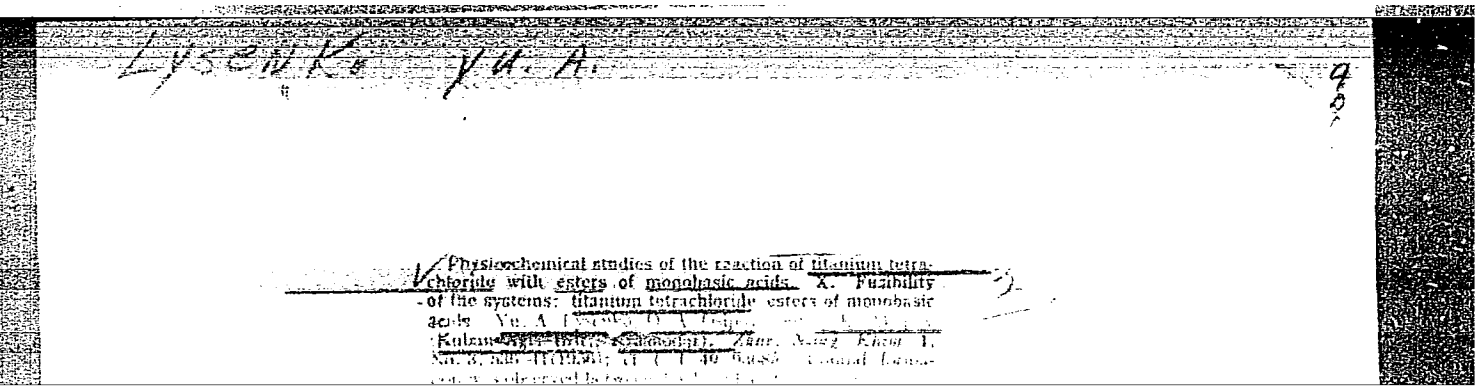


Lysenko, Yu. N.

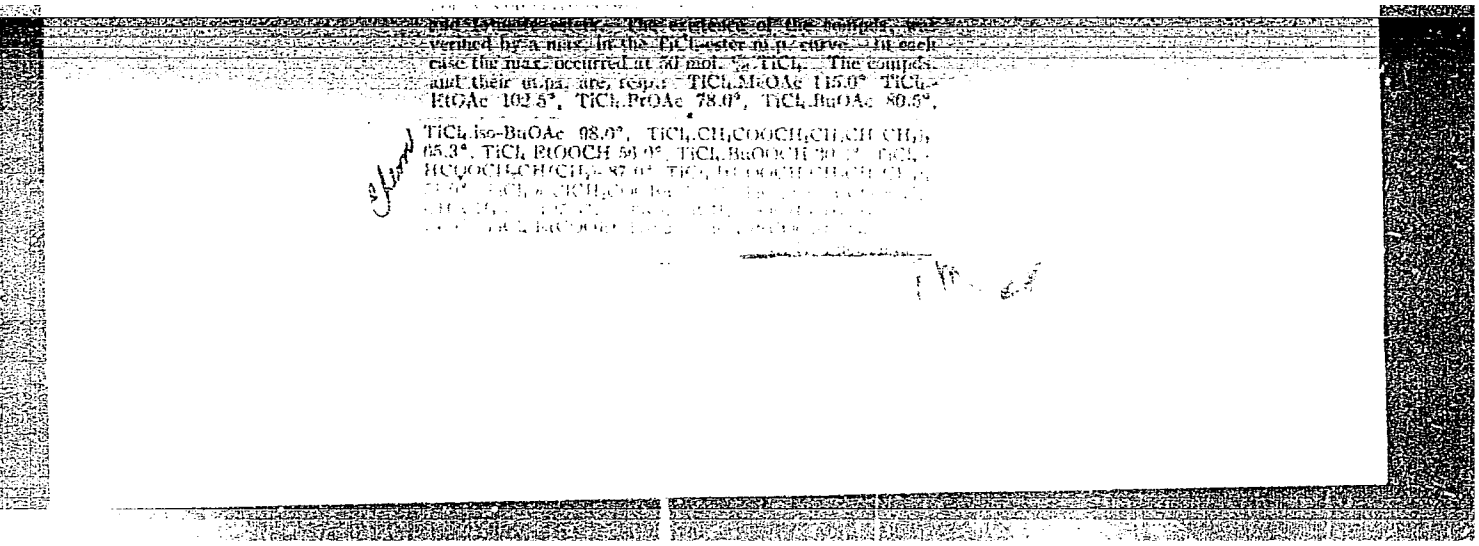
USSR

Physicochemical study of the reaction of titanium tetrachloride with esters of monobasic acids. V. Reaction of titanium tetrachloride with propyl acetate and butyl acetate. // O. A. Osipov, Yu. A. Lysenko, and R. K. Akopov (Kuban Agr. Inst.). *Zhur. Obshchei Khim.* 25, 240-55(1955); cf. *C.A.* 49, 3101a.—The max. heat of mixing is found to develop at precisely equimolar proportions of $TiCl_4$ and PrOAc; a small inflection occurs also at 64 mol. % PrOAc. The property-compn. curves are shown for viscosity, d., cond. of the systems of $TiCl_4$ with PrOAc and with BuOAc, the former at 70° and 80°, the latter at 70°, 80°, 85°, and 90°. The maxima shown by the curves of viscosity and cond. and the slope change in the curves of d. show that definite compd. formation takes place with equimolar proportions of the components in both cases. In addn., compds. of type $TiCl_4 \cdot 2ROAc$ are also formed, but these have lower stability as the size of R increases. Thus $TiCl_4 \cdot 2AmOAc$ is completely dissocd. at 60-70°. Also in *J. Gen. Chem.* (U.S.S.R.) 25, 233-7(1955)(Engl. translation).

G. M. K.



Physicochemical studies of the reaction of titanium tetrachloride with esters of monobasic acids. X. Fusibility of the systems: titanium tetrachloride-esters of monobasic acids. Yu. A. [illegible]



LYSENKO, Yu. A.

Physicochemical study of the reaction of titanium tetrachloride with esters of monobasic acids. VIII. Reaction of titanium tetrachloride with [illegible] formate and isoamyl formate. Yu. A. Lysenko. *Zhur. Obshchei Khim.* 26, 2963-8(1956); [illegible] — Detn. of the viscosity, d., and cond. at [illegible], 50°, 60°, and 70° showed the existence in the corresponding binary systems of complexes of compds. as follows: [illegible] $TiCl_4 \cdot 2HCO_2Bu$, $TiCl_4 \cdot$ iso-AmO_2CH, and $TiCl_4 \cdot 2HCO_2CH_2CH_2CHMe_2$. The 1:2 complexes are somewhat more stable than the corresponding ones with esters of AcOH. Isotherms are shown.

G. M. Kosolapoff

LYSENKO, Yu. A.

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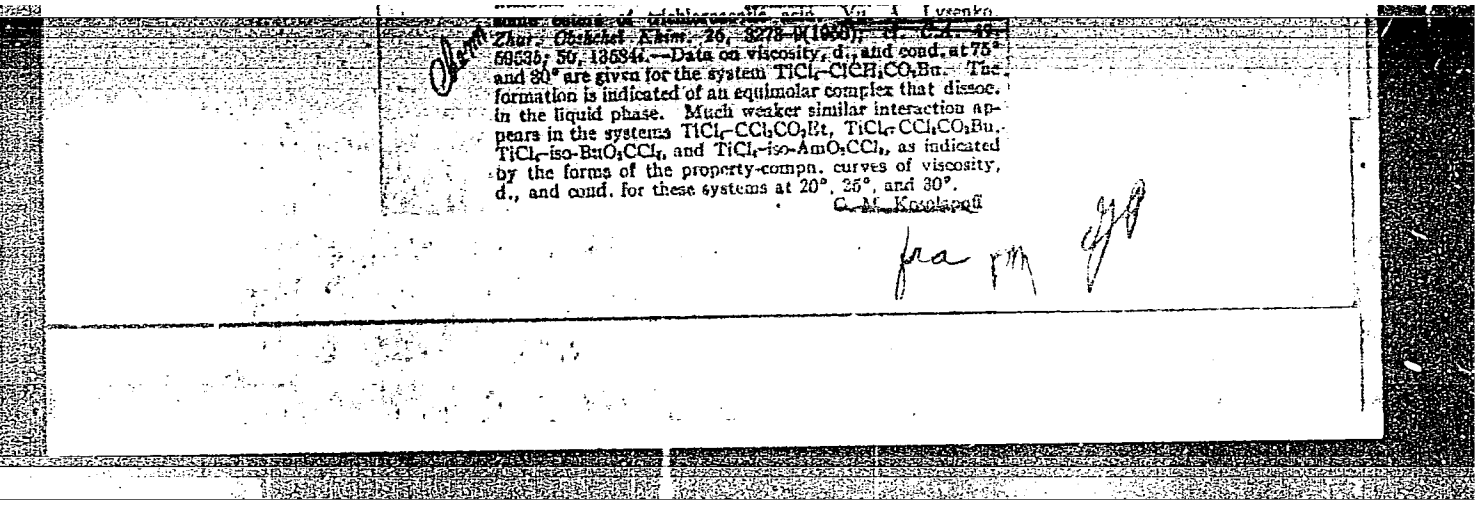
Physicochemical study of interaction of titanium tetrachlorides with esters of monobasic acids. IX. Reaction of titanium tetrachloride with butyl chloroacetate and with some esters of trichloroacetic acid. Yu. A. Lysenko. *Zhur. Obshchel Khim.* 26, 3278-9(1956); cf. CA. 49, [illegible]. Data on viscosity, d., and cond. at 75°



Zhur. Obshchei Khim., 26, 3278-9(1956); cf. C.A. 49, 5953b; 50, 13584d.—Data on viscosity, d., and cond. at 75° and 80° are given for the system $TiCl_4$–$ClCH_2CO_2Bu$. The formation is indicated of an equimolar complex that dissoc. in the liquid phase. Much weaker similar interaction appears in the systems $TiCl_4$–CCl_3CO_2Et, $TiCl_4$–CCl_3CO_2Bu, $TiCl_4$–iso-BuO_2CCl_3, and $TiCl_4$–iso-AmO_2CCl_3, as indicated by the forms of the property-compn. curves of viscosity, d., and cond. for these systems at 20°, 25°, and 30°.

