

9. Monthly List of Russian Accessions, Library of Congress, _____ 1953. Unclassified.

SECRET

TOP SECRET

CONFIDENTIAL

CONFIDENTIAL

PETROV, A. P.

USSR/ Biology : Plant Ecology

Card : 1/1

Authors : Petrov, A. P.

Title : Relation of grass plants to light and soil humidity

Periodical : Dokl. AN SSSR, 97, Ed. 1, 169 - 171, July 1954

Abstract : Biological and ecological data are presented on the dependence of grass plants upon light and humidity of the soil for their development. Three USSR references. Tables.

Institution : State Pedagogical Institute, Kazan

Presented by : Academician, V. N. Sukachev, April 26, 1954

PETROV, A. P.

USSR/Biology - Plant Ecology

Card : 1/1

Authors : Petrov, A. P.

Title : Relation between grass plants and certain fertility factors of the soil

Periodical : Dokl. AN SSSR, 97, Ed. 2, 333 - 335, July 1954

Abstract : Experiments were conducted on 46 test areas to establish the relation between grass plants and certain fertility factors and chemical properties of the soil. Results are given in table. Three references.

Institution : ...

Presented by : Academician V. N. Sukachev, April 26, 1954

PETROV, A.P.

Kaibitsy deciduous forests. Uch.zap. Kaz.un. 115 no.8:63-96 '55.
(... 10:3)

1. Daystvitel'nyy chlen obshchestva yestestvoispytateley.
(Tatar A.S.S.R.--Forests and forestry)

PETROV, A.P. (Kazan')

~~██████████~~ Geobotanical study of cultivated plants. Uch.zap.Kaz.un. 115
no.10:59-61 '55. (MLRA 10:5)
(Plants, Cultivated)

1972

Cultivable Plants - Grains.

Abstr Jour : Ref Zhur - ...

Author : Petry, ...

Inst : Kazan Branch of the ...

Title : ...

Abstract : ...

... ..

GONCHARENKO, N.K., kand. tekhn. nauk; PETROV, A.P., inzh.

Relationship between the conditions for using ropes and the selection of the optimum stretching force. Izv. vys. uchet. zav.; gor. zhur. 6 no.8:149-153 '63. (MIRA 16:10)

1. Institut gornogo dela AN UkrSSR. Rekomendovana kafedroy gornoy mekhaniki Khar'kovskogo instituta gornogo mashino-stroyeniya, avtomatiki i vychislitel'noy tekhniki.

PETROV, A. P. (Moskva)

Automatic control of hauling operations in transport using
electronic computer techniques. Izv. AN SSSR. Energ. i
transp. no. 5:612-624. S-0 1961. (MIRA 16:11)

PETKOV, A.P., prof., a muszaki tudományok doktora

Application of electronic computers in organizing railroad
traffic. Vasut 13 no.12:14-16 D '63.

PETROV, A.P., professor.

Experiments with corn on the school plot. Est.v shkole no.2:61-67
Mr-Apr '56. (MLRA 9:7)

1.Kazanskiy pedagogicheskiy institut.
(School gardens) (Corn (Maize))

Country : USSR
Category: Cultivated Plants. Grains.

Abstr Jour: RZhBiol. 1959, No 48879

Author : Butrya, I. I.
Inst : Kazan Affiliated Acad. Sci. USSR
Title : The Problem of Agrotechnical Differentiation in Corn
Cultivation in Tartar ASSR.

Orig Pub: Tr. Kazansk. f. l. AN SSSR. Ser. Biol., 1956 (1957)
vyf. 4, 5-2

Abstract: The most important problems of corn cultivation are differentiated with regard to soil characteristics and weather conditions. It is suggested to differentiate the types of arable soils of Tataria as follows: dark gray soils of the northern regions; brown-gray soils of the right banks of the Volga, Kama and Vyatka

Card : 1/2

PETROV, A.P.; AZIMOVA, N.G.

Effect of soil temperature on the germination and sprouting of
corn. Trudy Kazan. fil. AN SSSR. Ser. biol. nauk. no.4:103-107 '56.
(MIRA 11:11)

1. Kazanskiy filial AN SSSR i Kazanskiy gosudarstvennyy pedagogi-
cheskiy institut.
(Soil temperature) (Corn (Maize)) (Germination)

PETROV, A.P.; KUZNETSOVA, O.K.

Development of corn as influenced by the composition of fertilizers introduced in the soil. Trudy Kazan. fil. AN SSSR. Ser. biol. nauk. no.4:129-132 '56. (MIRA 11:11)

1. Kazanskiy filial AN SSSR i Kazanskiy gosudarstvennyy pedagogicheskiy institut.
(Corn (Maize)--Fertilizers and manures)

PETROV, A.P.; DAUTOV, R.K.

Ecological characteristics of red clober. Izv. Kazan. fil. AN SSSR.
Ser. biol. nauk no.5:3-9 '56. (MIRA 10:6)
(Clover)

PETROV, A.P.

Traumatism in agriculture. Zdrav.Kazakh. 1957. No. 10:108-11
'57. (MIRA 12:6)

1. Zav.rayzdravotdelom Nurinskogo rayona, Karagandinskoy
oblasti.

(NIRA DISTRICT--AGRICULTURE--ACCIDENTS)

USSR/Forestry - Bi 1 y and Typ 1 y of the Forest.

K-2

Abs Jour : Kol. Zhur - Bi 1., N 1, 1958, 1976

Author : Petrov, M.I.

Inst : Forest Institute, M3, USSR.

Title : Forest Types of Tellermanovskiy Forest Body.

Orig Pub : Tr. In-ta Lesa AN USSR, 1957, 33, 16-58.

Abstract : Ash-gut weedy oak forests occupy flat northern slopes. More seldom, they occupy narrow, comparatively drained plateaux and flat southern slopes with typical dark-grey heavy clayey humus soils. This kind of forest occupies a central place in the diagram of ecological relations of broad leaf forest types of the Tellermanovskiy forest area. The row A (the accumulation of dryness) in the diagram starts with ash-sedge-gut wood oak forest, which chiefly

Card 1/3

A.P. Petrov

3(2):20(1)
Akademiya nauk SSSR. Pochvennyy institut im. V. V. Dokuchaeva
Pochvennaya fizika: rukovodstvo po poevy i sedyaniyam i
kartirovaniyu pochv (Soil Surveying: A Manual on Field Surveying
and Mapping of Soils) Moscow, Izd-vo AN SSSR, 1959. 340 p.
7,000 copies printed. Errata slip inserted.

Reep. Eds.: I. V. Tyurin, Academician, I. P. Gerasimov, Academician,
Ye. M. Ivanova, Professor, and V. A. Mosin, Candidate of Sciences,
Eds. of Publishing House V. Ya. Izdatel'stvo Khimicheskoy
Akademiya Nauk SSSR, Moscow, 1959. 340 p. 7,000 copies printed.

