"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

IONOVA, I.V.; MOROZOVA, Ye.A.; PLINER, S.A.; DROBINSKAYA, N.A.

Synthesis of glycyl-leucine and glycyl-phenylalanine tetrapeptides. Vest.Mosk.un.Ser.2:Khim. 19 no.4:85-89 Jl-Ag '64.

(MIRA 18:8)

1. Kafedra organicheskoy khimii Moskovskogo universiteta.

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MOROZOVA, Ye.A.; IONOVA, L.V.; PLINER, S.A.

Cyclization of tetrapeptides by using ethoxyacetylene as a condensation agent. Dokl. AN SSSR 157 no.1:203-206 Jl '64 (MIRA 17:8)

1. Predstavleno akademikom A.N. Belozerskim.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINER, S.Kh.

Coloring of polyethylene products. Plast.massy no.6:44-46 '61. (MIRA 14:5)

(Dyes and dyeing--Plastics) (Polyethylene)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINER, V.: POLONSKIY, Ye.

On certain labor rights of trade unions, workers, and employees. Sots.trud 5 no.1:37-38 Ja '60. (MIRA 13:6)

1. Predsedatel' mestkoma Moskovskoy gorodskay kontory Stroybanka SSSR (for Pliner). 2. Starshiy yuriskonsul't Moskovskoy gorodskoy kontory Gosbanka SSSR (for Polonskiy).
(Labor laws and legislation)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

STEPANOVA, K.D.; TOLMACHEV, A.I., redaktor; PLINER, V.A., redaktor; KIRNARSKAYA, A.A., tekhnicheskiy redaktor.

[Meadows of the southern part of Sakhalin] Luga IUzhnoi chasti Sakhalina. Moskva, Izd-vo Akademii nauk SSSR, 1955. 133 p. (Sakhalin--Pastures and meadows) (MLRA 8:12)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINER, V.A.

GURSKIY, A.V.; SHIPCHINSKIY, N.V., otvetstvennyy redaktor [deceased]; PLINER, V.A., redaktor izdatel'stva; KIRHARSKAYA, A.A., tekhnicheskiy redaktor.

[Basic results of introducing trees and shrubs in the U.S.S.R.] Osnovnye itogi introduktsii drevesnykh rastenii v SSSR. Moskva, Izd-vo Akad.nauk SSSR, 1957. 301 p. (MLRA 10:6)
(Shrubs) (Trees) (Plant introduction)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINER, V.A.

V. A. Accumulation of vitamins C and P in wild rose hips. V. A. Vadova and V. A. Pliner. *Trudy Vsesoyuz. Nauch.-Issledovatel. Vitamin. Inst.* 4, 119–21(1953).—The vitamin P (I) content of wild rose hips in the early stages of the vegetative period is 1.44–1.72% on the wet and 4.6–5.5% on the dry basis. It reaches a max. of 2.80–3.32% and 11.30–12.30%, resp., at the end of the vegetative period. During the post-vegetative period, I is reduced to a min. of 1.32–1.76% and 3.74–4.08% on the wet and dry bases, resp. At full maturity I rises again. Vitamin C (II) rises gradually during the vegetative period and reaches its max. at complete maturity. The presence of I in the leaves of wild roses can be demonstrated only by a special procedure. (The following values are all on the dry-wt. basis.) It can be as high as 3.0%, that of II only 0.9%, while in the stems it varies from 1.5–5.9%. Both I and II varied, though not in a parallel manner, I from 0.9% in *Rosa albertii* to 14.2% in *R. canina* and II from 1.55% in *R. spinosissima* to 9.78% in *R. webbiana*. A high I content (4.82–14.18%) and a low II content (1.56–2.86%) were found in *R. cinnamomea*, *R. laxa*, and *R. elliptica*; A low I content (0.9–2.15%) and a high II content (8.91–9.78%) in *R. beggeriana*, *R. webbiana*, *R. albertii*; only slight differences (I 1.12–4.71% and II 1.20–5.40%) in *R. rugosa*, *R. pomifera*, *R. luschetika*, *R. spinosissima*, and *R. foetida*. The total sugar content in all species varied from 12–27% and had no relation to either II or I.

B. S. Levine

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

VADOVA, V.A.; PLINER, V.A.

Vitamins C and P in rose hips. Trudy VNIVI 4:119-121 '53.(MLRA 7:10)

1. Biologicheskiy otdel Leningradskogo filiala.
(VITAMIN C, determination,
in Rosa fruits)
(VITAMIN P, determination,
in Rosa fruits)
(PLANTS,
Rosa fruits, determ. of vitamins C & P)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINER, Ya.Ye., inzh.; VITEBSKIY, M.L., inzh.

Horizontal screw press for dismantling excavator units.
Mont.i spets.rab.v stroi. 22 no.8:31 Ag '60.
(MIRA 13:8)

1. Lyuberetskiy mekhanicheskiy zavod.
(Excavating machinery) (Power presses)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

VITEBSKIY, M.L., inzh.; PLINER, Ya.Ye., inzh.

Horizontal screw presses for dismantling excavator units. Suggested by M.L.Vitebskiy, Ya.Ye.Pliner. Rats.i izobr.predl. v. stroi. no.12:71-73 '59. (MIRA 13:5)

1. Lyuberetskiy mekhanicheskiy zavod trosta Gidrospetsfundamentstroy Ministerstva stroitel'stva RSFSR, Lyubertsy, Moskovskoy oblasti, Kotel'nicheskaya ul., d.22.
(Power presses)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINER YU. G. PA 77T36

USSR/Nuclear Physics - Mesons Mar 1948
Nuclear Physics - Nuclear Theory

"The Disintegration of Negative Mesotrons in Matter," Yu. G. Pliner, 2 pp

"Priroda" No 3

Outlines mesotron theory of nuclear forces. Time of spontaneous disintegration of negative mesotrons was calculated according to this theory. (Proc Ph Mat Soc Jap 1939). Describes recent experiments of Conversi, Pancini, Piccioni and Sigurgeirsson, Jamakava. Calculates disintegration time from their results. This differs from theoretical time, thus disproving mesotron theory of nuclear forces.

77T36

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINER, YU. G. PA5/49T49

USSR/Geophysics Jul 48
Magnetic Fields - Measurements
Magnetic Fields, Solar

"Magnetic Fields of Massive Rotating Bodies," Yu. G. Pliner, 9 pp

"Priroda" No 7 p.16-24

Primarily reports P. Blecket's studies on the magnetic field of Star Davy-78, with some reference to studies by P. N. Lebedev and other Soviet scientists to determine methods for measuring the magnetic field of rotating bodies.

5/49T49

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINER, YU. G.

USSR/Geophysics - Magnetism, Terrestrial Jul 50

"Experimental Verification of the Fundamental Theory of Magnetism," Yu. G. Pliner

"Priroda" No 7, pp 50-52

Discussion of the origin of terrestrial magnetism and a comparison of theoretical values with exptl values of H at various parts of the earth, in order to check the theory of stellar magnetism due to rotation.

219T65

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

MURIN, A.N.; PLINER, Yu.G.

Mechanism of the formation of abnormal mixed crystals. Radiokhimiia 1 no.3:253-256 '59. (MIRA 12:10)
(Crystals--Growth)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINER, Yu.G.