C. M. Knolapoff

AUTHORS: Osipov, O.A., Lysenko, Yu.A. 30V/78-3-7-23/44

TITLE: XI. The Electrolysis of Tetrachlorotitanium Compounds With Some Esters of Monobasic Acids (XI. Elektroliz soyedineniy chetyrekhkhloristogo titana s nekotorymi efirami odnoosnovnykh kislot)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol. 3, Nr 7, pp. 1605-1607 (USSR)

ABSTRACT: In the course of the present paper the results obtained by the electrolysis of the solutions of titanium-(IV)-chloride in n-butyl-formiate, isoamylacetate, ethyl acetate, and ethyl formiate are investigated. Graphite, and, in some cases, platinum and silver were used as material for electrodes. In the course of electrolysis there is a black precipitation at the cathode in the case of all experiments, in which the ratio between titanium and chlorine is 1 : 3. At the anode a product is separated in the case of which the ratio between titanium and chlorine is 1 : 4. On the strength of these investigations it is assumed that at the cathode $TiCl_2$ is first separated which is reduced with $TiCl_4$ to $TiCl_2$. The formation of $TiCl_2$ is characterized by the fact that at first

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XI. The Electrolysis of Tetrachlorotitanium Compounds With Some Esters of Monobasic Acids SOV/78-3-7-23/44

a yellowish-brown precipitation is formed on the cathode. The results obtained confirm the scheme of the electrolytic dissociation of titanium-(IV)-chloride in complex esters as described in earlier works. There are 1 table and 9 references, 8 of which are Soviet.

SUBMITTED: June 17, 1957

1. Titanium compounds--Electrolysis 2. Titanium compounds --Separation 3. Titanium compounds--Precipitation 4. Titanium compounds--Test results

Card 2/2

AUTHORS: Lysenko, Yu. A., Osipov, O. A. SOV/79-28-7-2/64

TITLE: The Investigation of the Conversion of Titanium Chloride With the Esters of Monobasic Acids (Issledovaniye vzaimodeystviya chetyrekhkhloristogo titana so slozhnymi efirami odnoosnovnykh kislot) XII. On the Decomposition of $TiCl_4$.E Compounds(XII. O razlozhenii soyedineniy $TiCl_4$. E)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 7, pp. 1724 - 1727 (USSR)

ABSTRACT: Earlier (Refs 1-6) the author found that the titanium chloride dissolved in the esters of monobasic acids forms compounds of the composition $TiCl_4$.E and $TiCl_4$.2E(where E denotes the ester molecule), with the products $TiCl_4$.E in the liquid phase being stable within a wide temperature interval. Although the data obtained by the authors point to a very stable reaction of most of the esters to $TiCl_4$ (Refs 1-6) the data presented in papers (Refs 8-15) on the decomposition of the ethers and esters in the presence of aluminium halides (and other metal halides) permit to assume that similar reactions must take place

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with some ester compounds of titanium chloride. Proceeding from the experimental results concerning the decomposition of the aluminium esters (Refs 12 - 14) it may be assumed that the decomposition of titanium chloride with esters takes place in such a case where the ester reacting with it consists of a radical of a strong acid and an alcohol radical of minor electronegative character; this is especially the case with isopropyl formiate, benzyl formiate and others; with compounds of titanium chloride and the corresponding esters of trichloro-acetic acid, where the tendency to decompose must be greater. According to the conceptions on the polarization it would have to be expected that of the compounds $TiCl_4 \cdot 2E$, $TiCl_4 \cdot E$ and $2TiCl_4 \cdot E$ the two latter display the greatest tendency to decompose. Thus, the results of the conversion experiments of titanium chloride with the above mentioned esters are mentioned and the authors determined that the data of Demarcay (Ref 7) (Demarse) on the compounds $2TiCl_4 \cdot E$ in liquid phase did not stand up to their checking. It was found that $TiCl_4$ with the

The Investigation of the Conversion of Titanium Chloride With the Esters of Monobasic Acids. XII. On the Decomposition of $TiCl_4$.E Compounds SOV/79-28-7-2/64

esters of trichloroacetic acid and benzoic acid yields compounds of the composition 1:1. The presence of the compounds $2TiCl_4$.E in solid phase was proved as well as the instability of the binding of the second molecule of titanium chloride with the ester $TiCl_4$.E. There are 2 tables and 22 references, 18 of which are Soviet.

ASSOCIATION: Kubanskiy sel'skokhozyaystvennyy institut (Kuban' Agricultural Institute)

SUBMITTED: June 17, 1957

1. Titanium chlorides--Decomposition 2. Monobasic acid esters --Chemical reactions

Card 3/3

LYSENKO, Yu. A., Candidate of Chem Sci (diss) -- "Investigation of the interaction of titanium tetrachloride with the complex esters of monobasic acids". Krasnodar, 1959. 14 pp (Rostov State U, Chair of Inorganic Chem), 150 copies (KL, No 21, 1959, 112)

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86494
S/078/60/005/008/030/031/XX
B023/B066

AUTHORS: Osipov, O. A., Lysenko, Yu. A.

TITLE: Heat of Formation of Esterates of Titanium Tetrachloride

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 8, pp. 1840-1845

TEXT: The authors investigated the heats of mixing of the systems: $TiCl_4$ - iso-$CH_3COOC_5H_{11}$; $TiCl_4$-sec-$CH_3COOC_8H_{11}$; $TiCl_4$ - n-$HCOOC_4H_9$; and $TiCl_4$- iso-$HCOOC_5H_{11}$. On the basis of the results obtained per g-mole, also the chemical nature of each component may be determined. For systems in which chemical processes take place, the interaction between the components is clearly seen if the thermal effects per g-mole of each component are calculated (Figs.1-4, Tables 1-4). Further investigations of the authors confirm the hypothesis according to which compounds of the type $2TiCl_4.E$ (E = ester) are not formed in the liquid phase. It was shown that in the compounds $TiCl_4.E$,

titanium has the coordination number 5, with the ester oxygen of the ester molecule being the principal electron donor. There are 4 figures, 5 tables, and 11 references: 9 Soviet and 2 German.

SUBMITTED: March 31, 1959

Legend to Fig. 1: Heats of mixing in the system $TiCl_4$ - $i\text{-}C_5H_4OOCCH_3$, kcal/mole; 1: thermal effects of $TiCl_4$; 2: thermal effects of the ester; 3: thermal effects of the mixture.
Legend to Fig. 2: Heats of mixing in the system $TiCl_4$ - $sec\text{-}C_8H_{17}OOCCH_3$, kcal/mole; for 1,2,3 see Fig. 1.
Legend to Fig. 3: Heats of mixing in the system $TiCl_4$ - $n\text{-}C_4H_9OOCH$, kcal/mole; for 1,2,3 see Fig. 1.
Legend to Fig. 4: Heats of mixing in the system $TiCl_4$ - $i\text{-}C_5H_{11}OOCH$, kcal/mole; for 1,2,3 see Fig. 1.

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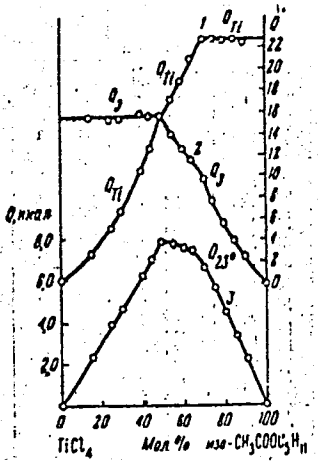

Рис. 1. Теплоты смешения системы $TiCl_4$ — изо-$C_5H_4OOCCH_3$, *ккал/г-моль*

1 — тепловые эффекты четыреххлористого титана; *2* — тепловые эффекты эфира; *3* — тепловые эффекты смеси

Card 3/6

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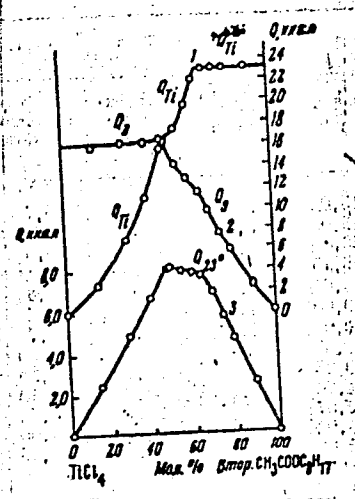

Рис. 2. Теплоты смешения системы $TiCl_4$ — втор-$C_8H_{17}OOCCH_3$, *ккал/г-моль*.

1 — тепловые эффекты четыреххлористого титана; *2* — тепловые эффекты эфира; *3* — тепловые эффекты смеси

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B023/B066

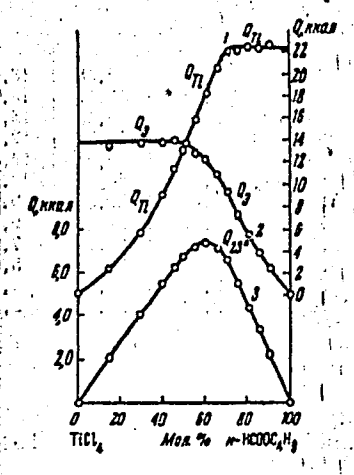

Рис. 3. Теплоты смешения системы $TiCl_4$—н-C_4H_9OOCH, *ккал/г-моль*.