PURPOSE: This book is intended for students and practitioners of
soil science and land utilization. It will also be of interest
to geographers and cartographers engaged in soil surveying and
mapping projects.

COVERAGE: This work on soil surveying was prepared by a group of
scientists of the Department of Soil Science, Geography and Cartography
of the Pochvennyy Institut AN SSSR (Soil Institute, AN SSSR).
The book discusses the methods used in soil science and agriculture
purpose surveys. The basis is of soil science and agriculture
agricultural productivity and methods used in soil science
The book includes representative maps and samples of the forms
and reports to be used by the soil scientist. No personalities
are mentioned. There are no Soviet references.

Soil Surveying (Cont.)

PART II

CV 2059

Ch. 1. Soil Studies as Related to Land Use and Agricultural Planning in Kolhoztes and Sovхозes (A. B. Svirin)	17
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Supplements:

1. Methods for studying the water-physical properties of soils
and ground water (A. P. Petrov and I. P. Gerasimov)
2. The determination of rock content in soil surveys
(A. P. Petrov)

Card 67

9

PETROV, A.P.

Kinetics of the exosmosis of water from tissues of plants belonging
to different ecological types. Nauch. dokl. vys. shkoly; biol.
nauki no.3:138-142 '61. (MIRA 14:7)

1. Rekomendovana kafedroy botaniki Kazanskogo pedagogicheskogo instituta.
(OSMOSIS) (PLANT PHYSIOLOGY)

PETROV, A.P.

Phasic course of exosmosis of water from the living tissues of leaves.
Dokl. Akad. Nauk SSSR 136 no.5:1245-1247 F '61. (MIRA 14:5)

1. Predstavleno akad. N.M.Sisakyanom.
(Osmosis) (Plant cells and tissues)

PETROV, A.P.

Weight method for studying the kinetics of the exosmosis of
water from the live tissues of plants. Bot.zhur. 47 no.3:348-
371 Mr '62. (MIRA 15:3)

1. Kazanskiy gosudarstvennyy pedagogicheskiy institut.
(Plant cells and tissues) (Osmosis)

1. The first part of the document

describes the general situation

of the country at the time

of the revolution and the

role of the military in the

process of change.

The second part of the

PETROV, A.P.; METE, M.G.

Automatic control of a unit for concentrating steam. Paper. 1
neftekhim. no. 7:36-39. 1964. (MIRA 1964)

1. Nauchno-issledovatel'skiy i projektnyy institut po kompleksnoy
avtomatizatsii proizvodstvennykh protsessov v nefteyancy i khimicheskoy
promyshlennosti i Azerbaydzanskiy institut nefti i khimii.

NAME: [Name], [Address], [City], [State], [Country].

Details for the [purpose] of [activity] for [time]
[ing] and [essentials] [details] [CIA] [information] [of] [type]
[sylvania] [element] [of] [type] [U. S.] [intelligence] [type] [type].
[Type] [type]

PETROV, S.P.; SHAROV, I.I.

Early rhythm of the growth of transverse diameter of the heart in the presence of growth retardation. *Tr. Akad. Nauk SSSR Ser. Med. Biol. Nauki* 1971, 12: 10-12.

1. Kazarskiy, I.I. *Tr. Akad. Nauk SSSR Ser. Med. Biol. Nauki* 1971, 12: 10-12.

BASOV, N.G.;MURIN, I.D.; PETROV, A.P.; PROKHOROV, A.M.; SHTRANIKH, I.V.

Molecular clock. Izv.vys.ucheb.zav.; radiofiz. 1 no.3:50-53 ' 52.
(MIRA 12:1)

1. Fizicheskiy institut imeni P.N. Lobedeva AN SSSR.
(Time measurements) (Molecules--Vibration)

RETAIN A.I.

AUTHOR: Basov, N.G. and Petrov, A.P.

109-3-2-25/26

TITLE: The Relative Frequency Stability of Molecular Oscillators
(Ob otноситel'noy stabil'nosti chastoty molekulyarnykh generatorov)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol.III, No.2,
pp. 298-299 (USSR).

ABSTRACT: The problem was investigated experimentally by means of the equipment shown in the figure on p.299. The results are shown graphically in Fig.2 for two different oscillators; the staircase-like curve in the figure shows the frequency deviation in c/s as a function of time in minutes. From this, it is seen that over a period of 16 minutes, the difference frequency did not vary more than ± 0.4 c/s. The relative frequency stability of the oscillators over the above period was of the order of 10^{-11} .

There 2 figures and 1 Russian reference.

ASSOCIATION: Institute of Physics im. P.N. Lebedev AS USSR
(Fizicheskiy institut im. P.N. Lebedeva AN SSSR)

SUBMITTED: July 15, 1957

AVAILABLE: Library of Congress

1. Oscillators-Frequency measurement-Stability

24(2)

SOV/51-6-5-31/34

AUTHORS: Veyngerov, M.L., Sivkov, A.A. and Petrov, A.P.

TITLE: Crookes' Radiometer as a Modulator of Radiation (Radiometr Kruksa v kachestve modulyatora izlucheniya,

PERIODICAL: Optika i Spektroskopiya, 1959, Vol 6, Nr 5, pp 713 (USSR)

ABSTRACT: Under some conditions it is not possible to use modulators of radiation which are rotated by an electric motor. The authors found that a modified Crookes' radiometer can be also used as a radiation modulator. The moving system of the radiometer consisted of four mica plates blackened on one side and aluminized on the other. These plates were suspended at 45° to the vertical. A radiation flux which caused the radiometer to rotate was directed horizontally on to the blackened sides of the plates. Radiation flux which was to be modulated was directed vertically on to the aluminized sides of the plates and was interrupted when these plates rotated. The rate of rotation of the radiometer depended on the vacuum and on the intensity of the horizontal radiation flux, which moved the plates. The highest rate of rotation was achieved at 2×10^{-2} mm Hg with the horizontal flux intensity of 0.5 W. The radiometer rotated then at 13 rev/sec, equivalent to a modulation frequency

Card 1/2

Crookes' Radiometer as a Modulator of Radiation

7-01-59-1 14

of 52 c/s. This frequency could be decreased continuously to zero. The maximum diameter of the cross-section of the modulated beam was 10 mm. Another variant of the Crookes' radiometer with two series of plates could also be used as the radiation modulator. In this case one series of plates was fixed vertically and was used for rotation of the radiometer, while the other was used to modulate the vertical radiation flux.

SUBMITTED: January 9, 1959

Card 2/2

NADGEIYEV, M.K., kend. med. nauk, otv. red.; BARKOV, B.A., prof.,
red.; PETROV, A.P., red.; SAMOYEVKIN, M.A., dots., nat. otv.
red.; TSITRITSKIY, Ye.I., red.; YAKOVLEV, G.K., red.