Relation between abnormal cocrystallization and association (complex formation). Radiokhimiia 1 no.4:384-386 '59. (MIRA 13:1)
(Crystallization) (Chemistry, Physical and theoretical)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINER, Yu. G., starshiy nauchnyy sotrudnik; KOZLOVSKIY, V. Kh., nauchnyy sotrudnik

Concerning the structure of polarization fixing substances. Izv. LETI 59 no.46:303-307 '62. (MIRA 15:10)

(Electrets) (Polarization(Electricity))
(Dipole moments)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

MURIN, A. N., dokter khimicheskikh nauk, prof.; PLINER, Yu. G., starshiy nauchnyy sotrudnik

Statistical thermodynamics of simultaneous crystalization processes in some heterogeneous systems. Izv. LETI 59 no.46: 335-336 '62. (MIRA 15:10)

(Crystallization)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINER, Yu. G., starshiy nauchnyy sotrudnik

Determination of the distribution of electrons. Izv. LETI 59 no.46:337-339 '62. (MIRA 15:10)

(Electrons)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

42785
S/194/62/000/011/022/062
D413/D308

24.2120

AUTHOR: Pliner, Yu. G.

TITLE: The establishment of electron distributions

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 11, 1962, 5, abstract 11-3-10ye (Izv. Leningr. elektrotekhn. in-ta, no. 46, 1961, 337-339)

TEXT: The author considers the interaction processes of electrons with atoms and ions in a gaseous discharge, using the approximation of interaction in pairs; collective effects are not taken into account here. It is shown that when any mechanism establishes a Maxwell distribution of electron velocities, the radial field after a certain very short interval of time will set up a Boltzmann distribution of the electrons in the space coordinates. The intial factor that establishes the velocity distribution of the electrons may be merely the interaction between them. 1 reference. [Abstracter's note: Complete translation.]

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

24.7900

S/058/62/000/010/064/093
A061/A101

AUTHORS: Pliner, Yu. G., Kozlovskiy, V. Kh.

TITLE: On the structure of substances fixing polarization

PERIODICAL: Referativnyy zhurnal, Fizika, no. 10, 1962, 27, abstract 10E204 ("Izv. Leningr. elektrotekhn. in-ta", 1961, no. 46, 303 - 307)

TEXT: The electrostatic energy of a substance (crystalline or amorphous) conserving the polarized state after removal of the external field is calculated on the assumption of the substance being comminuted into submacroscopic regions with different directions of polarization. The calculation is performed by taking account of both the presence of a free charge $\sigma_f = -\alpha\sigma_g$, where $0 < \alpha < 1$, which partly compensates the polarization charge on the interfaces, and the difference between the effective field in the boundary layer and the field in the bulk. It is found that there is a minimum of energy for a given dimension of the region, and that there is an equilibrium dimension of the region depending on α.

V. Kozlovskiy

[Abstracter's note: Complete translation]

1/B

Card 1/1

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINER, [illegible]; LAPPO, S.I.

Metal deposition in the process of smelting ferrotitanium. Izv. vys. ucheb. zav.; chern. met. 8 no.7:69-73 '65. (MIRA 18:7)

1. Klyuchevskiy zavod ferrosplavov i Vsesoyuznyy nauchno-issledovatel'skiy institut standartnykh obraztsov i spektral'nykh etalonov.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

L 27418-66 EWT(m)/EWP(t)/ETI IJP(c) JD/JH

ACC NR: AR6009552 SOURCE CODE: UR/0137/65/000/012/G017/G017

AUTHORS: Pliner, Yu. L.; Myasnikov, P. A.; Strizhov, G. F.; Ivanov, L. A.; Shabanov, P. G.

57
B

TITLE: Increasing the efficiency of an installation for spraying aluminum

18 27

SOURCE: Ref. zh. Metallurgiya, Abs. 12G119

REF SOURCE: Sb. tr. Klyuchevsk. z-da ferrosplavov, vyp. 1, 1965, 106-111

TOPIC TAGS: aluminum, aluminum powder, atomization

ABSTRACT: A new sprayer nozzle design provides better operating characteristics with the following dimensions and condition parameters of the aluminum and sprayer: nozzle diameter - 26 mm; liquid jet diameter - 15 mm; air gap - 1.5--3.0 mm; pot temperature of Al - 710--750°C; pot pressure of Al - 2.5--3.0 kg/cm^2; specific air flow rate - 0.19--0.24 kg/kg; sprayer pressure - 4--5 kg/cm^2. With the fulfillment of the cited parameters the productivity of sprayer installations can reach 2100--2600 kg/hr, which exceeds by 45--95% the productivity of nozzles used in the factory up to 1962. The content of substandard fractions comprises 16--20%. G. Svodtseva (Translation of abstract)

SUB CODE: 11

2

Card 1/1 UDC: 669.71.4

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

DUBROVIN, A.S.; PLINER, Yu.L.

Temperature of the aluminothermic process outside blast furnace. Izv. Sib. otd. AN SSSR no.12:9-15 '62. (MIRA 17:8)

1. Nauchno-issledovatel'skiy institut metallurgii, Chelyabinsk.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

DUBROVIN, A.S.; RUSAKOV, [illegible]; PLINER, Yu.L.

Aluminum migration and wetting during the aluminothermic reduction. Izv. AN SSSR Met. i gorn. delo no.2:51-57 Mr-Ap'64

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINER, Yu.I.; SUCHIL'NIKOV, S.I.

Factors determining the temperature of nonfurnace aluminothermic melting. Izv. vys. ucheb. zav.; chern. met. 4 no.11:71-75 '61. (MIRA 14:12)

1. Ural'skiy politekhnicheskiy institut.
(Aluminothermy)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

SHCHIL'NIKOV, S.I.; IGNATENKO, G.F.; PLINER, Yu.L.; IGNAT'YEV, V.S.; LAPPO, S.I.

Technology of aluminothermic smelting of metallic chromium in an electric arc furnace. Izv. vys. ucheb. zav.; chern. met. 5 no.5:78-85 '62. (MIRA 15:6)

1. Ural'skiy politekhnicheskiy institut.
(Chromium--Electrometallurgy)
(Aluminothermy)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

L 43088-66 EWT(m)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AR6014366 (A,N) SOURCE CODE: UR/0137/65/000/011/G029/G029

AUTHORS: Pliner, Yu. L.; Arkhipov, O. A.; Rubinshteyn, Ye. A.

32
B

TITLE: Manufacture of carbon-free vanadium alloys

SOURCE: Ref. zh. Metallurgiya, Abs. 11G214

REF SOURCE: Sb. tr. Klyuchevsk. z-da ferrosplavov, vyp. 1, 1965, 81--88

TOPIC TAGS: vanadium containing alloy, metal melting, iron containing alloy, aluminum containing alloy

ABSTRACT: It is reported that the most rational method for obtaining carbon-free V alloys is the aluminothermic method (0.02--0.06% C). The dependence of V extraction on the amount of reducing agent and other parameters was investigated. The Al content of the alloy should be kept below 1.5--2.0%. The smelting parameters of V alloys depend on the correct choice and amount of fluxes in the charge. The effect of lime in the slag was studied. The temperature dependence of the slag viscosity from Fe-V melts and the dependence of V extraction and Al content in the alloy were studied as a function of V_2O_5 particle size.