1 — тепловые эффекты четыреххлористого титана; *2* — тепловые эффекты эфира; *3* — тепловые эффекты смеси

Card 5/6

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B023/B066

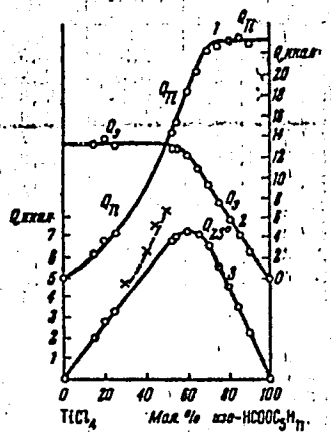

Рис. 4. Теплоты смешения системы: $TiCl_4$ — изо-$C_5H_{11}OOCH$, *ккал/г-моль*.

1 — тепловые эффекты четыреххлористого титана; *2* — тепловые эффекты эфира; *3* — тепловые эффекты смеси

Card 6/6

S/079/60/030/012/002/027
B001/B064

AUTHORS: Osipov, O. A. and Lysenko, Yu. A.

TITLE: Electrical Properties of the Systems Formed From Titanium Tetrachloride and Esters of Trichloro Acetic Acid

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 12, pp. 3866-3869

TEXT: This paper gives the dielectric constants of the systems of $TiCl_4$ with ethyl trichloro acetate, n-butyl trichloro acetate, isobutyl trichloro acetate, isotrichloro amyl acetate, and the dipole moments of some etherates $TiCl_4 \cdot E$, where E is the molecule of the ester. All determinations were carried out by previous methods (Refs. 1, 3, 5) at $20 \pm 0.1^{\circ}C$. Tables 1-4 show the dielectric constants (ε), densities (d), refractive indices n_D, as well as the values of the orientation polarization and the mean dipole moments of the systems of $TiCl_4$ and the four esters of trichloro acetic acid. The two last columns of the table show the deviations of the dielectric constants and polarization from the additive values.

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Electrical Properties of the Systems Formed From Titanium Tetrachloride and Esters of Trichloro Acetic Acid

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Orientation polarization and dipole moment were determined by an equation suggested by the authors (Ref. 6). This equation shows the relation between the dielectric constant of the pure polar liquid and its dipole moment. In the case of binary liquid systems, this equation reads:

$$(4/3)\pi N \Sigma\mu^2/3kT = P^{or} = \left\{\left[M_1 x_1 + M_2(1-x_1)\right]/\alpha\right\}\left\{\left[(\varepsilon-1)(\varepsilon+2)\right]/8\varepsilon\right\} - \left\{\left[(n^2-1)(n^2+2)\right]/8n^2\right\}$$

, where $\Sigma\mu$ is the mean dipole moment; x_1 is the molar part of the first component; M_1 and M_2 are the molecular weights of the components; ε, d, and n = dielectric constant, density, refractive index of the system; P^{or} = orientation polarization of the solution. The data of Table 5 show that the introduction of chlorine atoms in the acid radical of the ester entails a considerable reduction of the dipole moment of the complexes with $TiCl_4$. The dielectric constants and the orientation polarization show that in the trichloro acetates of $TiCl_4$ solutions, strongly dissociated compounds, of equimolar composition form at 20°C. The dipole moments obtained are between 2.48 and 2.60 D, a magnitude usual for

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Electrical Properties of the Systems Formed From Titanium Tetrachloride and Esters of Tri-chloro Acetic Acid

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members of a homologue series (Tables 1-4). There are 5 tables and 11 references: 9 Soviet, 1 US, and 1 British.

ASSOCIATION: Rostovskiy-na-Donu gosudarstvennyy universitet (Rostov-na-Donu State University)

SUBMITTED: February 5, 1960

Card 3/3

LYSENKO, Yu.A.; OSIPOV, O.A.

Interaction between titanium tetrachloride and chloromethyl acetate and ethyl stearate. Zhur. neorg. khim. 6 no.7: 1656-1661 Jl '61. (MIRA 14:7)

1. Kubanskiy sel'skokhozyaystvennyy institut, kafedra organicheskoy fizicheskoy i kolloidnoy khimii.
(Titanium chloride) (Esters)

OSIPOV, O.A.; ARTEMOVA, V.M.; KOGAN, V.A.; LYSENKO, Yu.A.

Dipole moments of the complex compounds of tin, titanium, and zirconium tetrachlorides with dibasic acid esters. Zhur.ob.khim. 32 no.5:1368-1373 My '62. (MIRA 15:5)
(Complex compounds--Dipole moments)

LYSENKO, Yu.A.; OSIPOV, O.A., KRAVTSOV, Ye.Ye.

On the existence of titanium etherates. Zhur.neorg.khim. no.3:663-667 Mr '63. (MIRA 16:4)

1. Luganskiy sel'skokhozyaystvennyy institut, kafedra obshchey khimii.
(Titanium compounds) (Esters)

LYSENKO, Yu. N.

SMIRNOV, I.V.; LYSENKO, Yu.N.

Some features of the inheritance of sex in swine [with summary in English]. Zhur.ob.biol. 18 no.3:242-248 My-Je '57. (MIRA 10:6)

1. Khar'kovskiy zootekhnicheskiy institut.
(SWINE) (SEX (BIOLOGY)) (HEREDITY)

LYSENKO, Yu.P., inzh.

Unit for building up the feed-mechanism carriage of a pilger mill. Mashinostroenie no.6:56-57 N-D '62. (MIRA 16:2)

1. Ordena Lenina metallurgicheskiy zavod imeni Il'icha, g. Zhdanov.

(Electric welding)

KALYUZHNAYA, L.D.; PORTNOV, S.M.; MAYKO, I.I.; LYSENKO, Z.A.; BRYANSKAYA, A.M.

Antagonistic properties of actinomyces isolated from soils in the Ukraine. Antibiotiki 7 no.3:19-24 Mr '62. (MIRA 15:3)
(ANTINOMYCES)
(UKRAINE--SOILS--MICROBIOLOGY)

KALYUZHNAYA, L.D.; BRYANSKAYA, A.N.; LITOVCHENKO, Ye.T.; [illegible], I.G.; LYSENKO, Z.A.; MAYKO, T.I.; [illegible], S.M.

Isolation and study of actinomycetes-antagonists from soils of some Ukrainian provinces. Mikrobiologiia 31 no.4:654-[illegible] Jl-Ag '62. (MIRA 18:3)

1. Kiyevskiy institut epidemiologii i mikrobiologii.

SKRIPKA, L.I. [Skrypka, L.I.]; LYSENKO, Z.A.

Actinomycetes antagonists in peaty soils of Kiev Province.
Mikrobiol. zhur. 27 no.6:20-26 '65. (MIRA 19:1)

1. Kiyevskiy nauchno-issledovatel'skiy institut epidemiologii i mikrobiologii.

LYSENKO, Z.B.

Using dimedrol as a soporific and sedative in the treatment of neuroses and neurotic states with distrubance of sleep. Vrach. delo no.6:75-76 Je '61. (MIRA 15:1)

1. Sanatoriy imeni XXX-letiya Sovetskoy Ukrainy.
(DIPHENHYDRAMINE) (NEUROSES) (INSOMNIA)

LYSENKO, Z.Ya.

Report on 395 bronchoscopies. Probl. tub. 38 no. 5:106-108 '60.
(MIRA 14:1)
(BRONCHOSCOPY) (TUBERCULOSIS—DIAGNOSIS)

LYSENKOV, A. A.

Agriculture - Tannu-Tuva

Detached from production demands ("Vegetation of Tuva." K. A. Sobolevskaya. Reviewed by N. K. Vishnyakov, A. A. Lysenkov.) Korm. baza 3 no. 3, 1952.

MONTHLY LIST OF RUSSIAN ACCESSIONS. Library of Congress, July 1952. UNCLASSIFIED.

LYSENKOV, G.L.

Effect of aerosol of various broncholytic drugs on bronchial permeability. Sov.med. 21 no.6:91-94 Je '57. (MLRA 10:9)

1. Iz vtoroy kafedry terapii (zav. - prof. B.Ye.Votchal) Tsentral'nogo instituta usovershenstvovaniya vrachey

(INHALATION THERAPY
eff. of broncholytic substances on bronchial permeability)
(BRONCHI, eff. of drugs on
borncholytic substances, on bronchial permeability)
(ATROPINE, effects,
on bronchial permeability, aerosols (Rus))
(PARASYMPATHOLITICS, effects,
himalin, aerosols, on bronchial permeability (Rus))
(BRONCHI, effect of drugs on,
atropine & himalin aerosols, on permeability (Rus))

USSR/Human and Animal Physiology - Digestion. T-7

Abs Jour : Ref Zhur - Biol., No 7, 1958, 31844

Author : Korovintsyn, V.T., Lysenkov, I.M.
Inst : -
Title : On the Use of Regularities of the Parabiotic Process for the Study of Stomach Illnesses.

Orig Pub : V sb.: Ucheniye N. Ye. Vvedenskogo i klinich. praktike. Odessa, 1957, 130-134.

Abstract : No abstract.

Card 1/1

PODLEVSKIY, A.V.; KOGAN, V.Ya.; GORCHAKOVA, Yu.P.; YELIZAROVSKIY, G.I.; RYABOSHAPKA, A.P.; REZNIK, S.R.; GOLUBEV, T.I.; GINTSE, L.A.; RASKIN, M.M.; ZUYENKO, P.G.; KHOMIK, S.R.; KATSNEL'SON, I.A.; ZHILIN, S.I.; LYSENKOV, M.N.; ROMANOV, B.G.; SAVENKOV, D.A.; GIL', L.T.; LEVINA, Ye.S.; VOVKI, A.S.; POSLEDOV, F.F.