[Papers on morphology and surgery; dedicated to the 30th anniversary of the medical, scientific-medical and social work of Professor A.I. Labkov] *Zhurnal teorii i praktiki khirurgii*; posviashchennyi 30-letiyu vrachebnoy, nauchno-pedagogicheskoy i obshchestvennoy deyatelnosti prof. A.I. Labkova. *St. Petersburg, Akad. nauch. med. nauch. tsentra, 1967, 210 p.* (R.S.S.R. 1967)

- 1. *Blagoveshchenskiy gos. univ. meditsinskiy institut. Kafedra fakul'tetskoy khirurgii* (for Barkov).
 - 2. *Zaveduyushchiy Kafedroy fakul'tetakhirurgii Arkhangel'skogo meditsinskogo instituta* (for Barkov).
 - 3. *Kafedra operativnoy khirurgii i plasticheskoy anatomii Blagoveshchenskogo meditsinskogo instituta* (for Petrov).
 - 4. *Zaveduyushchiy Kafedroy patologicheskoy anatomii St. Petersburgskogo meditsinskogo instituta* (for Samoyevkin).
- (LABKOV, A. I. POSVIASHCHENIYE) (SURGERY)
(YAKOVLEV, G. K.) (MORPHOLOGY)

L 13085-63

EWP(j)/BDS/EWT(m) Pc-4 RM

ACCESSION NR: AP3002831

8/0152/63/000/005/0067/0070

AUTHOR: Petrov, A. P.; Movsumzade, M. M.56
55TITLE: Terephthalic acid from petroleum products

SOURCE: IVUZ. Neft' 1 gaz, no. 5, 1963, 67-70

TOPIC TAGS: terephthalic acid, benzene, olefin, dialkylbenzene

ABSTRACT: This work describes a method of preparation of terephthalic acid from paraethylisopropylbenzene which is separated as a by-product in the alkylation of benzene in a wide olefinic fraction. The clear polymeric products which are formed after the alkylation of the above-mentioned fraction contain dialkyl benzenes in approximately the following amounts: diethylbenzene 9%, ethylisopropylbenzene fraction 193-195C about 12%, and di-isopropylbenzene. By oxidizing the above dialkylbenzenes in the close and in the wide fractions with nitric acid it is possible to obtain terephthalic acid with good yields. The fraction 193° to 195°C of the clear polymer corresponds to paraethylisopropylbenzene. By oxidizing this fraction with nitric acid a yield of 82.8% of terephthalic acid is obtained. Orig. art. has: 2 tables and 1 figure.

Azerbaydzhan Inst. of Petroleum and Chemistry.

Card 1/2/

BUTKEVICH, R.V.; SEMENOV, A.P.; BAKINOV, G.P.; PETROV, A.P.

Results of using the chamber mining system in Estonian shale mines.
Ugol' 11 no.9:10-14 S. 88. (MIRA 12:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy ugol'nyy institut (for Butkevich, Semenov).
2. Leningradskiy gornyy institut (for Bakinov)
3. Trest Estonslanets (for Petrov).
(Estonia-Shale) (Mining engineering)

ZHUKOVSKIY, N.P. ; PETROV, A.S

Use of triangular diagrams for the determination of ore dressing
indices. Geog. rud. 6 no.5:28-31 '61. MIRA 15:
(Ore dressing)
(Mineralogy. Determinative--Graphic methods)

YEVSIOVICH, I.I.; THE

Technical
from the
(MIRA 1941)

ZHUKOVSKIY, N.P.; PETROV, A.S.

Determining indices for the dressing of samples from ores with the help
of triangular diagrams. Obog. rud " no. 3:26-37 152. (1958, 12)
(Iron ores—testing) (Ore dressing)

YEVSIOVICH, S.G.; PETROV, A.S.; CHEPURNYKH, K.S.

Flow sheet of the Gari ore dressing plant. Obog. rud 7 no.4:3-10
'62. (MIFA 16:4)

(Ore dressing)

ZHUKOVSKIY, N.P.; PETROV, A.S.

Graphic method for the determination of ore dressing indices.
Obog. rud. 8 no.2:32-34 '63. (MIRA 17:2)

1-37-07 221(1)
ACC NR: AT0023.08

SOURCE CODE: UR/0139/66/000/003/0014/0020

AUTHOR: Letinao, V. N.; Petrov, A. S.

ORIG: Siberian Physicotechnical Institute Im. V. D. Kuznetsov (Sibirskiy fiziko-
tehnicheskiy institut)

TITLE: Analysis of reactive modulation amplifier with semiconductor-diode capacitance

SOURCE: IVUZ. Fizika, no. 3, 1966, 1*-20

TOPIC TAGS: amplifier design, amplitude modulation, phase modulation, parametric
amplifier, nonlinear effect

ABSTRACT: The authors point out that earlier analysis of such amplifiers, carried out by the method of complex amplitudes and making use of the similarity between the modulation-type and parametric amplifiers, does not yield specific information on the type of modulation which takes place at a given tuning of the tank circuit, and does not permit analysis of nonlinear effects. To eliminate these shortcomings, the authors solve the differential equations for the equivalent circuit of the amplifier by the methods of oscillation theory in the linear and nonlinear approximations. Only single-ended amplifiers are considered. In the linear approximation it is shown that modulation amplification can be accompanied by both amplitude and phase modulation, the latter going over into the frequency modulation with increasing signal frequency. In the nonlinear approximation, the critical mode due to the nonlinearity of the system is considered. It is shown that in this mode amplitude and phase modulation with

Card 1/2

I. 09357-67

ACC NR: AP6023408

maximum depth exist simultaneously. In the critical mode, the gain increases without limit with decreasing frequency, so that this mode can be used for dc amplification. The spectrum of the oscillations on the diode is determined for the critical mode. It is shown that the use of the upper sideband frequency is more effective than the use of the lower one. Orig. art. has: 2 figures and 21 formulas.