Card 1/2

UDC: 669.292.018.9

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

L 43088-66

ACC NR: AR6014366

Recommendations for further decreasing the impurites content in the alloy are presented. Bibliography of 8 citations. V. Semakin [Translation of abstract]

SUB CODE: 11

Card 2/2 gl

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINER, Yu.L.; DUDKO, O.M.; KONEV, A.F.; BOBYLEV, G.K., inzh., retsenzent

[Economics of iron alloy production] Ekonomika ferrosplavnogo proizvodstva. Moskva, Metallurgiia, 1964. 149 p. (MIRA 17:12)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINER, Yu.L.; DUBROVIN, A.S.

Speed of an off-furnace aluminothermic reduction process. Zhur. prikl. khim. 37 no.8:1708-1713 Ag '64.

(MIRA 17:11)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

STRIZHOV, G.F.; MYASNIKOV, P.A.; PLINER, Yu.L.

Efficient operating conditions for aluminum pulverizing equipment.
Stal' 23 no. 3:234-237 Mr '64. (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy teplotekhniki i Klyuchevskiy zavod ferrosplavov.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

IGNATENKO, G.F.; SUCHIL'NIKOV, S.I.; PLINER, Yu.L.; IGNAT'YEV, V.S.; KONEV, A.F.

Making chromium metal in arc furnaces by aluminothermy. Stal' 22 no.2:137-139 F '62. (MIRA 15:2)

1. Klyuchevskiy zavod ferrosplavov i Ural'skiy politekhnicheskiy institut.

(Chromium—Electrometallurgy)
(Aluminothermy)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

ROZENTSVEYG, Yan Davydovich; SHVEDOV, Lev Vladimirovich; VENETSKIY, Sergey Iosifovich; PLINER, Yu.L., kand. tekhn. nauk, retsenzent; RYSS, M.A., inzh., red.

[Brief handbook on the manufacture of ferroalloys (for workers)] Kratkii spravochnik ferrosplavshchika (dlia rabochikh). Moskva, Izd-vo "Metallurgiia," 1964. 343 p. (MIRA 17:5)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

DUBROVIN, A.S.; PLINER, Yu. L.

At the Chelyabinsk Metallurgical Research Institute.
Stal' 22 no.10:918 0'62. (MIRA 15:10)
(Metallurgical research)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINER, Yuriy L'vovich; IGNATENKO, Gennadiy Fedorovich; LAPPO, Stanislav Ivanovich

[Metallurgy of chromium] Metallurgiia khroma. Moskva, Metallurgiia, 1965. 182 p. (MIRA 18:2)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINER, Yuriy L'vovich; SUCHIL'NIKOV, Sergey Ivanovich; RUBINSHTEYN, Yevsey Abramovich; LEPINSKIKH, B.M., red.; KOMOVINA, N.A., tekhn. red.

[Aluminothermy in the production of ferroalloys and addition alloys] Aliuminotermicheskoe proizvodstvo ferrosplavov i ligatur. Moskva, Metallurgizdat, 1963. 174 p. (MIRA 16:10)

(Iron alloys--Metallurgy) (Aluminothermy)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

IGNATENKO, G.F., inzh.; PLINER, Yu.L., kand.tekhn.nauk; LAPPO, S.I., inzh.; KONEV, A.F., inzh.

Thermochemical reduction of chromium metal by silicon with partial melting of oxides in the charge. Stal' 23 no.3:226-227 Mr '63. (MIRA 16:5)

(Chromium--Metallurgy)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

S/133/63/000/003/002/007
A054/A126

AUTHORS: Ignatenko, G.F., Engineer, Pliner, Yu.L., Candidate of Technical Sciences, Lappo, S.I., Konev, A.F., - Engineers

TITLE: Silicothermic production of metallic chrome with partial melting of the oxides in the charge

PERIODICAL: Stal', no. 3, 1963, 226 - 227

TEXT: At the Klyuchevskiy zavod ferrosplavov (Klyuchevsk Plant in Ferro-alloys) a new technology has been established to produce low-carbon metallic chrome in the electric furnace. Before feeding in the reducing agents, 60 - 65% of chrome oxides is melted in the furnace with lime added, then the balance of oxides is fed in to the charge surface together with silicon crystals. The reduction process can take place with or without current. In the first case the silicon quantity added must ensure the formation of silicochrome containing at least 50% Si. The tests carried out with 30 kg chrome oxides yielded the following parameters: chrome-extraction: 84%; consumption of silicon crystals: 450 kg/t; power consumption: 2,600 kwh/t; silicon-utilization: 90%. The metal

Card 1/2

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

L 50195-65 EWG(j)/EWT(m)/EWP(w)/EPF(c)/EPF(n)-2/EWA(d)/EPR/T/EWP(t)/EWP(b)/
EWA(c) Pr-4/Ps-4/Pu-4 IJP(c) JD/JW/JG

AM5016218 BOOK EXPLOITATION UR/669263

Pliner, YUriy L'vovich; Ignatenko, Gennadiy Fedorovich; Lappo, Stanislav Ivanovich

Metallurgy of chrome (Metallurgiya khroma). Moscow, Izd-vo "Metallurgiya", 1965. 182 p. illus., biblio., tables., indices. Errata slip inserted. 1717 copies printed.

TOPIC TAGS: chromium, chromium bearing ore, metallic chromium chromium production, thermochemical chromium production, aluminum reduction, silicon reduction, chromium oxide reduction, chromium chloride reduction

PURPOSE AND COVERAGE: This book is intended for engineering personnel of metallurgical plants and scientific research institutes. The book reviews the theoretical fundamentals of producing metallic chromium by various thermochemical methods including electrolytic and other methods. The characteristics of chromium-bearing ores are presented, and methods of producing chromium compounds discussed. The physical and chemical properties of chromium are indicated and phase diagrams of systems of chromium with

Card 1/5

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various elements are reproduced. An economic evaluation of obtaining metallic chromium by thermochemical methods is presented. There are 184 references, mostly Soviet.

TABLE OF CONTENTS:

Introduction -- 5

Ch. I. Physical and chemical properties of the principal Compounds -- 9
1. Physical and chemical properties of chromium -- 9
2. Chromium-aluminum system -- 13
3. Chromium-silicon system -- 15
4. Chromium-carbon system -- 18
5. Chromium-oxygen system -- 20
6. Chromium-iron system -- 24
7. Chromium-nitrogen system -- 25
8. Chromium-hydrogen system -- 27
9. Chromium-sulfur system -- 28
10. Chromium-phosphorus system -- 28

Card 2/5

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

L 50195-65
AM5016218

10

11. Interaction of chromium with arsenic, zinc, lead, tin, bismuth, and cadmium -- 29

Ch. II. Characteristics of chromium ores and methods of processing them -- 31
1. Classification of chromium ores -- 31
2. Technology of obtaining hexavalent chromium compounds -- 37
3. Producing of chromium oxide -- 39

Ch. III. Thermodynamic analysis of reduction reactions of chromium oxide -- 45
1. Reduction of chromium oxide by aluminum -- 45
2. Reduction of chromium oxide by silicon -- 57
3. Reduction of chromium oxide and chloride by magnesium -- 60
4. Reduction of chromium oxide by carbon -- 62

Ch. IV. Chromium extraction by reduction of reactive metals -- 66
1. Thermal conditions of extraction by reduction of aluminum -- 67
2. Specific features of reactions of reducing chromium oxide by aluminum -- 76

Card 3/5

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

L 50195-65
AM5016218

3. Precipitation of reduced metal -- 83
4. Technology of production of metallic chromium by reduction of of aluminum -- 91
5. Characteristics of slags used in chromium extraction with the reduction of aluminum without using a furnace -- 104
6. Extraction of metallic chromium by reduction of aluminum in an electric furnace -- 114
7. Extraction of metallic chromium by reduction of silicon -- 139

Ch. V. Other methods of obtaining metallic chromium -- 152
1. Electrolytic extraction of metallic chromium -- 152
2. Carbothermal production of metallic chromium -- 161
3. Reduction of chromium chloride by magnesium -- 163

Ch. VI. Economic Evaluation of thermochemical methods of metallic chromium extraction -- 167
1. Reduction of aluminum without furnace -- 167
2. Reduction of aluminum in an electric furnace -- 168
3. Reduction of silicon in an electric furnace -- 170
Appendix -- 172

Card 4/5

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

L 50195-65
AM5016218

References -- 176

SUB CODE: MM SUBMITTED: 18Jan65 NO REF SOV: 154

OTHER: 030

Card 5/5

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

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S/148/62/000/005/003/009
E071/E135

18.1135

AUTHORS: Suchil'nikov, S.I., Ignatenko, G.F., Pliner, Yu.L., Ignat'yev, V.S., and Lappo, S.I.