Annotations. Zhur.mikrobiol.,epid.i immun. 32 no.12:120-125 D '61. (MIRA 15:11)

1. Iz Leningradskogo instituta usovershenstvovaniya vrachey imeni Kirova (for Podlevskiy). 2. Iz Ukrainskogo nauchno-issledovatel'skogo instituta kommunal'noy gigiyeny (for Kogan). 3. Iz Voronezhskogo meditsinskogo instituta (for Gorchakova). 4. Iz Arkhangel'skogo meditsinskogo instituta (for Yelizarovskiy). 5. Iz Kiyevskogo instituta epidemiologii i mikrobiologii (for Ryaboshapka, Reznik). 6. Iz zavoda meditsinskikh preparatov Leningradskogo myasokombinata imeni S.M.Kirova (for Golubev). 7. Iz Gosudarstvennogo kontrol'nogo instituta meditsinskikh biologicheskikh preparatov imeni Tarasevicha (for Gintse). 8. Iz Chitinskogo instituta epidemiologii, mikrobiologii i gigiyeny (for Raskin). 9. Iz Ternopol'skogo meditsinskogo instituta (for Zuyenko). 10. Iz Rostovskogo instituta epidemiologii, mikrobiologii i gigiyeny (for Khomik). 11. Iz Chelyabinskogo meditsinskogo instituta (for Gil', Levina, Vovki, Posledov).
(IMMUNOLOGY--ABSTRACTS) (EPIDEMIOLOGY--ABSTRACTS)

LYSENKOV, N.

Daily attention should be given to construction work on collective farms. Sel'.stroi. 10 no.2:5 F '55. (MIRA 8:4)

1. Nachal'nik upravleniya po stroitel'stvu v kolkhozakh Udmurtskoy ASSR.
(Farm buildings)

LYSTSOV, N.G., Cand Tech Sci--(diss) "Ion transfer [illegible] ci[illegible]er in the Blunding [illegible] electric drive [illegible]. (Theoretical and experimental studies)." Mos, 1961. 16 pp (Min of Higher Education USSR. Mos Order of Lenin Power Engineering Inst), 150 copies (KL,49-61,124)

SOV/ 161 -58-1-20/33

AUTHOR: Lysenkov, N. G., Engineer at the Chair of Electric Equipment of Industrial Plants at the Moscow Institute of Power Engineering.

TITLE: Stabilized Operation of a Mercury-Arc Rectifier Feeding the Exciter Winding of an Electrical Machine and Its Relation With the Discharge Resistance (Ustanovivshiyesya rezhimy raboty rtutnogo vypryamitelya na obmotku vozbuzhdeniya elektricheskoy mashiny i razryadnoye soprotivleniye)

PERIODICAL: Nauchnyye doklady vysshey shkoly, Elektromekhanika i avtomatika, 1958, Nr 1, pp. 158 - 164 (USSR)

ABSTRACT: Stabilized modes of operation of one-way rectifiers with a reversing switch feeding the exciter windings of generators of ionic converters of electric drives with a reversing mechanism are investigated. The connection of the discharge resistance shunting the exciter winding, which represents a considerable inductivity, leads to noticeable modifications of a number of transient processes and of quasi-steady modes of operation of the mercury-arc rectifier (MAR). The commutation conditions at the anodes are changed. The rectified voltage QG of the MAR

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Stabilized Operation of a Mercury-Arc Rectifier Feeding the Exciter Winding of an Electrical Machine and Its Relation With the Discharge Resistance

at great control angles shows a dependence which is more complicated than $E_d = E_{do} \cos \alpha$. The magnitude of the discharge resistance has a considerable effect upon the mean value of the rectified voltage of the MAR, which is fed into the exciter windings at a constant control angle α. This is shown in a diagram. The dependence of the mean rectified voltage at the exciter winding upon the control angle α and the discharge resistance R_p was determined. By the method of successive approximation the functions of the control angle versus the cut-off angle φ (which is given by equation (6)) is obtained according to the different values of the factor K_p. It is shown how to construct the curves of $\alpha = f(\varphi_{cut-off})$. The computed curves of $\alpha = f(\varphi_{cut-off})$ are given for values of K_p = 2, 3, 4, 5. It can be seen that from $\alpha > 30^\circ$ a discontinuous mode of operation of the MAR is possible. This is, however, only possible at small values of K_p. If the discharge voltage

Stabilized Operation of a Mercury-Arc Rectifier Feeding the Exciter Winding of an Electrical Machine and Its Relation With the Discharge Resistance

at K_p = 2 - 5 is chosen according to real conditions, a discontinuous mode of operation is only possible at $\alpha = 60^\circ - 65^\circ$. The curves of the mean rectified voltage which was applied to the exciter winding can be divided into two sections according to the control angle. In the first section the rectified voltage is determined according to the well known law $U_d = E_{d_o} \cdot \cos\alpha$. The limit of the first section for values of K_p used in practical operation is between $\alpha = 0$ and $\alpha \approx 60^\circ$. In the second section ($\alpha > 60^\circ$) the curve $U_d = f(\alpha)$ exhibits a complicated character.

The equations (1) to (6) were deduced without taking into account the voltage drop in the arc of the MAR, which is denoted by $-\Delta E$. If ΔE is taken into consideration equations (7) are obtained for U_d and (8) for U_p. A common solution of (7) and (8) yields (9). A comparison of (8) and (9) shows that the consideration of ΔE leads to a reduction of the voltage at the exciter winding (at identical values of α and K_p). The method

Stabilized Operation of a Mercury-Arc Rectifier Feeding the Exciter Winding of an Electrical Machine and Its Relation With the Discharge Resistance

of computation presented permits to construct with sufficient accuracy the curve describing the rectified voltage versus control angle function, if the exciter windings of electrical machines with a parallel discharge resistance and with other similar inductive loads are fed from ionic transformers. The formulae obtained hold for a rectification of an arbitrary number "m" of phases. There are 5 figures and 3 references, which are Soviet.

ASSOCIATION: Kafedra elektrooborudovaniya prompredpriyatiy Moskovskogo energeticheskogo instituta (The Chair of Electrical Equipment of Industrial Plants at the Moscow Institute of Power Engineering)

SUBMITTED: January 21, 1958

MOROZOV, D.P., doktor tekhn. nauk, prof.; LYSENKOV, N.G., inzh.

Electronic converter as exciter in the generator-motor system of a reversing mill. Trudy MEI no.30:253-268 '58. (MIRA 12:5)

1.Moskovskiy ordena Lenina energeticheskiy institut, Kafedra elektrooborudovaniya promyshlennykh predpriyatiy.
(Electric machinery)

SOV/110-59-6-12/24

AUTHORS: Morozov, D.P., Doctor of Technical Sciences and Lysenkov, N.G., Candidate of Technical Sciences

TITLE: A Single-Valve Supply Circuit for Exciting a Generator used in a Reversing Mill Drive (Odnoventil'naya skhema pitaniya obmotki vozbuzhdeniya generatora v sisteme elektroprivoda reversivnogo stana)

PERIODICAL: Vestnik elektropromyshlennosti, 1959, Nr 6, pp 51-57 (USSR)

ABSTRACT: Arc rectifiers are now often used to supply the field of generators used in generator-motor drives for reversing mills. The cross-over system of valve connection is used to reverse the generator field current. With this method reversing and other processes are effected by grid control of the rectifier. The system is efficient but wasteful of plant as many items are duplicated. The defects of the cross-over system are overcome by the use of a single-valve circuit with a reverser, as shown in Fig 1a and 1b. In this case, the direction of rotation is reversed by altering the polarity of the generator field winding. This article analyses the transient processes of the system, considering first the transients in the generator field

A Single-Valve Supply Circuit for Exciting a Generator used in a Reversing Mill Drive

winding when the motor is run up to speed. The process, which is indicated graphically in Fig 2, presents no special interest as it is just the same as with excitation from a normal exciter. Transients in the generator field winding during retardation of the motor are then considered. The cases of application of negative potential to the grid and alteration of the grid control angle are examined separately; transient curves for the first case are given in Fig 3 and for the second in Fig 4 and 5. It is considered that the best methods of stopping the motor are either to disconnect the generator field winding from the supply or to apply a negative potential to the rectifier control grid. It is in any case best to exert grid control before disconnecting the field winding, so saving the operating contacts. The transient process in the generator field winding during reversal of the motor is then considered and the appropriate curves are given in

A Single-Valve Supply Circuit for Exciting a Generator used in a Reversing Mill Drive

Fig 6. The transient process of reversing with the single-valve circuit and reverser differs from that in the cross-over system mainly in the absence of inverter conditions. When the field current is reduced to zero the energy stored in the generator field winding is expended in the discharge resistor and in the resistance of the winding itself. The single-valve circuit with reverser is as good as the cross-over circuit in respect of the processes of starting, changing speed and reversing. The use of a reverser in the generator field circuit has practically no influence on the reversing time because the field current passes through a discharge resistance whilst the contacts are being reversed; currents are plotted in Fig 6. The main disadvantage of the single-valve circuit with reverser is the presence in the generator field circuit of the reverser contacts and discharge resistance. However, modern contactors are very reliable and the losses in the discharge resistance are small. The use of the

A Single-Valve Supply Circuit for Exciting a Generator used in a Reversing Mill Drive

single-valve system with reverser is accordingly recommended for large reversing drives. There are 6 figures and 3 Soviet references.

MOROZOV, D.P., doktor tekhn.nauk; LYSENKOV, N.G., kand.tekhn.nauk

Pulse regulation in excitation circuits and in the armature of motors fed from controlled mercury rectifiers. Vest.elektroprom. 31 no.6:26-31 Je '60. (MIRA 13:7)
(Electric current rectifiers)
(Electric motors)

LYSENKOV, N.G.

PHASE I BOOK EXPLOITATION SOV/4553

Vsesoyuznoye ob"yedinennoye soveshchaniye po avtomatizatsii proizvodstvennykh protsessov v mashinostroyenii i avtomatizirovannomu elektroprivodu v promyshlennosti. 3d, Moscow, 1959

Elektroprivod i avtomatizatsiya promyshlennykh ustanovok; trudy soveshchaniya (Electric Drive and Automation in Industrial Systems; Transactions of the Conference) Moscow, Gosenergoizdat, 1960. 470 p. 11,000 copies printed.