SUB CODE: 09 SUBM DATE: 20Jul64/ ORIG REF: 006/ OTH REF: 003

L 32134-65

ACCESSION NR: AP5002683

8/0280/64/000/006/0072/0080

AUTHOR: Petrov, A. P. (Moscow)

TITLE: Potentialities of the perceptron

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 6, 1964, 72-80

TOPIC TAGS: perceptron

7
B

ABSTRACT: An experimental and theoretical investigation of the recognition abilities of a perceptron model is reported. Two models — one with 450 A-elements and the other with 1,350 A-elements — were set up on a computer; the retina had 256 receptors. These patterns were tested: a horizontally placed rectangle, a vertically placed rectangle, a randomly placed rectangle, a square, a circle, an oval, and a triangle. Teaching by 30, 60, and 90 pictures was employed. Perceptron errors are tabulated. A theoretical analysis of the perceptron operation is also presented. It is found that: (1) The perceptron

Card 1/2

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ACCESSION NR: AP5002683

algorithm is equivalent to defining a function $P(c, d)$ that characterizes the proximity of two patterns c and d ; if perceptron parameters $N, L, \{x_1, x_2, \dots, x_L\}$ are known, the function $P(c, d)$ can be computed for any pattern pair c and d by using formula (2.7) or (2.8); (2) The class of problems solvable by the perceptron is closed with respect to a group of receptor permutations; the perceptron can handle only the problems solvable by a simple superposition algorithm; (3) In pattern recognition, the perceptron does not use the pattern geometrical properties; example: the inability of the perceptron to distinguish patterns having an angle from those having no angle. Orig. art. has: 3 figures, 20 formulas, and 2 tables.

ASSOCIATION: none

SUBMITTED: 21Feb64

ENCL: 00

SUB CODE: DP

NO REF SOV: 003

OTHER: 009

Card 2/2

L 23835-65 EWT(d)/EWT(m)/EPP(c)/EWP(v)/EWP(j)/EWP(k)/EWP(h)/EWP(l) Pr-Li/Pr-Li/
ACCESSION NR: AP4049442 Pr-Li RM S/0318/64/000/007/0036/0039 28/

AUTHOR: Petrov, A. P., Mett, M. S.

TITLE: Automation of a unit for the concentration of divinyl

SOURCE: Neftepererabotka i neftekhimiya, no. 7, 1964, 36-39

TOPIC TAGS: divinyl concentration, automation, chemisorption, synthetic rubber, automatic control system

ABSTRACT: A commercial unit for the concentration of divinyl by the method of chemisorption with copper-ammonium salts was studied in order to automate it. The divinyl obtained was 95-97% pure; its content of waste gases was not over 2%. For use in rubber manufacture, however, divinyl must be 98% pure. The automatic control system shown in Fig. 1 of the Enclosure was proposed, using the solubility of divinyl (3.6-4.6% by weight) as the control parameter. The system operates as follows: The consumption of butylene-divinyl fraction is measured by G_1 , its readings are transmitted to R_1 which acts on the operating mechanism U_1 situated in the line of the butylene divinyl fraction. From G_1 , the pulse is multiplied by M_1 by the divinyl content in the fraction and transmitted to B_1 . The loop in the divinyl-return line operates similarly (the designations are, respectively,

Card 1/3

L 23835-65

ACCESSION NR: AP4049442

G₂, R₂, U₂. 2). Orig. art. has: 1 figure and 2 formulas

ASSOCIATION: NEPI: "Neftekhimavtomat"; Azerb. institut nefti i khimii (Azerbaydhan
Institute of Petroleum and Chemistry)

SUBMITTED: 00

ENCL: 01

SUB CODE: IE, MT

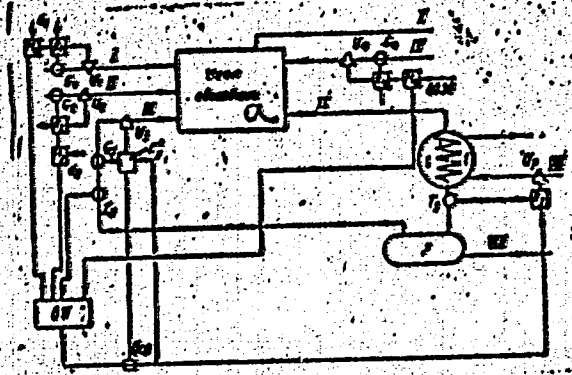
NO REF SOV: 002

OTHER: 000

Card 2/3

L 23835-65
ACCESSION NR: AP4049442

ENCLOSURE: 01



Flows: I - butylene-divinyl fraction; II - divinyl-return; III - divinyl recycle; IV - desorbed absorption solution; V - non-absorbed hydrocarbons; VI - saturated absorption solution; VII - steam; VIII - absorption solution for desorption.

Figure 1.

Diagram of automatic control of a recycle divinyl feed: 1 - steam preheater
2 - preliminary desorption tank $G_1 - G_4$ - flow gages; $R_1 - R_2$ - regulators; M_1, M_2, M_3, M_4 - multiplying devices; $\alpha_1, \alpha_2, \alpha_3$ - divinyl content; T_3 - temperature pickup; $H_1 - H_4$ - operating organs; $B\gamma$ - calculating device; \bar{U}_{cp} - comparison block a-absorption unit.

Card 3/3

DETINKO, V. N.; PETROV, A. S.

Forced oscillations in an electric circuit with a nonlinear capacitor. Izv. vys. ucheb. zav.; fiz. no.6:90-98 '62.
(MIRA 16:1)

1. Sibirskiy fiziko-tekhnicheskoy institut pri Tomskom gosudarstvennom universitete imeni Kuybysheva.

(Electric circuits (Oscillations))

44196

S/109/62/007/012/016/021
D266/D308

AUTHOR: Petrov, A. S.
 TITLE: Gain of a lossy travelling wave diode parametric amplifier
 PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 12, 1962, 2090-2092

TEXT: The purpose of the paper is to calculate theoretically the potential distributions pertaining to the signal, idler and pumping frequencies. The author's analysis follows that of A. L. Culien (Proc. IRE, 1960, 107, 52, 101) but extends it to the case when there are losses on all three frequencies. The complete solution is obtained in a closed form in terms of Bessel functions of the second kind. If $\omega_1 = \omega_2$ and $\alpha_1 = \alpha_2 = \alpha$ the Bessel functions reduce to hyperbolic functions showing clearly a growing and a decaying wave. The condition of amplification is

$$\alpha > \frac{1}{2\epsilon}$$

(7)

Card 1/3

S/109/62/007, 012/016, 021
D266/D308

Gain of a lossy ...

where ξ - capacity modulation coefficient at the beginning of the transmission line, $\alpha = 1/\omega_0 RC_0 = \alpha$ of the diode at the pumping frequency. The amplitude of the growing wave is maximum at

$$z_{opt} = \frac{\xi}{2} \ln 2\xi\alpha \quad (8)$$

and its value is

$$\left(\frac{V_1}{V_{10}}\right)_{max} = \frac{1}{2^4 \sqrt{2\xi\alpha}} e^{\frac{\xi\alpha}{2} - \frac{1}{4}}$$

Thus both the optimum length and the maximum gain increase with increasing α . The existence of an optimum length is a feature of this

Card 2/3

Gain of a lossy ...

S/109/62/007/012/016/021
D266/D308

solution (when losses on all three frequencies are included, not following from Sallen's work. There is 1 figure.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskii institut pri Tomskom gosudarstvennom universitete im. V. V. Kuybysheva (Siberian Physical and Engineering Institute at Tomsk State University im. V. V. Kuybyshev)

SUBMITTED: January 18, 1962

Card 3/3

IVANOV, A.N.; PETROV, A.S.