TITLE: The technology of aluminothermic smelting of metallic chromium in an electric arc furnace

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no.5, 1962, 78-85

TEXT: The following modified technology was investigated: preliminary melting of a part of the chromium oxide charge with addition of lime in an electric arc furnace, lifting the electrodes, adding the remaining part of the charge and finishing the process in the usual way. A part of the thermal energy is supplied by the electric arc, thus reducing the consumption of aluminium and eliminating the need for potassium nitrate (except for a small amount used for the initial ignition). In addition, the quality of the metal produced can be improved, since a part of the carbon present in chromium oxide will become oxidised, so that metal with a lower C and N content can be obtained. The experiments were carried out in an open semi-industrial arc

Card 1/2

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A054/A029

18.1150

AUTHORS: Ignatenko, G.F., Pliner, Yu.L., Lappo, S.I., Rubinshteyn, Ye.A., Knyshev, E.A., Engineers

TITLE: The Technology for Producing Carbon-Free Ferrochrome of High Nitrogen Content by the Aluminothermic Process

PERIODICAL: Stal', 1960, No. 9, pp. 817-818

TEXT: In the aluminothermic process for producing ferrochrome of high nitrogen content, which was developed by A.M. Samarin and S.I. Filippov, in 1945-46, the charge contains chrome ore concentrate, aluminum powder, sodium nitrate and slag obtained while melting chromium metal. In connection with the ever increasing number of steel types alloyed with nitrogen, it was found expedient to develop a more economical method for producing this kind of steel and to improve its properties as well as to raise the nitrogen content in the nitrified ferrochrome outside of the furnace. The main factors affecting the assimilation of nitrogen by ferrochrome in the aluminothermic process were investigated at the Klyuchevsk Plant. The nitrogen content of ferrochrome depends in the first place on the amount of nitrogen separated during melting, i.e., on the amount of saltpeter added to the charge. Melting tests were carried out with a saltpeter con-

Card 1/3

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A054/A029

The Technology for Producing Carbon-Free Ferrochrome of High Nitrogen Content by the Aluminothermic Process

tent of 20-65 % of the weight of chromium concentrate and grinding and sieving the materials contained in the charge to a size of 0.8 mm. The necessary specific heat of the process (δ H = 670 cal/kg of the charge) was maintained by controlling the slag content. Maximum nitrogen content could be obtained by adding 40-45 % saltpeter based on the chrome concentrate. In order to determine the optimum granular size for obtaining a maximum nitrogen content in the alloy, tests were made with a constant 45 %-saltpeter content and by changing the granular size of the charge materials to a mximum of 2 mm, which, however, resulted in a decrease in the nitrogen content by 0.3 % on an average while the metal yield decreased by more than 20 %. The amount of deoxidizing agents affects the metal yield and the melting process. Tests carried out with 45 % saltpeter in the charge for the purpose of determining the optimum quantity of deoxidizing agents revealed that the maximum nitrogen content in the alloy is obtainable by applying deoxidizers in the amount of up to 97 % of the theoretical quantity of deoxidizers required for the process. In order to establish the optimum heat conditions tests were carried out with 670-750 cal/kg of the charge and it was found

Card 2/3

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The Technology for Producing Carbon-Free Ferrochrome of High Nitrogen Content by the Aluminothermic Process

that an increase in the specific heat of the process decreases the nitrogen content, while the maximum was obtained at a heat condition ensuring a specific heat of 670 cal/kg of the charge. Based on the test results a technology was developed for producing high-nitrogen, carbon-free ferrochrome, according to which 1.5-1.7 % nitrogen content can be obtained with 25 % saltpeter in the charge and with a specific heat of 625-635 cal/kg, whereas 2.0-2.1 % nitrogen content will be ensured with 45 % saltpeter in the charge and with a δ H value of 670 cal/kg. There are 1 figure, 1 set of figures and 2 Soviet references.

ASSOCIATION: Klyuchevskiy zavod ferrosplavov (Klyuchevsk Ferro-Alloy Plant)

Card 3/3

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S/148/62/000/002/003/008
E193/E383

18.1735

AUTHORS: Ignat'yev, V.S., Ignatenko, G.F., Suchil'nikov, S.I. and Pliner, Yu.L.

TITLE: Material and heat-balance of smelting metallic chromium in an electric-arc furnace

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, no. 2, 1962, 65 - 72

TEXT: A new method of chromium smelting, cheaper than the conventional process, had been proposed by the present authors and the object of the investigation described in the present paper was to check the efficiency of this process by compiling its material and heat-balances. The salient feature of the new process is the elimination from the charge of that portion of sodium nitrate which is normally used to provide heat required to ensure correct running of the smelting process and separation of the slag from the metal. In the new method a portion of oxides and fluxes constituting the total weight of the charge is fused in a three-phase electric-arc furnace and serves as a physical source of heat required in the reducing stage of the

Card 1/8

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process. The smelting experiments were carried out in a 750 kVA furnace equipped with a magnetite-lined cast-iron melting shaft, provision having been made for insertion of several thermocouples. The temperature of the charge was measured from the moment of ignition of the combustible mixture added to the charge to form a liquid phase. When this had been formed, the furnace electrodes were lowered, current was switched on and the chromium oxide/lime mixture was smelted. The electrodes were then withdrawn and the reducing portion of the charge (chromium oxide and aluminium in the quantity required to reduce both the solid and fused oxides) was introduced into the melt. The composition of the charge, divided into igniting, ore-bearing and reducing portions (denoted by A, Б and B, respectively) is given below (kg):

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Material and heat-balance ....

	A	E	B	Total
Technical chromium oxide (98.23% Cr_2O_3)	200	500	1620	2320
Aluminium grain (97% Al)	76	-	766	842
Lime (85% CaO)	-	200	-	200
Saltpetre (98% $NaNO_3$)	16	-	-	16
Total ...	292	700	2386	3378 .

The various elements content (in kg) of the charge was:

Chromium $2320 \times 0.9823 \times \frac{104}{152} = 1558.8;$

Aluminium $842 \times 0.97 = 816.7;$

Iron $2320 \times 0.0015 \cdot \frac{56}{72} + 842 \times 0.0036 = 5.73;$

Silicon $2320 \times 0.005 \frac{28}{60} = 5.42 .$

Card 3/8

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E193/E383

Material and heat-balance ....