General Eds.: I.I. Petrov, A.A. Sirotin, and M.G. Chilikin; Eds.: I.I. Bud, and S.F. Silayev; Tech. Eds.: K.P. Voronin, and G.Ye. Larionov.

PURPOSE: The collection of reports is intended for the scientific and technical personnel of scientific research institutes, plants and schools of higher education.

COVERAGE: The book is a collection of reports submitted by scientific workers at plants, scientific institutes and schools of higher education at the third Joint All-Union Conference on the Automation of Industrial Processes in Machine Building and Automated Electric Drives in Industry held in Moscow on May 12-16, 1959. The Conference was called by the Academy of Sciences USSR, the Gosplan SSSR (State Planning Commission USSR), the GNTK SSSR, the Gosudarstvennyy Komitet po avtomatizatsii i mashinostroyeniyu (State Committee on Automation and Machine Building) and the Natsional'nyy Komitet SSSR po avtomaticheskomu upravleniyu (USSR National Committee on Automatic Controls) and prepared by the Nauchno-tekhnicheskiy komitet po avtomatizirovannomu elektroprivodu (Scientific and Technical Committee on Automated Electric Drives), the MEI (Moscow Institute of Energetics), the VNIIEM, the IAT (Institute of Automation and Telemechanics) of the Academy of Sciences USSR, and the Komissiya po tekhnologii mashinostroyeniya Instituta mashinovedeniya AN SSSR (Commission on the Technology of Machine Building of the Institute of Science of Machines of the Academy of Sciences USSR). It was the purpose of the Editorial Board to arrange the reports in a way which would ensure a relatively systematic presentation of theoretical and practical problems relating to electric drives and automatic controls of industrial mechanisms used in various branches of industry. Basic problems of automated electric drive and their solution are outlined. The book also contains articles on electric machinery and means of automation. Considerable attention is paid to noncontact automatic control systems, including systems with semiconductor devices and magnetic amplifiers, and to computers intended both for the analysis and the synthesis of linear and nonlinear automatic regulation and control systems. Reports already published in journals or official publications have been considerably abbreviated; those which have appeared in volume V of NII EP transactions or in the journal "Elektrichestvo" are marked with an asterisk. No personalities are mentioned. References accompany some of the papers.

PART I. GENERAL PROBLEMS CONCERNING THE THEORY AND PRACTICE OF ELECTRIC DRIVE AND AUTOMATION OF CONTROL

OLEFIR, F.F., kand.tekhn.nauk; LYSENKOV, N.G., kand.tekhn.nauk

Automatic control of strip thickness on thin-sheet hot rolling mills. Avtom.i prib. no.3:72-78 Jl-S '62. (MIRA 16:2)

1. Institut avtomatiki Gosplana UkrSSR.
(Rolling mills)
(Electronic control)

LYSENOV, N.G., kand.tekhn.nauk; OLEFIR, F.F., kand.tekhn.nauk;
KOVALEV, N.G.; TERESHKIN, A.A.; KIVVA, A.N.

Noncontact system of optimum pulsed control of an electric drive. Avtom. i prib. no. 1:11-15 Ja-Mr '64. (MIRA 17:5)

EWT(d)/EWP(v)/EWA(d)/EWP(h)/EWP(k)/EWP(l) Pf-4

ACCESSION NR: AR4048226 S/0137/64/000/009/D020/D021

SOURCE: Ref. zh. Metallurgiya, Abs. 9D127

AUTHOR: Ly*senkov, N. G.

TITLE: Loading and speed of response characteristics of an electric drive for pressure devices for automatic control of strip thickness on plate rolling mills

CITED SOURCE: Sb. Avtomatiz. metallurg. proiz-va. Kiyev, Gostekhizdat USSR, 1964, 162-175

TOPIC TAGS: rolling mill, electric drive, automatic control equipment, automatic regulation, pressure control/ rolling mill 1680

TRANSLATION: Basic requirements have been determined for an electric drive for thin plate rolling mill type 1680. The method proposed for determining loading and speed of response characteristics of an electric drive enables enables the thorough analysis and selection of electric drives for pressure devices working under conditions of automatic control of strip thickness in thin plate

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L 32062-65
ACCESSION NR: AR4048226

rolling mills. A concrete analysis of loading and speed of response characteristics of an electric drive for pressure devices in the finishing bank of thin plate rolling mills type 1680 showed the necessity of installing more powerful motors of type DP-72 in pressure devices, requiring a change in the gear ratio of the reducer, i, from 1026 to 600-800. K. Ursova.

SUB CODE: IE,EE ENCL: 00

Card 2/2

ACC NR: AP7004261 (A) SOURCE CODE: UR/0432/66/000/003/0008/0011

AUTHOR: Lysenkov, N. G. (Candidate of technical sciences); Kovalev, N. G.

ORG: none

TITLE: Electric-drive control system with transistors and pulse regulation of generator voltage

SOURCE: Mekhanizatsiya i avtomatizatsiya upravleniya, no. 3, 1966, 8-11

TOPIC TAGS: voltage regulator, automatic regulation, electric drive

ABSTRACT: The development is reported of a transistorized system for separation and regulation of feedback signals in nonreversible and reversible electric drives. The system is intended to supplant the magnetic amplifiers and multivibrators hitherto used for magnetic separation of circuits in the amplifying unit of the drive. The reversible drive comprises a transistorized pulse-type generator-voltage regulator, a functional armature-current instantaneous turn-off circuit, an automatic generator-field discharge device, and a combination (negative-voltage positive-current) feedback. The system was developed by the Automation Institute, Ministry of Instruments, Automation and Control; it was used on 13 electric drives installed on sheet-mill screwdown mechanisms at metallurgical plants. Orig. art. has: 3 figures.

SUB CODE: 09, 13 / SUBM DATE: none

Card 1/1 UDC: 62 - 521

TATARINOV, Valentin Petrovich; LYSENKOV, Nikolay Il'ich;
YERMOLINSKIY, I.A., red.

[New technology of working cutovers in Udmurtia] Novaia tekhnologiia razrabotki lesosek v Udmurtii. Moskva, Lesnaia promyshlennost', 1964. 62 p. (MIRA 18:3)

TATARINOV, V.P.; LYSENKOV, N.I.; NOVOSEL'TSEV, N.V., red.; MILIKESOVA, I.F., tekhn. red.

[Working felling areas with the preservation of young growth and young stands in the logging camps of Udmurtia] Razrabotka lesosek s sokhraneniem podrosta i molodniaka v lesopromkhozakh Udmurtii. Moskva, TSentr. in-t tekhn. informatsii i ekon. issledovaniia po lesnoi, bumazhnoi i derevoobrabatyvaiushchei promyshl., 1963. 26 p. (MIRA 16:8)

(Udmurt A.S.S.R.--Lumbering)

LYSENKOV, Nikolay Konstantinovich; BUSHKOVICH, Vyacheslav Iosifovich; PRIVES, Mikhail Grigor'yevich, prof.; GINZBURG, V.V., red.; RULEVA, M.S., tekhn.red.

[Textbook of normal human anatomy] Uchebnik normal'noi anatomii cheloveka. Pod obshchei red. M.G.Privesa. Izd.5., dop. i perer. Moskva, Gos.izd-vo med.lit-ry, Leningr.otd-nie, 1958. 783 p. (MIRA 12:7)

(ANATOMY, HUMAN)

LYSENKOV, M.V.; BOLDYREV, I.V.; KRYUCHKOVA, V.G.

Aliphatic - aromatic esters of carbonic acid. Ukr. khim. zhur. 30 no.12:1330-1332 '64 (MIRA 18:2)

1. Institut organicheskoy khimii AN UkrSSR.

STARIKOV, P.V.; LYSENKOV, P.N.

Case of cattle poisoning with hay containing Thermopsis.
Veterinariia 41 no.2:72 F '65. (MIRA 18:3)

1. Zamestitel' nachal'nika Upravleniya veterinarii TSelinnogo krayevogo upravleniya proizvodstva i zagotovok sel'skokhozyaystvennykh produktov (for Starikov). 2. Glavnyy veterinarnyy vrach Upravleniya veterinarii TSenlinnogo krayevogo upravleniya proizvodstva i zagotovok sel'skokhozyaystvennykh produktov (for Lysenkov).

L 5098-66 EWT(d)/EWP(e)/EWP(w)/T/EWP(k)/EWP(h)/EWP(l)/ETC(m) WW
ACC NR: AP5025311 SOURCE CODE: UR/0193/65/000/009/0025/0026

AUTHOR: Lysenkov, Yu. I.; Korolev, F. I.

ORG: none

TITLE: UKP-2 ultrasonic flaw detector for small-diameter steel wire

SOURCE: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 9, 1965, 25-26

TOPIC TAGS: wire, steel wire, wire flaw, flaw detection, flaw detector, ultrasonic flaw detector

ABSTRACT: The UKP-2 ultrasonic tester for evaluating the structural homogeneity of and detecting surface defects in steel wires 0.5—3.0 mm in diameter and 1000—5000 mm long has been developed. The wire is irradiated through a liquid medium obliquely to its axis with longitudinal, transverse, and torsional-ultrasonic waves causing so-called "wire waves", which are very sensitive to surface and inner defects in the wire. The waves reflected from the defects produce impulses on the detector screen. The UKP-2 makes it possible to detect surface defects as shallow as 0.01 mm and small inclusions and to root out defective wire during processing. Orig. art. has: 1 figure. [WW]

SUB CODE: IE, GP/SUBM DATE: none/ ORIG REF: 000/ OTH REF: 000/ ATD PRESS: 4134

Card 1/1 UDC: 681.2-868.6:621.9-422

0401064 3

PIK, I.Sh.; Prinimali uchastiye Skundina, F.I.; LYSENKOVA, R.I.