Measuring the capacitance, inductance, and resistance to spreading of parametric semiconductor diodes in the superhigh frequency range. Izv. vys. ucheb. zav; fiz. no.1:35-38 '63. (MIRA 10:5)

1. Sibirskiy fiziko-tekhnicheskii institut pri Tomskom gosudarstvennom universitete imeni V.V.Kuybysheva.
(Junction transistors—Electric properties)

DETINKO, V.N.; PETROV, A.S.

Analysis of the operation of a single-stage amplifier-converter
with nonlinear capacitance. Radiotekh. i elektron. 8 no.10:
1692-1697 0 '63. (MIRA 1: 1)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420001-7

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R001240420001-7"

L 9344-65

END(qs)/RABK(t)

ACCESSION NR: AP4045503

S/0109/64/009/009/1721/1722

AUTHOR: Petrov, A. S.; Levashkin, V. I.

TITLE: Parametric resonance in systems with nonlinear elastic force

B

SOURCE: Radiotekhnika i elektronika, v. 9, no. 9, 1964, 1721-1722

TOPIC TAGS: parametric resonance, self excited oscillation, oscillatory system, parametric oscillatory system

ABSTRACT: The peculiarities of parametric self-excitation in a system (a circuit containing a semiconductor diode) with a soft elastic force are briefly considered. Estimated and experimental curves of the parametric self-excitation of a p-n-diode-containing circuit show that (a) the width of the frequency-pulling zone and the maximum amplitude of oscillations are determined by the nonlinearity of attenuation; (b) stable resonance branches exist, for which the conditions of self-excitation are not satisfied. Orig. art. has: 3 figures

Card 1/2

L 9944-65

ACCESSION NR: AP4045503

and 7 formulas.

ASSOCIATION: none

SUBMITTED: 21 Oct 63

SUB CODE: EC, ME

NO REF SOV: 003

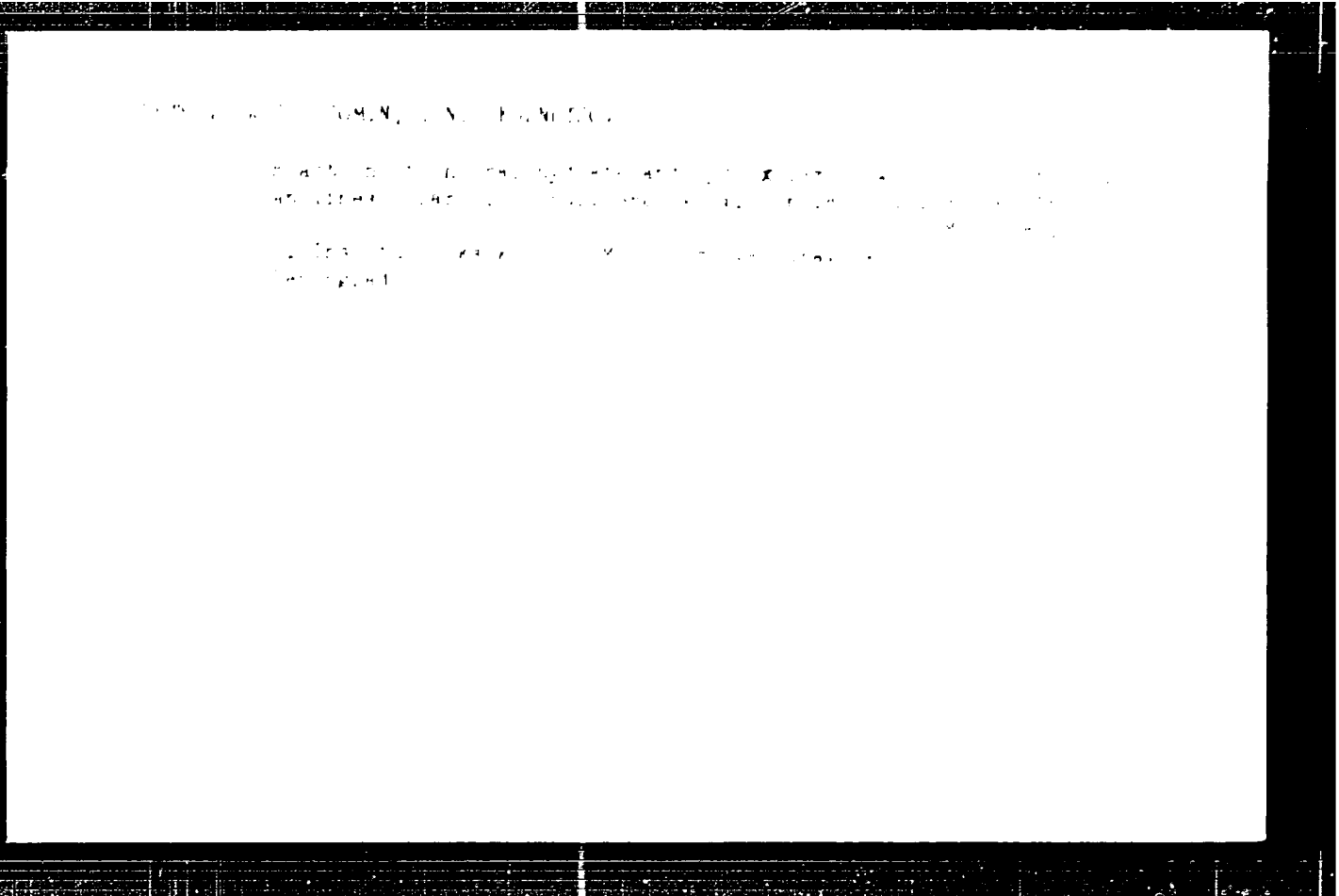
ENCL: 00

OTHER: 000

Card 2/2

SECRET, REF: 7-10-1-1

Approved for Release by NSA on 05-08-2014 pursuant to E.O. 13526



L 28515-66 EWA(h)/EWI(1)

ACC NR: AR6000070

SOURCE CODE: UR/0275/65/000/009/A042/A043

AUTHOR: Gessen, I.I.; Petrov, A. S.

38
B

TITLE: Parametric traveling-wave amplifier under regenerative conditions

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 9A296

REF SOURCE: Dokl. Nauchno-tekhn. konferentsii, posvyashch. dnyu radio. Tomsk, Tomskiy un-t, 1964, 113-123

TOPIC TAGS: parametric amplifier, traveling wave, frequency characteristics, traveling wave amplifier

ABSTRACT: On the basis of known expressions—those for the condition of synchronism and the condition of equal group velocities of the signal and of the difference wave—design calculations are made for a concrete amplifier circuit. Experimental results of an investigation of a parametric traveling-wave amplifier under regenerative conditions are given; the results agree with the calculated data. The most uniform frequency characteristics were obtained by adjusting the output filters. An amplification factor of 14 db was obtained in the range of 0.6 Mc (16%) at a mean frequency of 3.6 Mc and a pumping amplitude of 2 v.