The 767.8 kg Al used up in the process was made up as follows: 763.3 kg for reducing the chromium oxide, 3.48 kg and 0.92 kg for the reduction of silicon and iron, respectively, and 3.5 kg included in the metal produced. The process yielded 1 456 kg of crude chromium (Cr 99.06%, Si 0.24%, Al 0.24%, Fe 0.41%, C 0.019%, S 0.016%, P 0.007%), equivalent to 91.6% recovery, the degree of utilization of Al being 94.4%. Regarding the heat-balance, the total duration of the process was 1 hour 44 min, of which 1 hour 27 min constituted the smelting stage (with the current switched on) and the remainder represented the duration of the reducing stage. The temperature of the melt was 1 870 °C, the temperature of the process being 2 100 °C. The integrated heat-balance calculated for these conditions was as follows:

Card 4/8

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E193/E383

Material and heat-balance ....

Heat supplied

	kcal	%
By exothermic reducing reactions	1861887	70.6
By electrical energy	773245	29.4
Total	2635132	100.0

Heat consumed

	kcal	%
Heat content of the metal	623750	23.64
Heat content of the slag	1269620	48.21
Heat losses	735416	27.91
Unaccounted-for losses	6346	0.24
Total	2635132	100.0

Card 5/8

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The heat-balance for the smelting stage was as follows:

Heat supplied by	kcal	%
Decomposition of saltpetre by aluminium	52496	5.35
Exothermic reaction of aluminium reduction of chromium oxide	155981	15.88
Electric arcs	773245	78.76
Total	981722	100.0

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consumption of aluminium by 81 kg/t of the melt, as a result of which the cost of producing crude chromium was reduced by 4%. It is pointed out in this connection that the furnace used in the new process should be equipped with a roof to minimise heat losses. There is 1 figure.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural' Polytechnical Institute)

SUBMITTED: June 23, 1961

Card 8/8

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IGNATENKO, G.F., inzh.; PLINER, Yu.L., inzh.; LAPPO, S.I., inzh.; RUBINSHTEYN, Ye.A., inzh.; KNYSHEV, E.A., inzh.

Technology of making high-nitrogen, carbon-free, ferrochromiym by the aluminothermic method. Stal' 20 no.9:817-818 S '60. (MIRA 13:9)

1. Klyuchevskiy zavod ferrosplavov.
(Iron-crhomium alloys--Metallurgy) (Aluminothermy)

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S/148/61/000/011/005/018
E071/E180

AUTHORS: Pliner, Yu.L., and Suchil'nikov, S.I.

TITLE: On factors determining the temperature of alumino thermal smelting outside a furnace

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, no.11, 1961, 71-75

TEXT: Main factors determining the temperature of the alumino-thermic processes carried out outside furnaces are discussed. It is pointed out that the process is possible only if the temperature exceeds the melting point of the oxide being reduced. The temperature at which the process can start can be determined from a modified equation of N.N. Murach and U.D. Veryatin (Ref.6: Vnepechnaya metallotermiya, TsIIN, Metallurgizdat, 1956):

$$\log t_{process} = \frac{t_{melt.}}{3600} + 2.81 \qquad (6)$$

where: $t_{process}$ - temperature at which the process can start, and

Card 1/2

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PLIŇER, Yu. L., Cand Tech Sci -- (diss) "Effect of some factors on the yield of metal in the aluminothermal production of ferroalloys at the Klyuchevskiy Ferroalloy Plant." Sverdlovsk, 1960. 16 pp; (Ural'skiy Affiliate of the Academy of Sciences USSR, Inst of Metallurgy); 150 copies; price not given; (KL, 22-60, 138)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINER, Yu.L.

Deposition of ferrotitanium regulus. Trudy Inst. met. UFAN SSSR no.4:123-126 '58. (MIRA 12:10)
(Titanium-iron alloys) (Aluminothermy)

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PLINER, Yu.L.

Akademiya nauk SSSR. Ural'skiy filial. Institut metallurgii

Trudy, Vyp. 4 (Transactions of the Institute of Metallurgy, Ural Branch, Academy of Sciences, USSR; No. 4) Sverdlovsk, 1958. 157 p. Errata slip inserted. 1,000 copies printed.

Editorial Board: N.A. Vatolin (Resp. Ed.), Candidate of Technical Sciences; A.S. Mikulinskiy, Professor, Doctor; V.Ya. Miller, Professor; P.A. Pazdnikov, Candidate of Technical Sciences; and S.S. Liseyak, Candidate of Technical Sciences; Ed.: N.S. Baranovskaya.

PURPOSE: This book is intended for ferrous and nonferrous metallurgists.

COVERAGE: The book presents results of investigations of theoretical problems in metallurgy and chemistry and gives information on the efficient use of raw materials in ferrous and nonferrous metallurgy and on the development of new production processes in the metallurgical and chemical industries. The articles were written by junior members and experienced specialists of the scientific staff of the Institutes of Metallurgy, Chemistry, and Electrochemistry, Ural Branch, Academy of Sciences, USSR.

Shevris, S.V., T.V. Saporozhnikova, and B.N. Leginskiy. Electrical Resistance and Phase Composition of Briquetted Ilmenite During the Reducing-Roasting Process 15

Kuzlev, G.A., and Yu.A. Vetrenko. On the Connection Between the Kinetics of the Vaporization of Sulfide and the Pressure of Saturated Vapor 19

Zaryadov, V.I., and N.P. Mayev (Deceased). Behavior of Germanium During the Roasting of Sulfide Concentrates 25

Shatov, L.N., and N.I. Kochnev. On the Reduction of the Lower Sulfides of Nickel and Cobalt 35

Shatov, L.N., and N.I. Kochnev. Oxidation of the Lower Sulfides of Nickel and Cobalt 39

Chekreyev, N.Ya., and M.V. Smirnov. Polarization of Beryllium-Oxide-Carbon Anodes in Fused Chlorides 45

Zhuravlev, N.N., L.K. Garrilov, and P.A. Pazdnikov. Investigation of the Conditions for Electrodeposition of Copper From Sulfate Solutions in the Presence of Iron, Zinc, and Cadmium Cations and the Nitrate Anion 51

Frishberg, I.V., P.A. Pazdnikov, and L.K. Garrilov. Some Prerequisites for the Electrolytic Production of Lead Sponge From Alkaline Chloride Solutions and Selection of Insoluble Anodes for Electrolysis 59

Kozhevnikov, G.N. Some Peculiarities of the Reaction of Nelsenite With Soda and Lime During the Sintering Process 65

Kozhevnikov, G.N., and S.I. Kuznetsov. Optimum Conditions for Leaching Soda-Nelsenite Sinter Cakes 71

Mikulinskiy, A.S., and G.N. Kozhevnikov. Production of Metallic Sodium by Carbon Reduction of the Sulfate or Carbonate (Exploratory Tests) 77

Nalatirev, V.F., Ye.A. Vetrenko, A.A. Tishchenko, and A.A. Rahadzhan. On the Problem of Passage of Zinc From [Copper] Matte to the Gaseous Phase During Air Blast 81

Zaryadov, V.I., S.A. Vyrmenichev, and N.P. Mayev (Deceased). Comparative Data on the Carrying of Liquid Into the Gas-exhaust Holes in an Experimental Converter 87

Mikhaylov, V.V., R.Z. Kadinov, and V.I. Chuchkov. On the Behavior of Oxides of Boron During the Metallurgical Treatment of Boronic Ores 97

Kaybichev, A.V., and V.P. Chernobrovkin. On the Melting and Overheating of Pig Iron in the Cupola 101

Kaybichev, A.V., and V.P. Chernobrovkin. Change in Chemical Composition and Heat Content of Pig Iron During Cupola Melting 107

Chernobrovkin, V.P., A.A. Dobrydnev, and V.S. Belyayev. Phosphorus and Titanium in Foundry Pig Iron 113

Pliner, Yu.L. On the Deposition of Ferrotitanium Reguli 123

Tokarev, A.Ya., and S.S. Spasskiy. Investigation of the Copolymers of Poly-1,3-butylene Glycol Fumarate and Styrene 127

Plotkina, N.I., and V.G. Plyusnin. Production of Isoparaffins by Alkylation of Isobutane With Olefins 133

Teterin, G.A., O.A. Yesin, and B.M. Lepinskikh. Physicochemical Properties of Fused Silicates of Cobalt 145

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SOV/137-58-10-20543

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 28 (USSR)

AUTHOR: Pliner, Yu.L.