Quality of products from polytetrafluoroethylene as determined by the conditions of its treatment. Plast.massy no.6:30-32 '60. (MIRA 13:11)

(Ethylene) (Plastics)

LYSENKOVSKIY, A.

Visiting China's coal miners. Sovshakht. 10 no.11:41-42 N '61. (MIRA 14:11)

1. Predsedatel' Primorskogo krayevogo komiteta profsoyuza rabochikh ugol'noy promyshlennosti.
(Russia—Relations(General)with China)
(China—Relations(General)with Russia)
(China—Coal miners)

ABRAMOV, M.A.; ALIVERDIZADE, K.S.; AMIROV, Ye.M.; ARENSON, R.I.; ARSEN'YEV, S.I.; BAGDASAROV, R.M.; BAGDASAROV, G.A.; BADAMYANTS, A.A.; DANIYELYAN, G.N.; DZHAFAROV, A.A.; KAZAK, A.S.; KERCHEHSKIY, M.M.; KONYUKHOV, S.I.; KRASNOBAYEV, A.V.; KURKOVSKIY, A.I.; LALAZAROV, G.S.; LARIONOV, Ye.P.; LISTENGARTEN, M.Ye.; LIVSHITS, B.L.; LISIKYAN, K.A.; LOGINOVSKIY, V.I.; LYSENKOVSKIY, P.S.; MOLCHANOV, G.V.; MAYDEL'MAN, N.M.; OKHON'KO, S.K.; ROMANIKHIN, V.A.; ROSIN, I.I.; RUSTAMOV, E.M.; SARKISOV, R.T.; SKRYPNIK, P.I.; SOBOLEV, N.A.; TARATUTA, R.N.; TVOROGOVA, L.M.; TER-GRIGORYAN, A.I.; USACHEV, V.I.; FAYN, B.P.; CHICHEROV, L.G.; SHAPIRO, Z.L.; SHEVCHUK, Yu.I.; TSUDIK, A.A.; ABUGOV, P.M., red.; MARTYNOVA, M.P., vedushchiy red.; DANIYELYAN, A.A.; TROFIMOV, A.V., tekhn.red.

[Oil field equipment; in six volumes] Neftianoe oborudovanie; v shesti tomakh. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry. Vol.3. [Petroleum production equipment] Oborudovanie i instrument dlia dobychi nefti. 1960. 183 p.
(MIRA 13:4)

(Oil fields--Equipment and supplies)

KHOKHLOV, Yu.I.; LYSEVICH, G.G.

Mechanical brush for priming leather with aqueous nitro emulsions.
Obm. tekh. opyt. [MLP] no.29:19-23 '57. (MIRA 13:1)
(Leather industry--Equipment and supplies)

USSR/Farm Animals. Swine. Q-2

Abs Jour: Ref Zhur - Biol., No. 22, 1958, 101165

Author : Lyshchina, L.P.

Inst : All-Union Scientific Research Institute of Animal Husbandry.

Title : Meat Fattening of Swine with Corn Rations When Protein Nutrients of Various Quality are Used.

Orig Pub: Byul nauchno-tekhn. inform. Vses. n.-i. in-t zhivotnovodstva, 1957, [vyp.] aspirantskiy, 20-23

Abstract: When pigs were fattened for meat with corn (85 percent of nitritional value), fish flour and soybean cakes (42 percent of the ration's digestible protein) were replaced by fodder

Card 1/2

USSR/Farm Animals. Swine. Q-2

Abs Jour: Ref Zhur - Biol., No. 22, 1958, 101164

Author : Lyshchina, L.P.

Inst : -

Title : Utilization of Fodder Protein in Meat Fattening of Pigs with Corn Rations.

Orig Pub: Sots, s. kh. Uzbekistana, 1957, No. 12, 59-62

Abstract: Fodder protein obtained from ricinic oil cakes according to the method of S. S. Perov was included in amounts of 42 percent (2nd test group) and of 22.5 percent (3rd test group) of the total digestible protein of the rations into corn rations given to immature sows. The resulting average daily weight gains of such immature sows of the 2nd group were 15.5 per-

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Abs Jour: Ref Zhur - Biol., No. 22, 1958, 101164

cent higher and fodder unit expenditures per each kg of weight gain were 0.76 percent lower as compared to controls; the figures for immature sows of the 3rd group were 8.2 and 0.28 percent, respectively. Immature sows of the 2nd group utilized 46.15 percent of digestible nitrogen, and of the 3rd group 45.4 percent, whereas controls utilized 41 percent of digestible nitrogen.

LYSHCHINA, L.P., Cand Biol Sci - (diss) "Use of fodder protein in the meat fattening of growing piglings on corn." Mos, 1958, 14 pp (All-Union Acad of Agr Sci im V.I. Lenin. All-Union Sci Res Inst of Animal Husbandry. Laboratory of Protein) (KL, 23-58, 104)

LYSHCHINSKIY, G. P.

"Theoretical and Experimental Investigation of Circuits of Electric Drive Systems for Modeling Equipment." Sub 2 Nov 51, Moscow Order of Lenin Power Engineering Inst imeni V. M. Molotov

Dissertations presented for science and engineering degrees in Moscow during 1951

SO: Sum. No. 480, 9 May 55

LYSHCHINSKIY, G.P.

112-2-3455

Translation from: Referativnyy Zhurnal, Elektrotekhnika, 1957, Nr 2, p. 135 (USSR)

AUTHOR: Lyshchinskiy, G.P.

TITLE: More on the Electrical Equipment of Machines in the Printing Industry (K voprosu elektrooborudovaniya mashin poligraficheskoy promishlennosti)

PERIODICAL: Nauch. zap. L'vovsk. politekhn. in-t, 1955, Nr 34, pp.233-238

ABSTRACT: Squirrel-cage induction motors are used to drive machines in the printing industry and in rare cases wound-rotor motors are used since the great majority of machines operate at constant speed. Speed control (when required) is realized mechanically. Certain motors are equipped with reversers for adjustment operations and the simplest

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More on the Electrical Equipment of Machines in the Printing (Cont.)

type of drive automation (a locking device for paper tearing, automatic switching from wye to delta during starting, etc). The absence of multiple motor drive in printing machines complicates their kinematics and operation, lowers their efficiency and output, and the quality of the finished product. Insufficient motor load causes a sharp drop in the power factor. Due to insufficient machine electrification and automation it is not possible to set up assembly line production and automated shops. To simplify machine design, improve product quality, increase output, and ensure continuous operation, it will be necessary to: 1) adopt automatic multiple motor drive; 2) automate the type setting and other processes by using electric magnets; 3) replace the mechanical synchro-transmission by a system of electrical synchro-transmission; 4) make broader use of photoelectric automation in type setting and zincographic operations; 5) campaign for the adoption of the "electric spark" methods of engraving.

Ya.V.M.

Card 2/2

GANDZHA, L.I., kand.tekhn.nauk,dotsent ; LYSHCHINSKIY, G.P., kand.tekhn. nauk, dotsent

Review of A.A. Sirotin's book "Automatic control of electric drives." Elektrichestvo no. 11:94-95 N '60. (MIRA 13:12)
(Automatic control) (Electric driving)
(Sirotin, A.A.)

S/200/62/000/001/001/004
D201/D302

16.8000 (1031, 1132, 1397)

AUTHORS: Bakhovets, B.A., and Lyshchinskiy, G.P.

TITLE: Synthesis of linear systems of an automated electric drive in the control regime

PERIODICAL: Akademiya nauk SSSR. Sibirskoye otdeleniye. Izvestiya, no. 1, 1962, 19 - 29

TEXT: The author postulate that the curve $x_n(t)$ of the transient process of the system should be close to a curve $x_m(t)$ which is assumed to satisfy the requirements imposed on the system. Let the chosen structure be characterized by a differential equation with constant coefficients. If $x_m(t)$ is chosen as a solution of

$$\sum_{k=0}^{m} c_k x_m^{(k)} = 0 \qquad (3)$$

with initial conditions

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Synthesis of linear systems of an ...

$$x^{(k)}(0) = x_0^{(k)}[k = 0, 1, 2,...(n - 1)] \qquad (2)$$

and $m < n$, a relation $a_k = f(c_k)$ becomes fundamental for the problem. The choice of the law governing the control regime is discussed. The synthesis of parameters of a chosen system structure is carried out as follows: In general the system in the control state may be described by an operator equation; it is shown that the latter can always be reduced to

$$\sum_{k=0}^{n} a_k x_n^{(k)} = 0 \qquad (1)$$

with initial conditions (2). Finally, the relationship between coefficients a_k and c_k is determined from the condition that the error resulting by substituting function $x_n(t)$ (3) be minimum. This leads to

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$$\sum_{k=0}^{m-1} c_k \int_0^\infty x_n^{(k)} x_n^{(l)}\, dt = -\int_0^\infty x_n^{(m)} x_n^{(l)}\, dt \quad [l = 0,\ 1,\ 2, \ldots (m-2)]; \tag{19}$$

$$c_0 \sum_{k=1}^{n} a_k x_0^{(k-1)} = a_0 \sum_{k=1}^{m} c_k x_0^{(k-1)}. \tag{20}$$

it is stated that the infinite integrals can be comparatively easily evaluated. The error is evaluated by applying the inequality of Bunyakovskiy. Two numerical examples are given. A case of possible instability is indicated. There are 6 figures and 10 Soviet-bloc references.

ASSOCIATION: Novosibirskiy elektrotekhnicheskiy institut (Novosibirsk Electrotechnical Institute)

SUBMITTED: July 12, 1961

Card 3/3

KOSTENKO, M.V.; NEYMAN, L.R.; VENIKOV, V.A.; POPKOV, V.I.; MEL'NIKOV, N.A.; VOROB'YEV, A.A.; KUTYAVIN, I.D.; LYSHCHINSKIY, G.P.