[LQ]

SUB CODE: 09/ SUBM DATE: none

Card 1/1 CC

ZHUKOVSKIY, Nikolay Platonovich; PETROV, Aleksey Semenovich;
BLOKH, L.S., inzh.; SEGAL', L.S., inzh.; BERGER, G.S.,
kand. tekhn.nauk, retsenzent; KRASNOCVETS, A.V., otv.
red.

[Graphic methods of technological calculations in the de-
sign of ore-dressing plants] Graficheskie metody tekhnolo-
gicheskikh raschetov pri proektirovanii obogatitel'nykh fab-
rik. Moskva, Izd-vo "Nedra," 1964. 168 p. (MIRA 17:1)

PETROV, A.S.; TKACHENKO, I.A.; KRIVOSHEYA, P.I.; KRAVCHENKO, A.V., inzh.

Advanced section of communist labor. Put' i put. khoz. 2 no. 2:10
'65. (MIRA 18:7)

1. Nachal'nik Svatovskoy distantsii Donetskoy dorogi (for Petrov).
2. Sekretar' partiynogo byuro, stantsiya Svatovo, Donetskoy dorogi (for Tkachenko).
3. Svatovskaya distantsiya Donetskoy dorogi (for Kravchenko).

L 2946-66 EWT(m)/EPF(c)/EWP(j)/T/ETC(m) WW/RM

ACCESSION NR: AP5025023

UR/0286/65/000/016/0081/0081
678.674

AUTHOR: ^{44,55} Shoshtayeva, M. V.; ^{44,56} Tarkhanova, E. B.; ^{44,56} Kryuchkov, F. A.; ³⁴ Petrov, A. S. ^{44,55}

TITLE: Treatment for unsaturated polyesters. Class 39, No. 173933 ¹⁵

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 81

TOPIC TAGS: polyester, fire resistant material

ABSTRACT: An Author Certificate has been issued for a treatment for unsaturated polyesters involving acetic anhydride. To produce nonburning¹⁵ and water-resistant⁵ unsaturated polyesters, a chloral-modified unsaturated polyester is used, and the treatment is carried out with excess acetic anhydride with heating at 60-70C min in the presence of a tertiary amine, e.g., triethylamine. [SM]

ASSOCIATION: none

SUBMITTED: 02Aug63

ENCL: 00

SUB CODE: OC,GC

NO REF SOV: 000

OTHER: 000

ATD PRESS: 4110

BVK
Card 1/1

PETROV, Anatoliy Stepanovich; BULARINA, V., red.; KIRSANOVA, I.,
mladshly red.; NOGINA, N., tekhn. red.

[Work and the creative capacity of the masses] Trud i tvor-
chestvo mass. Moskva, Sotsekgiz, 1962. 185 p. (MIRA 16:2)
(Efficiency, Industrial)

PETROV, A. S. Aspirant and MINAKOV, A. N. Prof.

"The Problem of Diminishing the Breaking Tendency In Spinning Processes,"
report given at the All-University Scientific Conference "Lomonosov Lectures", Vest.
Mosk. Un., No.8, 1953.

Translation U-7895, 1 Mar 56

17.8300

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A00/A00

Translation from Refractive Journal, Mekhanika, No. 1, 1977, # 1777

AUTHOR Patryk, A.S.

TITLE On the Analogy between the Problem of a

PERIODICAL Ref. Journal, MEKANIKA, No. 1, 1977, # 1777

TEXT: Based on the analogy between the steady motion of a flexible inextensible filament and the stationary motion of a barotropic liquid, the motion equations of the filament are derived and their first integrals are determined with the same analogical equations as in fluid dynamics. Taken together with the boundary conditions, they make it possible to find the shape of a filament moving steadily. The case of a filament of a material that is not equal in mass of the filament is considered as an example of a filament of a filament.

L.M. Matkhanov

Translation from Mekhanika, No. 1, 1977, # 1777, p. 1777-1781, 1781-1782

04000/

GINZBURG, O.F.; RELOGORODSKIY, V.V.; PETROV, A.S.

Dyes with antipyrine nuclei. Part 9: Derivatives with
two and three heterocycles. Zhur.ob.khim. 32 no.10:3317-3326
C 162. (MIRA 15:11)

1. Leningradskiy tekhnologicheskii institut imeni
Lensoveta.

(Dyes and dyeing)
(Antipyrine)

RENEK, W. S. & RAYBMAN, I. S. (Moscow)

"The use of statistical methods in the diagnosis of radiation sickness."

report, presented at the 1st. International Conference on Statistics, University, Moscow, 1961.

(Russian) *Statisticheskaya diagnostika radiatsionnoy bolezni*. *Statisticheskaya diagnostika*, 1961, 1, 1-10.

(Moscow Agricultural Academy imeni Timiryazev)

PETROV, A.S., inzhener.

Marine machine building at the exhibition in London. Vest.
mash. 36 no.6:22-29 Je '56. (MLRA 9:10)

(London--Marine engines--Exhibitions)

PETROV, Aleksey Semenovich; KAGANOV, Aleksandr Ivanovich; KULANDIN,
Ya.I., red.; LEVANDOVSKIY, S.N., red.; GOLYATKINA, A.G.,
red. izd-va; ISLENT'YEVA, P.G., tekhn. red.

[Manufacture of rolls for cold rolling] Proizvodstvo valkov
kholodnoi prokatki. Moskva, Metallurgizdat, 1962. 216 p.
(MIRA 15:4)

(Rolls (Iron mills))

... ..

... ..

... .. prof.
... ..

PETROV, Atanas, inzh.

Scientific and technical meetings at the Plovdiv International
Sample Fair. Tekstilna prom 13 no.6:34-36 '64.

10

PHASE I BOOK EXPLORATION

30V 2359

Petrov, Appolinariy Stepanovich

Proizvodstvo i primeneniye gruntoblokov v maloetazhnom stroitel'stve (Production and Use of Adobe Blocks in One-and Two-story Structures) Magadan, 1958. 47 p (Series: Magadan. Vsesoyuznyy nauchno-issledovatel'skiy institut zolota i redkikh metallov. Trudy: Mestnyye stroymaterialy, vyp. 7). 550 copies printed.

Additional Sponsoring Agency: RSFSR. Magadanskiy sovet narodnogo khozyaystva.