TITLE: Effect of Heating of a Charge and of Electrical Heating of Molten Slags Upon Performance Indices in the Aluminothermal Smelting of Ferrotitanium (Vliyaniye nagreva shikhty i elektropodogreva zhidkikh shlakov na pokazateli alyuminotermicheskoy vyplavki ferrotitana)

PERIODICAL: Izv. Sibirsk. otd. AN SSSR, 1958, Nr 1, pp 56-62

ABSTRACT: Experimental laboratory and industrial heats of Fe-Ti are made by the aluminothermal method, with heating of the charge. They show that the yield of metal under these conditions rises by 7-8%, the Al consumption being reduced from 540 to 490 kg/t. It is found that as the quantity of charge increases, the temperature to which it has to be heated diminishes and is 215°C for the smelting of 1500 kg of concentrate. An investigation of the slags showed that when the charge is heated, its Fe-Ti-beads content diminishes considerably. Experimental pilot-plant heats with electrical heating of the molten slag by immersion of the electrodes of a 3-phase arc furnace into it to a depth of

Card 1/2

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Effect of Heating of a Charge and of Electrical Heating (cont.)

100 mm demonstrate that the degree of reduction of Ti is increased, so that it is possible to refrain from the use of thermit heating additives and to reduce the cost of the alloy by 300 rubles per t.

A.Sh.

1. Alloys--Production 2. Furnaces--Operation 3. Heat--Sources 4. Aluminum--Thermal effects 5. Electric currents--Thermal effects

Card 2/2

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B016/B052

AUTHORS: Pliner, Yu. L., and Suchil'nikov, S. I.

TITLE: Estimating the Rate of Sinking of Ferrotitanium Drops in Molten Slag

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 5, pp. 1187-1189

TEXT: The authors report on the investigation of the loss of ferrotitanium in slag during aluminothermal melting. They recommend measurements for the elimination of such losses (up to 10% of the total weight). The time during which the slag remains liquid is too short for the complete sinking of drops in the slag (Ref. 1). In Ref. 2, the authors mention that the motion of one drop has the following velocity: $V = V_0 \frac{3\eta+3\eta'+\varepsilon^2\varkappa^{-1}}{2\eta+3\eta'+\varepsilon^2\varkappa^{-1}}$ (1), where V_0 denotes the velocity of motion of a solid ball of the same radius as the drop; η is the viscosity of the slag; η' is the viscosity of the metal drop; ε is the charge per unit area of the drop; and $\varkappa$ is the elec-

Card 1/4

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Estimate of the Rate of Sinking of Ferroti[redacted]60/135/005/037/043
titanium Drops in Molten Slag B016/B052

trical conductivity of the slag. Since practically no retardation of the tangential motion of the liquid within the drop takes place when $\eta + \eta' \gg \varepsilon^2 \varkappa^{-1}$, equation (1) (considering that $\eta \gg \eta'$) takes the form of $V = 3/2\, V_o$ (2). After comparing published data (V. V. Khlynov and G. A. Yesin, Ref. 4) with the viscosity of ferrotitanium slag (4.8 poise), the authors suggest the following approximate equation for the velocity of motion of the metal drop in the slag: $V = \frac{V_o + 3/2 V_o}{2} = 1.25\, V_o$ (3), or

$V = 1.25 \cdot 2/9 \cdot \frac{r^2 g(\gamma_2 - \gamma_1)}{\eta} = 272{,}5\, \frac{r^2(\gamma_2 - \gamma_1)}{\eta}$ (4), where r is the radius of the drop, γ_2 and γ_1 are the density of drop and slag, respectively. A comparison of the grain size of scrap aluminum (0.42 mm) used formerly with that of the metal drop in the slag (0.36 ± 0.03 mm) showed that they are practically equal. Fig. 1 shows the viscosity of slag between 1450° and 1750°C measured with an electromagnetic vibrating viscosimeter. A

Card 2/4

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Estimate of the Rate of Sinking of Ferrotitanium Drops in Molten Slag

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thermocouple of the type ЦНИИЧМ-1 (TsNIIChM-1), designed at the Central Scientific Institute of Ferrous Metallurgy was used for measuring temperature. The considerably high viscosity at high temperatures is due to the presence of slightly mobile ions mainly of AlO_2^- (Ref. 8). Equation (4) can only be applied for the sinking rate of drops as long as the motion remains laminar. This is only the case until the critical rate of $V = c\frac{\eta}{\gamma_2 \cdot r}$ (5) is reached (where c is the Reynolds criterion). The authors combine equations (4) and (5) to obtain the maximum value of the drop radius at which the motion is still laminar, namely: $r_{max} = 0.97$ cm. Since this value exceeds considerably the size of metal drops formed during reduction, the authors calculate the sinking rate of the ferrotitanium drops. From these data they conclude that only drops larger than 0.2 mm can sink down to the metal layer. Drops with a radius of 0.05 mm and less are practically all kept back in the slag. For the elimination of losses, the authors suggest: a) the use of aluminum shot with a grain size of 0.1 - 0.2 mm; b) melting in a heated forge or in an electric furnace of

Card 3/4

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Estimate of the Rate of Sinking of Ferro-titanium Drops in Molten Slag

S/020/60/135/005/037/043
B016/B052

the type of a steel-melting furnace; and c) discharge of metal and slag in chills. There are 1 figure and 8 Soviet references.

ASSOCIATION: Ural'skiy politekhnicheskiy institut im. S. M. Kirova (Ural Polytechnic Institute imeni S. M. Kirov)

PRESENTED: July 5, 1960, by A. N. Frumkin, Academician

SUBMITTED: March 22, 1960

Card 4/4

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINER, Yu.L.; SUCHIL'NIKOV, S.I.

Estimation of the rate of fall of ferrotitanium drops in a molten slag. Dokl. AN SSSR 135 no.5 1187-1190 D '60. (MIRA 13:12)

1. Ural'skiy politekhnicheskiy institut im. S.M.Kirova. Predstavleno akademikom A.N.Frumkinym.
(Iron-titanium alloys)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

Electricity-Electronics 55

BJR

939* **Analytical Method of Calculating Open Systems With Steel Wires.** (Russian) V. K. Plugachev. *Elektrichestvo*, Mar. 1952, p. 48-52.