V.K. Shcherbakov; on his 60th birthday and 35th anniversary of his educational work. Elektrichestvo no.8:93-94 Ag '63. (MIRA 16:10)

BAKHOVETS, B.A.; LYSHCHINSKIY, G.P.

Solution of some problems of the invariance theory using a differentiation method. Izv. SO AN SSSR no.10 Ser. tekh. nauk no.3: 126-130 '63. (MIRA 17:11)

1. Novosibirskiy elektrotekhnicheskiy institut.

L 20767-65 EWT(d)/EPF(n)-2/EWP(l) Po-4/Pq-4/Pg-4/Pu-4/Pk-4/Pl-4 IJP(c)/
SSD/ASD(a)-5/AFMDC/AFETR/AFTC(...)/RAEM(d)/RAEM(a)/ESD(dp) WW/BC
ACCESSION NR: AP5003796 S/0144/64/000/010/1262/1270

AUTHOR: Bakhvets, B. A.; Lyshchinskiy, G. P.

TITLE: Method for constructing automatic control systems for electric drives

SOURCE: IVUZ. Elektromekhanika, no. 10, 1964, 1262-1270

TOPIC TAGS: automatic control system, electric rotating equipment, mechanical power transmission equipm

Abstract: Optimal control systems are being more and more used for electric drives which function intermittently. Such control systems in the case of rolling mills, artillery-aiming installations, and the like, make it possible either to secure greater productivity or to reduce the capacity of the motors in use. Here pressing problems arise in devising control systems which will be optimal. The author notes that earlier studies in this area have failed to deal with such important questions as the control law, analysis of initial conditions, choice of switching points, etc. He studies the synthesis of optimal systems for electric drives, using the method of differentiating equations of the appropriate laws of motion. Orig. art. has 6 graphs and 12 formulas.

Card 1/2

L 20767-65
ACCESSION NR: AP5003796

ASSOCIATION: none

SUBMITTED: 22Feb63 ENCL: 00 SUB CODE: IE, EE

NO REF SOV: 010 OTHER: 000 JPRS

Card 2/2

GANDZHA, L.I.; LYSHCHINSKIY, G.P.; VASIL'YEV, A.I.; BREZE, Yu.K.

Transient processes and oscillations in a nonlinear generator-motor system with varying magnetic flux. Trudy Inst. avtom. i elektrometr. SO AN SSSR no.6:64-76 '64. (MIRA 17:10)

ACC NR: AR6015994 SOURCE CODE: UR/0271/65/000/012/A018/A018

AUTHOR: Lyshchinskiy, G. P.; Parshin, V. G.

TITLE: Increasing the reliability of a relay by redundancy

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika, Abs. 12A121

REF SOURCE: Sb. dokl. k Novosib. nauchno-tekhn. konferentsii po mashinostr. Ch. 2. Novosibirsk, 1964, 11-16

TOPIC TAGS: electric relay, circuit reliability, reliability engineering

ABSTRACT: Relay is one of the most reliable units in multi-element systems. The shortcomings universally accepted methods for analyzing the reliability of relays are noted. It is indicated that in determining the reliability of a relay it is necessary to include simultaneously the probability of failures in windings and contact groups. Otherwise, the results will be incorrect. Redundancy is recommended as one of the most effective methods of increasing reliability. A graphical method of studying the redundancy problem is discussed. A table is also presented from which the maximum reliability of a contact system can be determined. [Translation of abstract] 1 illustration and bibliography of 2 titles. M. M.

SUB CODE: 09, 14

62-52:621.374.36

Card 1/1

L 11834-65 EWT(1)/EWP(m)/EWG(s)-2/EWG(v)/EPR/FCS(k)/EWA(1) Pd-1/Pe-5/Ps-4/
Pi-4/Pw-4 WW
ACCESSION NR: AP5010934 UR/0286/65/000/007/0120/0120

AUTHOR: Kuleshov, V. I.; Lyshchinskiy, V. V.; Maksimov, S. M.; Solodkin, V. K.

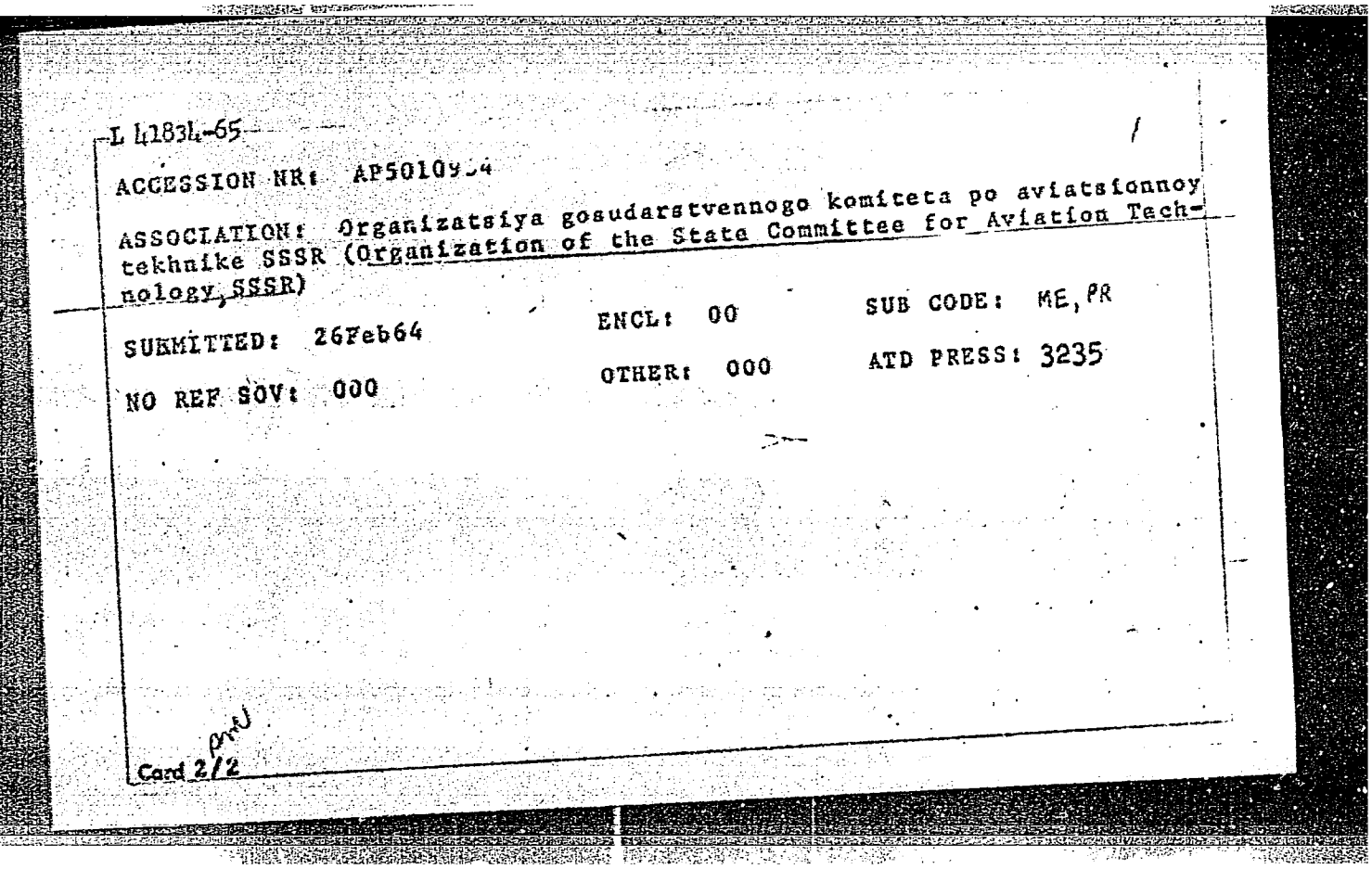
TITLE: Regulated nozzle for wind tunnels. Class 42, No. 169841

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 120

TOPIC TAGS: wind tunnel, regulated nozzle, nozzle

ABSTRACT: This Author Certificate introduces a regulated nozzle for wind tunnels with a rigid intake section and a flexible outlet section. In the flexible section a rigid plate has been mounted to form a rectilinear zone in the flexible wall and its support. The arrangement secures a more uniform Mach number field including the correction for the boundary layer thickness. [AC]

Card 1/2



L 41834-65

ACCESSION NR: AP5010954

ASSOCIATION: Organizatsiya gosudarstvennogo komiteta po aviatsionnoy tekhnike SSSR (Organization of the State Committee for Aviation Technology, SSSR)

SUBMITTED: 26Feb64 ENCL: 00 SUB CODE: ME, PR

NO REF SOV: 000 OTHER: 000 ATD PRESS: 3235

Card 2/2 pm

LYSHEVSKIY, A.S.

AID P - 2568

Subject : USSR/Engineering

Card 1/1 Pub. 110-a - 7/16

Author : Lyshevskiy, A. S., Kand. Tech. Sci.

Title : Summarizing test results on the flame length of pulverized liquid fuel

Periodical : Teploenergetika, 8, 36-39, Ag 1955

Abstract : A summarization of factors to show the relation between the flame length, the physical properties of the fluid, and the size of the equipment. The author reports that multiple tests conform with mathematical analysis and theoretical data. Seven diagrams. Six Russian references, 1935-1951.

Institution : Novocherkassk Polytechnical Institute

Submitted : No date

SOV/124-58-1-398

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 1, p 48 (USSR)

AUTHOR: Lyshevskiy, A. S.

TITLE: Determination of the Length of a Fuel-spray Jet (Opredeleniye dliny fakela raspylennogo topliva)

PERIODICAL: Nauchn. tr. Novocherkas. politekhn. in-ta, 1955, Vol 26, pp 391-401

ABSTRACT: A generalized equation is proposed for the length of the jet (i. e., the depth of penetration of the jet of fuel spray into an ambient filled with compressed air.). The equation is verified on the basis of an analysis of pertinent test data available in current specialized literature. Graphs are adduced to confirm the validity of that form of dependence which in general is also found from theoretical considerations. Bibliography: 5 references.