Ed.: N. A. Vansheydt; Editorial Board: N. A. Shilo (Resp. Ed.), P. P. Aleksandrov, F. R. Apel'tsin, V. P. Berezin, A. I. Kalabin, G. G. Kuznetsov, L. P. Matsuyev, E. I. Nuzhdin, S. V. Potemkin (Deputy Resp. Ed.), L. V. Firsov (Resp. Secretary), and T. G. Fomenko.

PURPOSE: This book is intended for civil engineers or other persons interested in building materials.

COVERAGE: The book treats of the applicability, technical properties and production of adobe blocks as building materials. Production processes, granulometric analysis, building plans and techniques, and economic advantages in the use of

Card 1.4

Production and Use of Adobe Blocks (Cont.)

SOV/2359

this material are discussed in detail. There are 10 Soviet references, all Soviet. No personalities are mentioned.

TABLE OF CONTENTS: None given; the book is divided as follows:

Introduction	1
Technical characteristics of adobe blocks	4
Characteristics of raw materials for adobe blocks	6
Production of adobe blocks	7
Preparation of stabilizers	9
Choice of components for adobe blocks	13
Organization of the production of blocks	17
Preparation of soil	18
Production of soil mixtures	19
Card 2, 4	

Production and Use of Adobe Blocks	30V 2319
Determination of the granulometric composition of soils	42
Determination of gravel content	43
Determination of the content of coarse sand particles (-2.0 to +1 mm)	43
Determination of the content of fine sand particles (-1 to +0.05 mm)	43
Determination of the content of clay particles (less than 0.005 mm)	44
Determination of the content of dust particles (-0.05 to +0.005 mm)	45
Bibliography	48

AVAILABLE: Library of Congress

Card 4/4

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SECRET COPY

Transmittal Form (Reference: Form 1041, 10/65)

TO: DIRECTOR, CIA

FROM: SAC, NEW YORK (100-100000)

SUBJECT: [Illegible]

CLASSIFICATION: [Illegible]

DATE: [Illegible]

BY: [Illegible]

REASON: [Illegible]

SECRET COPY

Investigation of the [Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

[Illegible]

31167

3CV/35-59-8-6608

3. 2/00

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959,
Nr 8, pp 71 - 72

AUTHORS: Bugrov, B.G., Gorlov, O.G., Petrov, A.V., Serov, A.D., Yugov,
Ye.M., Yakovlev, V.I.

TITLE: Investigations of the Vital Activity of Animals During Flights
in Rocket Non-hermetic Cabin up to 110 km

PERIODICAL: V sb.: Predvarit. itogi nauchn. issled. s pomoshch'yu pervykh
sov. iskusstv. sputnikov Zemli i raket. Moscow, AS USSR, 1958,
pp 130 - 149 (Engl. sum.)

ABSTRACT: The results are described of Soviet studies on the efficiency
of using diving suits for maintaining the life of experimental
dogs when the cabin is de-hermetized and the dogs stay sub-
sequently at high altitudes for a long time (up to 1 hour). The
possibility of leaving the cabin by the catapulting method at
an altitude of 80 - 90 km and high flight velocity was also in-
vestigated. It was established that the use of a ventilation
living suit, conventional in flight practice, with an oxygen

Card 1/4

81407

30V/35-59-8-6608

Investigations of the Vital Activity of Animals During Flights in Rocket
Non-hermetic Cabin up to 110 km

protecting mask for maintaining the life of an experimental animal is inconvenient in many respects and even dangerous for the animal. Therefore, a special ventilation diving suit with a spherical voluminous helmet made of transparent plexiglas, a system of oxygen supply and an extension-type tray were developed. A constant working pressure of 440 mm Hg was maintained in the diving suit during flights at altitudes above 4,350 m by means of a special valve. The diving suit was fastened on the extension-type tray and inserted into a catapult carriage which was similar to catapult devices of modern aircraft. The equipment consisted of a special amplifier, called the aircraft medical set and devised for recording the frequency of breathing and pulse, the values of maximum and minimum arterial pressure, body temperature and the internal temperature in the diving suit. Usually, two quite similar carriages with dogs were accommodated in the rocket head section. The rocket took off 3 - 5 min prior to sunrise and flew up to an altitude of 110 km. The flight along the ascending branch of the trajectory was in the main stabilized. At an altitude of 100 - 109 km, 188 sec after the take-off, the rocket head section was separated and started non-

Card 2/4

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911.67

SCV/35-59-8-6608

Investigations of the Vital Activity of Animals During Flights in Rocket
Non-hermetic Cabin up to 10 km

stabilized free falling. At an altitude of 75 - 90 km, corresponding to
247 - 250 sec of flight, the animal placed in the right carriage was cata-
pulted at a velocity of 560 - 730 m/sec. The carriage with the animal fell
freely during 3 sec, after which a parachute device was opened. The dynamic
load during the opening of the parachute amounted to 500 kg, and the over-
loading to 7 g. At the 297 - 300 sec of the flight, when the rocket head
section reached, in its falling, the 39 - 46 km altitude, the animal in the
left carriage was catapulted at a velocity of over 1,100 m/sec. The left
catapult carriage with the animal fell down to the 3.8-km altitude, when
its parachute device was put into operation. The main factors affecting
physiological functions during the first stage of the flight were engine
noise, vibrations and increasing acceleration; during the second stage -
weightlessness, and during the third stage, upon entering the dense atmo-
spheric layers, gravity and acceleration. The results of measurements showed
that moderate changes in the values of arterial pressure, pulse frequency and
breathing occurred in the animals during the flight in rockets. The data ob-
tained warrant a conclusion that differences in the changes of pulse frequency

Card 3/4

11.67

SV/5-59-8-00.8

Investigations of the Vital Activity of Animals During Flights in Rocket
Non-hermetic Cabin up to 110 km

were determined by the type of the animal's nervous system. In the conditions of partial and full weightlessness, pulse frequency is reduced insignificantly. A moderate reduction of breathing frequency during the period of weightlessness was observed in all dogs. In the whole, the investigations performed showed that maskless diving suits preserved the life of animals during the flight in a rocket non-hermetic cabin up to 110 km, catapulting and descending with a parachute from 75 - 85 km, while the total time of staying in the upper atmospheric layers amounted to 50 - 60 minutes. There are 18 references.

T.S. Kizilova

✓

Card 4/4

POTOMAC, A.M., 1964.

1. The purpose of this report is to provide information on the activities of the Potomac River Commission (PRC) during the period from 1964 to 1965. The report is based on a review of the PRC's annual reports and other documents.

PETROV, A.V., Inzh.

Universal coding classification and its importance in the
organization of technical information. See. 1 Sept. 1968.
No. 11:47-48. 1968. M.I.T. Press.

SHAVIN, G.A., kand. tekhn. nauk; PETROV, A.V., kand. tekhn. nauk; SMIRNOV, A.V., inzh.; KOLTKOVA, G.M., inzh.

Automatic welding with a nonconsumable electrode of aluminum alloys using a pulsating arc. Svar. prot. 1965, D 165.