The approximate dependance between voltage losses and cross section of steel wires is given. A method of calculating the minimum amount of metal in a system is also discussed.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

SAMOYLOVICH, G.G., prof.; BELYAYEV, N.I., inzh.; KUDRITSKIY, D.M., dots.; GLAGOLEV, A.V., inzh.; NEFEDOV, P.M., inzh.; GALKINA, Ye.A., st. nauchn. sotr.; PLINK, L.I., inzh.; DONSKOY, I.P., prof., retsenzent; SAVEL'YEV, V.V., kand. tekhn. nauk, dots., retsenzent; ALYSHEV, I.F., kand. tekhn. nauk, dots., retsenzent; LOBANOV, A.N., prof., doktor tekhn. nauk, retsenzent; DOROKHOV, B.A., inzh., red.

[Use of aerial photographic surveying in forest engineering] Primenenie aerofotos"emki v lesoinzhenernom dele. Moskva, Lesnaia promyshlennost', 1965. 354 p. (MIRA 18:10)

1. Kafedra sukhoputnogo transporta lesa Lesotekhnicheskoy akademii im. S.M.Kirova (for Alyshev). 2. Zamestitel' glavnogo inzhenera Gosudarstvennogo instituta po proyektirovaniyu lesnogo transporta (for Dorokhov).

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

VASIL'YEV,M.V.; GLAGOLEV,A.V.; LISOVSKIY,M.A.; PLINK,L.I.; RIRASEVICH,G.V.

Application of aerial methods to railroad surveying. Geog.sborn no.7:31-52 '55. (MIRA 9:1)
(Railroads--Surveying) (Aerial photogrammetry)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINK, O. D.

LEVI, Karlo [Levi, Carlo]; NAUMOV, K. [translator]; PLINK, O.D., red.; NIKIFOROVA, A.N., tekhn.red.

[Words are stones; three days in Sicily. Translated from the Italian] Slova-kamni; tri dnia v Sitsilii. Moskva, Izd-vo inostr. lit-ry, 1957. 128 p. (MIRA 11:5)
(Sicily—Description and travel)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINKA, A.D.

Onions

Annual varieties of onions at the "Gribovskaya" Vegetable Experiment Station, Sad i og., No. 8, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

B1

Ripening of onion seeds. A. D. Plinka (*Sad i Ogorod*, 1960, No. 8, 17—21; *Hort. Abstr.*, 1961, 32, 80).—Field ripening of onion seeds has great advantages over ripening under cover. Frost damage may be reduced by lifting all seed plants with the bulbs a week or 10 days before frost may be expected. The lifted plants are tied into bundles and propped up against the espalier which previously supported the growing seed heads. Frost protection under cover is also considered. C. H. Ninth.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINSINA, O.P., SHANANYAN, M.M., FATKULLIN, M.Kh., RUBACHEV, G.N.

Advance Experience in Application of Submerged Electric Pumps. (Series Experience in Introducion of New Techniques). Gostoptekhizdat, 1956, 52 p, price: rubles 1.25. Summary of experiment in organizing the work of advance shifts in underground overhaul of wells equipped with emersed electric pumps in the Tuimaza (?) trades. Analysis of basic technico-economic indices of the application of emersed electric pump in the trades of the Tuimazaneft' administration. Presentation of a project of an instruction map of advance methods of labor with drop-lift operations with emersed electric pumps. For foremen, operators, engineer-technicians.

So: A- 3080689

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

LEVCHENKO, M.I., inzh.; PLINSKIY, Ya.I.; RUBAL'SKIY, S.A.

Moving a granite block for a memorial to Karl Marx. Mont. i spets. rab. v stroi. 24 no.3:19-22 Mr '62 (MIRA 15:6)

1. Mkrproyektstal'konstruktsiya.
(Moscow—Monuments) (Granite—Transportation)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINSKIY, Ye.S.

The "22d Congress of the CPSU" signaling and communications district. Avtom., telem.i sviaz' 6 no.8:24-27 Ag '62. (MIRA 15:8)

1. Nachal'nik Khmel'nitskoy distantsii signalizatsii i svyazi Yugo-Zapadnoy dorogi.
(Railroads--Signaling) (Railroads--Employees)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

STEININGER, Zygmunt, dr inż.; PLINTA, Ja[redacted]r inż.

Studies on 7 x 2.5 mm structural splices for prestressed concrete. Hutnik P 30 no. 5: 152-158 My '63.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

BALASZ, Aleksander; PLINTA, Maria; MARCZYNSKI, Kazimierz

Case of ovarian abscess with fistula following along the inguinal canal. Pol. tyg. lek. 20 no.39:1469-1470 27 S '65.

1. Z Kliniki Poloznictwa i Chorob Kobiecych AM w Krakowie (Kierownik: prof. dr. Stefan Schwarz).

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

MIECZNIKOWSKI, Andrzej; PLINTA, Marta.

Behavior of eosinophils during labor. Gin. polska 28 no.2:205-210 Mar-Apr 1956.

1. Z Kliniki Położnictwa i Chorób Kobiecych A.M. w Zabrzu. Kierownik: prof. dr. W.Starzewski. Kraków--ul. Florianska 34.

(LABOR, blood in
eosinophil count (Pol))
(EOSINOPHIL COUNT
in labor, serial tests (Pol))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLINTOVIC, D.

Honor and gratitude to Stalin's army, our liberator. p. 1.
(LUDOVY ROZHLAS., Vol. 9, no. 19, Apr. 1953, Czechoslovakia)

SO: Monthly List of East European Accessions, Vol. 2 #8, Library of Congress, August 1953, Uncl.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

BALAZ,V.; PLINTOVIC,V.; MATIS.J.

Change in the estrogen steroid spectrum following histamine. Cas.lek.cesk. 103 no.14:380-383 3 Ap'64.

1. Vyzkumny ustav pre fyziatriu, balneologiu a klimatologiu, pobocka v Bratislave (riaditel: prof.dr. J.Hensel); Gynekologicko-porodnicke oddelenie KUNZ v Banskej Bystrici (vedouci: MUDr. J.Scholtz) a Olsborny liecebny ustav endokrinologicky v Lubochni (riaditel: MUDr. E.Spanar, CSc.).

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

OLEYNIK, S. F.; PLIPENKO, V. A.

Blood Pressure

Nycto-hemeral variations of blood pressure in hospitalized patients. Klin. med. 31, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

SAPGIR, I.N., doktor tekhn. nauk; IVANOVA, A.A.; GOL'DBERG, M.M.; SAMIARNOV, A.V.; LUBMAN, A.I.; SVERDLIN, M.S.; TYURIN, B.F. Primimali uchastiye: PLIPLINA, A.I.; IOFFE, M.Ya.; LIVSHITS, M.L., red.; ZAZUL'SKAYA, V.F., tekhn. red.

[Paint materials; raw materials and intermediate products; handbook] Lakokrasochnye materialy; syr'e i poluprodukty; spravochnik. Pod red. I.N.Sapgira. Moskva, Gos.nauchno-tekhn.izd-vo khim. lit-ry, 1961. 506 p. (MIRA 14:12)
(Paint materials)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLIS, A.; WAZEWSKI, T. (Krakow)

Functions with all partial derivatives arbitrarily prescribed at a point. Annales pol math 12 no.2:155-157 '62.

1. Mathematical Institute, Polish Academy of Sciences, Warsaw.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLIS, A.

Pliś, A.; and Ważewski, T. A uniqueness condition with a standard differential equation without uniqueness property. Bull. Acad. Polon. Sci. Sér. Sci. Math. Astr. Phys. 6 (1958), 145–148.