A. A. Gukhman

Card 1/1

LYSHEVSKIY, A.S., dotsent, kandidat tekhnicheskikh nauk.

Cross section of the distribution of fuel sprays. Nauch.trudy MPI 30(44):21-24 '55. (MLRA 9:11)
(Gas and oil engines) (Diesel fuels)

LYSHEVSKIY, A.S., dotsent, kandidat tekhnicheskikh nauk.

Distribution of droplets by size during fuel atomization by diesel engine nozzles. Nauch.trudy MPI 30(44):25-32 '55. (MLRA 9:11)
(Diesel fuels) (Atomization)

LYSHEVSKIY, A.S., dotsent, kandidat tekhnicheskikh nauk.

Fuel atomization by diesel engine nozzles. Nauch.trudy NPI 30(44):33-51 '55. (MLRA 9:11)
(Diesel fuels) (Atomization)

LYSHEVSKIY, A.S., dotsent, kandidat tekhnicheskikh nauk.

Pressure viscosity ratios for diesel fuels. Nauch.trudy NPI 30(44):225-228 '55. (MLRA 9:11)
(Diesel fuels)

SOV/124-58-1-399

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 1, p 48 (USSR)

AUTHOR: Lyshevskiy, A. S.

TITLE: Calculation Method for the Determination of the Length of a Fuel-spray Flame Jet in an Ambient of High-density Air (Raschetnyy metod opredeleniya dliny fakela topliva v plotnom vozdukhe)

PERIODICAL: V sb.: Konstruirovaniye, issledovaniya, ispytaniya avtomobiley Nr 2. Moscow, Mashgiz, 1956, pp 44-53

ABSTRACT: On the premise that a fuel spray constitutes a free turbulent jet the author derives a formula for the determination of the length of a combustion-flame jet when the fuel is injected into an ambient of high-density air by means of a cylindrical nozzle. The value of the nondimensional coefficient entering the formula is determined from an analysis of test data. A calculation example relative to the determination of the length of the flame jet is adduced. The calculation is compared with test data obtained by a number of authors.
Bibliography: 5 references.

V. D. Sokolov

Card 1/1

AID P - 5103

Subject : USSR/Engineering

Card 1/1 Pub. 110-a - 6/18

Author : Lyshevskiy, A. S., Kand. Tech. Sci.

Title : Precise atomization of liquid fuel by regular injectors

Periodical : Teploenergetika, 10, 30-33, O 1956

Abstract : The investigation of the above process is described. The type and design of the injector is discussed, as well as the exactitude of the atomization process. The results of tests and a method for an efficient operation are presented. Table, 2 diagrams. 3 references.

Institution : Novocherkassk Polytechnic Institute

Submitted : No date

LYSHEVSKIY, A.S., dotsent, kandidat tekhnicheskikh nauk.

Disintegration of viscous fuel layers in the air. Trudy EPI 33:228-238 '56. (MLRA 10:9)

(Liquid fuels) (Fluid dynamics)

SOV/124-58-2-1992

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 2, p 69 (USSR)

AUTHOR: Lyshevskiy, A. S.

TITLE: On the Subject of the Coefficient of Free Turbulence of a Liquid-fuel Spray Jet (K voprosu o koeffitsiyente svobodnoy turbulentnosti strui raspylennogo zhidkogo topliva)

PERIODICAL: Tr. Novocherkas. politekhn. in-ta, 1956, Nr 33/47, pp 239-248

ABSTRACT: The author offers an approximate method for the determination of the coefficient of free turbulence of a liquid-fuel spray jet, which is required for the construction of the concentration fields of the liquid. The analysis is based on G. N. Abramovich's theory of a turbulent gas jet [Turbulentnyye svobodnyye strui zhidkostey i gazov (Turbulent Free Liquid and Gas Jets). Energoizdat, 1948] with consideration of the process of break-up of the jet. The author utilizes the method of dimensional analysis, subjects the experimental data of Miller and Beardsley to an analysis in terms of nondimensional parameters, and obtains a relationship for the coefficient of free turbulence of a jet in terms of the density of the air and the fuel-flow characteristics.

K. N. Yerastov

Card 1/1

LYSHEVSKIY, A. S.

LYSHEVSKIY, A.S., dotsent, kandidat tekhnicheskikh nauk.

Velocity field of free axisymmetric turbulent jet flowing out from a point source. Trudy NPI 33:249-255 '56. (MLRA 10:9)
(Fluid dynamics)

SOV/124-58-1-830

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 1, p 108 (USSR)

AUTHOR: Lyshevskiy, A.S.

TITLE: The Application of the Laws of Turbulent Diffusion to the Investigation of the Dispersion of Liquid Jets Issuing From Small Orifices (Primeneniye zakonov turbulentnoy diffuzii k issledovaniyu rasseivaniya zhidkikh struy, vytekayushchikh iz malykh otverstiy)

PERIODICAL: Nauchn. tr. Novocherkasskiy politekhn. in-t, 1957, Nr 39 (53) pp 49-66

ABSTRACT: The equations of the turbulent diffusion of a liquid addition to an axisymmetric air jet are linearized by means of a partial substitution in the equations for the local values of the mean velocity by the mean values therefor relative to the cross section of the jet. The approximate equations thus obtained are analogous to the equation of heat transfer and their integration is performed by the usual methods. The theoretical results are compared with extant experimental materials relative to the spray atomization of fuel. At sections located far from the nozzle outlet, where the concentration of the liquid suspension is sufficiently small, the agreement between

Card 1/2

The Application of the Laws of Turbulent Diffusion to the Investigation (cont.)

theory and experiment is found to be fully satisfactory.

L. G. Loytsyanskiy

SOV/124-58-4-4075

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 4, p 56 (USSR)

AUTHOR: Lyshevskiy, A. S.

TITLE: Determination of Limit Velocities in the Breakdown of a Liquid Jet (K opredeleniyu predel'nykh skorostey pri raspade strui zhidkosti)

PERIODICAL: Nauchn. tr. Novocherkasskiy politekhn. in-t, 1957, Vol 39 (53), pp 67-70

ABSTRACT: The author gives an empirical formula for the determination of the limits of various forms of breakdown of a jet of water: 1) breakdown of a jet without the interference of aerodynamic forces, 2) breakdown of a jet with interference of aerodynamic forces, 3) breakdown of a jet with formation of a wave profile. The limits between the various forms of breakdown of a jet are determined by studying the results of experiments made by O. Gol'felder [Protsess raspada strui v zavisimosti ot formy sopla i protivodavleniya (The Process of the Breakdown of a Jet As a Function of the Shape of the Nozzle and the Back Pressure,) Vol 1, S. N. Vasil'yeva, Ed., ONTI, NKTF SSSR, 1936] with application of the theory of dimensional similarity.

Card 1/2

Determination of Limit Velocities in the Breakdown of a Liquid Jet

The equation for these limits is:

$$W = A \pi^{m} \qquad (5a)$$

where π is the ratio of the density of the liquid, ρ_{ℓ}, to the density of the air ρ_a, and

$$W = U_n^2 \rho_{\ell} d_c \alpha^{-1}$$

where U_n is the velocity of the jet, d_c is the diameter of the nozzle, and α is the surface tension of the liquid. The numerical values of A and m are found for each limit. There are certain discrepancies in the author's reasonings. He disregards the influence of the liquid's viscosity on the grounds that the viscosity coefficient in the experiment remained constant; yet the same can be said relative to the surface tension. The author asserts that the equation (5A) is obtained on the basis of the theory of similarity, whereas that theory points only to the fact that W is a function of π and the presentation of the dependence of W upon π as a power function is merely an admissible hypothesis. 1. Liquid jets--Velocity 2. Liquid jets--Aerodynamic characteristics

Card 2/2

M. I. Gurevich

SOV/124-58-11-12577

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 11, p 93 (USSR)

AUTHOR: Lyshevskiy, A. S.

TITLE: Some Laws Governing the Expansion of a Liquid-spray Jet in a Medium With a Counterpressure (Nekotoryye zakonomernosti rasshireniya strui raspylennoy zhidkosti v srede s protivodavleniyem)

PERIODICAL: Nauchn. tr. Novocherkasskiy politekhn. in-t, 1957, Vol 39 (53), pp 71-79

ABSTRACT: The author adduces semiempirical relationships of the taper angle of a liquid-spray jet issuing from a nozzle as a function of the geometric shape of the outlet opening (cylindrical, convergent-cone, divergent-cone, et al.) and of the Reynolds number. The relationship is based on the theory of a free jet, on the one hand, and on Hohlfelder's experiments (DVS. Sb. monogr. po in. lit., ONTI NKTP SSSR, 1936), on the other hand.

I. A. Shepelev

Card 1/1

SOV/124-58-2-1840

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 2, p 48 (USSR)

AUTHOR: Lyshevskiy, A. S.

TITLE: On the Influence of Turbulence on the Breakdown of a Liquid Jet (O vliyanii turbulentnosti na raspad zhidkoy strui)

PERIODICAL: Nauchn. tr. Novocherkasskiy politekhn. in-t, 1957, Vol 39(53), pp 81-86

ABSTRACT: An analysis of the reasonings of various authors who have investigated the character of the liquid flow in the outlet openings of liquid-spray fuel-injection nozzles. From an analysis of the nondimensional parameters of experimental data on the length of the unbroken liquid jet, obtained by a number of investigators, the following formula is obtained:

$$\frac{l}{d_c} = c\, W^{-m} R^{-n}, \quad W = \frac{u_c^2\, \rho_t\, d_c}{a}, \quad R = u_c\, d_c / \nu_t$$

where l is the length of the unbroken portion of the liquid jet, d_c is the diameter of the nozzle-outlet opening, u_c is the outflow velocity of the fuel, ρ_t and ν_t are the density and the kinematic viscosity

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