1-F\W

3

In the system (1) $X'=F(t, X)$ a solution $X=X(t)$ $(\alpha<t<\beta)$ will be called unique to the right if, for any solution $Y(t)$ of (1) defined in $\gamma\leqq t\leqq\delta$, $\alpha<\gamma<\delta<\beta$, and satisfying $Y(\gamma)=X(\gamma)$, we have $Y(t)\equiv X(t)$, $\gamma\leqq t\leqq\delta$. The main theorem also requires the following definition: We say that a function $g(t, x)$ defined in a subset S of the half-plane $x>0$ has property P if for every real number s there exists a sequence $x_n(t)$ of positive solutions of $x'=g(t, x)$ such that either (I) there exists $\varepsilon>0$ such that $\lim_{n\to\infty} x_n(t)=0$ for $s\leqq t\leqq s+\varepsilon$, or (II) there exists a sequence of numbers $t_n>s$, $t_n\to s$ as $n\to\infty$, and for each fixed n, $x_n(t)\to 0$ as $t\to t_n$ $(s<t<t_n)$.

Theorem: Suppose that the right hand members of the system (1), defined in the open set R, satisfy the inequality

$$|F(t, X)-F(t, Y)|<g(t, |X-Y|)$$

for $(t, X)\in R$, $(t, Y)\in R$, $(t, X-Y)\in S$, $|A|=(a_1^2+a_2^2+\cdots+a_n^2)^{\frac{1}{2}}$, where the function $g(t, x)$ has property P. Then every solution of (1) is unique to the right.

R. R. Kemp (Kingston, Ont.)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

GOLAB, S.; FLIS, A. (Krakow)

On the notion of gradient. III. Gradient as a limit value of a surface integral. Annales pol math 8 no.1:13-22 '60. (EEAI 10:2)
(Vector analysis)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

Pliś, A. On characteristics of partial differential equations. Bull. Acad. Polon. Sci. Cl. III. 5 (1957), 957–958, LXXX. (Russian summary)

The author weakens assumptions for the existence of solutions of a system of characteristic equation derived from a first order partial differential equation.

M. Steinberg (Culver City, Calif.).

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLIS, A.

"On the estimation of the existence domain for solutions of a nonlinear partial differential equation of the first order. In English."

p. 125 (Bulletin) Vol. 4, no. 3, 1956
Varsovie, Poland

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4, April 1958

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLIS, A.

Remark on measurable set-valued functions. Bul Ac Pol mat 9 no.12:857-859 '61.

1. Institute of Mathematics, Gracow Branch, Polish Academy of Sciences. Presented by T. Wazewski

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLIS, A.

On nonumiqueness in Cauchy problem for an elliptic second order differential equation. Bul Ac Pol mat 11 no.3:95-100 '63.

1. Institute of Mathematics, Krakow Branch, Polish Academy of Sciences. Presented by T. Wazewski.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLIS, A. (Krakow)

Remark on a partial differential inequality of the first order. Annales Pol math 16 no.3:371-375 '65.

1. Institute of Mathematics of the Polish Academy of Sciences. Submitted February 5, 1964.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLIS, A.

"Generalization of the Cauchy problem for a system of partial differential equations. In English."

p. 741 (Bulletin) Vol. 4, no. 11, 1956
Varsovie, Poland

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4, April 1958

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLIS, A.

"Sets filled by asymptotic integrals of ordinary differential equations. In English."

p. 749 (Bulletin) Vol. 4, no. 11, 1956
Varsovie, Poland

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4, April 1958

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLIS, A. (Krakow)

On the uniqueness of the non-negative solution of the homogeneous mixed problem for a system of partial differential equations. Annales pol math 7 no.3:255-258 '60. (EEAI 9:10)
(Differential equations)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

Pliś, A.

Pliś, A. Sets filled by asymptotic integrals of ordinary differential equations. Bull. Acad. Polon. Sci. Cl. III. 4 (1956), 749-752.

The author considers the system of $k+m$ real ordinary differential equations

$$(1) \qquad \dot{x}=f(x, y, t), \quad \dot{y}=g(x, y, t),$$

where $x=(x_1, \cdots, x_k)$, $y=(y_1, \cdots, y_m)$, $f=(f^1, \cdots, f^k)$, $g=(g^1, \cdots, g^m)$. It is assumed that f and g are continuous in an open set S of $(k+m+1)$ space, and therein satisfy certain unusual inequalities. Also it is assumed that (1) has a unique solution for each initial point in S.

Let U be the set of points (X, Y, T) lying on solution curves of (1) which remain in S for $T \leq t < \infty$ and which also satisfy a certain growth condition. The principal theorem states that U is the graph of a single-valued Lipschitz function $Y=\varphi(X, T)$. *L. Markus.*

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLIS, A.

"The Problem of Uniqueness for the Solution of a System of Partial Differential Equations", P. 55, (POLSKA AKADEMIA NAUK, Vol. 2, No. 2, 1954, Varsovie, Poland)

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 4, No. 3, March 1955, Uncl.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLIS, A.

On the problem of nonlocal existence for first integrals of a system of ordinary differential equations. In English. p. 63.
BULLETIN, Varsovie, Vol. 3, no. 2, 1955.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, no. 10, Oct. 1955, Uncl.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLIS, A.

Rational functions univalent on sets separating the plane. In English. p. 255, (FRAGMENTA FLORISTICA ET GEOBOTANICA, Vol. 2, No. 6, 1954, Krakow, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 5 May 1955, Uncl.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

PLIS, A.

Bulletin - Vol. 2, no. 9, 1954.

On a topological method for studying the behavior of the integrals of ordinary differential equations. In English. p. 415.

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, No. 9, Sept. 1955
Uncl.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

P/15, A

Pliś, A. On the problem of non-local existence for first integrals of a system of ordinary differential equations. Bull. Acad. Polon. Sci. Cl. III, 3, 63-67 (1955).

An example is given of a system (S) $x_i' = f_i(x, y_j)$ $(i, j = 1, 2)$ with $f_i \in C^\infty$ in E_2 such that if $z(x, y_j)$ is continuous in E_2 and is constant on the integrals of (S) then z is constant throughout E_2. (S) is constructed in such a way that its integral of ramification (in the sense of Ważewski) is dense in E_2. *F. A. Ficken* (Knoxville, Tenn.).

Z - E/W

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001341310007-1

1-FW.

Pliś, A. Remarque sur le système dynamique dans le domaine doublement connexe. Ann. Polon. Math. 3 (1956), 169–171.

This paper is in the line of the Ważewski's topological theory [see e.g. T. Ważewski, same Ann. 1 (1955), 338–345; MR 17, 611; Z. Mikołajska, ibid. 1 (1955), 277–305; MR 17, 515; A. Pliś, Bull. Acad. Polon. Sci. Cl. III, 2 (1954), 415–418; MR 16, 700; F. Albrecht, ibid. 2 (1954), 315–318; MR 16, 248] and concerns the differential system (*) $dx/dt=X(x, y)$, $dy/dt=Y(x, y)$, where X, Y are continuous functions in the whole xy-plane and a uniqueness theorem holds. An annular region G is considered lying between two simple closed curves C_1, C_2, and the following hypotheses are made concerning the set S of the points of egress from G: all points of S are points of strict egress; $S\neq C_1$, $S\neq C_2$, $S\neq 0$, $S\neq C_1+C_2$. Under these hypotheses there exists in G at least one singular point for (*); i.e., a point where $X=Y=0$.

L. Cesari.

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