ALIMARIN, I.P.; ZOLOTOV, Yu.A., KARYAKIN, A.V., PETROV, A.Y., SUEZHANSKIYA,
A.I.

Extraction of thallium (III) compounds from chloride solutions.
Zhur. neorg. khim. 10 no.2-524-530 P 1965. (MIRA 1211)

1. Institut goskhimii i analiticheskoy khimii imeni Lomonosova
AN SSSR i Volgogradskiy i tekhnicheskiy institut. Submitted
May 6, 1964.

KESSENIKH, R.M.; SOTNIKOV, V.G.; TRIPEL', V.G.; PETROV, A.V.; POKHOLKOV, Yu.P.;
SHUMILOV, Yu.N.

Some electrophysical properties of the homolog series of novolak-type
phenol-formaldehyde resins. Izv. TPI 126:26-35 '64. (MIRA 18:7)

PETROV, A.V., kand. tekhn. nauk; OLAVIN, G.A., kand. tekhn. nauk; SHTEKMAN,
M.M., kand. tekhn. nauk

Automatic welding with a consumable electrode on a vertical
plane. Svar. protsv. i avtomat. A: 165. (MIRA 1946)

L 130C-56 EWT(d)/ENP(e)/EWT(m)/EWP(w)/EPF(c)/EPF(n)-2/EWP(v)/T/EWP(t)/EWP(k)/
ACCESSION NR: AP5022345 EWP(z)/EWP(h)/EWA(h)/UR/0135/65/000/009/0005/0007
EWA(c)/ETC(m) IJP(c) JD/NW/HM/JG/EM 621.791.011:537.525.1

AUTHOR: Petrov, A. V. (Candidate of technical sciences); Morenov, A. I. (Engi-
neer)

TITLE: On the formation of the jet of deposited coating material by means of
a plasma arc

SOURCE: Svarchnoye proizvodstvo, no. 9, 1965, 5-7

TOPIC TAGS: metal coating, plasma jet, metal deposition, nozzle design, arc
discharge, metal powder

ABSTRACT: At present coatings of powder materials usually are deposited with the
aid of stationary arc burners in which the powder is introduced into the plasma
jet in the region of the nozzle channel. Experiments with the deposition of
coatings of different materials (W, Al₂O₃, ZrO₂, and others) showed that the ef-
fectiveness of the process -- the rate of deposition, the coefficient of utili-
zation of the powder material -- depends to a large degree on the site of intro-
duction of the powder into the nozzle channel. In this connection the authors

Card 1/2

L 1300-66

ACCESSION NR: AP5022345

examine the optimal conditions for the formation of the jet of deposited material as a function of the processes occurring in the plasma burner. An analysis of the structure of the plasma jet in the nozzle channel on the basis of the laws of thermodynamics and the kinetics of chemical reactions indicates that the region directly beyond the active (anode) spot of the arc discharge is the optimal site for introducing the gas and powder. The introduction of powder at this site will intensify the processes of recombination in the plasma jet. Owing to the increase in the effective heat conduction of gases in the recombination-temperature range, the process of the transfer of heat from the high-temperature plasma jet to the comparatively cold powder material will be greatly intensified in this section of the nozzle channel. As for the position of the anode spot, this must be experimentally determined, by means of a special probe, since it depends on the design and operating parameters of the burner, such as the nozzle channel diameter and the rate of involution of the gas flow. Orig. art. has: 6 figures

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MM, IE

NO REF SOV: 002

OTHER: 000

Card

2/2 *mlc*

L 1896-66 EWT(m)/EWP(v)/T/EWP(t)/EWP(k)/EWP(b)/EWA(c) JD/HM

ACCESSION NR: AP5021576

UR/0286/65/000/013/0049/0049
621.791.89

AUTHOR: Petrov, A. V.; Verbitskiy, V. G.; Slavin, G. A.

33
B

TITLE: Constricted arc welding Class 21, No. 172423

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1965, 49

TOPIC TAGS: arc welding, constricted arc welding, thin sheet arc welding

ABSTRACT: An Author Certificate has been issued for a method of constricted arc welding of thin sheet materials. The welding is done with a closed constricted arc using a miniature chamber pressed at a definite pressure to the parts being welded and moved along the weld. [MS]

ASSOCIATION: none

SUBMITTED: 19Jan63

ENCL: 00

SUB CODE: IE

NO REF SOV: 000

OTHER: 000

ATD PRESS: 4090

Card 1/1 *MLB*

PETROV, A.V.; KARYAKIN, A.V.; MARUNOVA, K.V.

Mechanism of rhenium extraction with tributyl phosphate. Zhur.
neorg.khim. 10 no.4:986-991 Ap '65. (MIRA 18:6)

1. Institut geokhimi i analiticheskoy khimii imeni Vernadskogo
AN SSSR, Volgogradskiy po' tekhnicheskoy institut i Gosudarstvennyy
~~institut~~ redkikh metallov.

MEMORANDUM FOR THE DIRECTOR, CIA
SUBJECT: [Illegible]

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L 51451-65 EWT(d)/EWT(m)/EWP(c)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/
EWP(z)/EWP(b)/EWP(l)/EWA(c) Rf-4 MJW/JD/HM

ACCESSION NR: AP5009671

UR:0135/65/000/004/0015/0018
62L.791.89:669.15-194

31
B

AUTHOR: Patrov, A. V. (Candidate of technical sciences); Slavin, G. A. (Candidate of technical sciences); Shtrikman, M. M. (Candidate of technical sciences)

TITLE: Automatic consumable-electrode welding in the vertical plane

SOURCE: Svarochnoye proizvodstvo, no. 4, 1965, 15-18

TOPIC TAGS: consumable electrode welding, automatic welding, vertical weld technology, gas shield, transverse electrode vibration / ASVP-1 welder, ASGP-1 welder, VNS-5 steel, SN3 electrode

ABSTRACT: The ASVP-1 and ASGP-1 automatic welders were used to study the optimal conditions for automatic consumable-electrode welding of vertical or horizontal joints on vertical surfaces of VNS-5 steel in an atmosphere of inert gas (sample thickness 8-10mm, seam joint). SN3 welding wire with ϕ -1.2 - 1.6 mm, a downward pass direction, an arc length not exceeding 2 mm and a gas shield of Ar + 10% CO₂ provided the best primary layers in vertical welds. Metal of the molten pool should not advance the arc. Optimal amplitudes and frequencies of transverse vibrations of the welding wire, insuring the minimal number of passes needed to complete the second and subsequent layers, are given. The authors also

Card 1/2

L 51451-65

ACCESSION NR: AP5009671

comment briefly on horizontal welds. Orig. art. has: 2 tables and 8 figures. 0

ASSOCIATION: None

SUBMITTED: 00

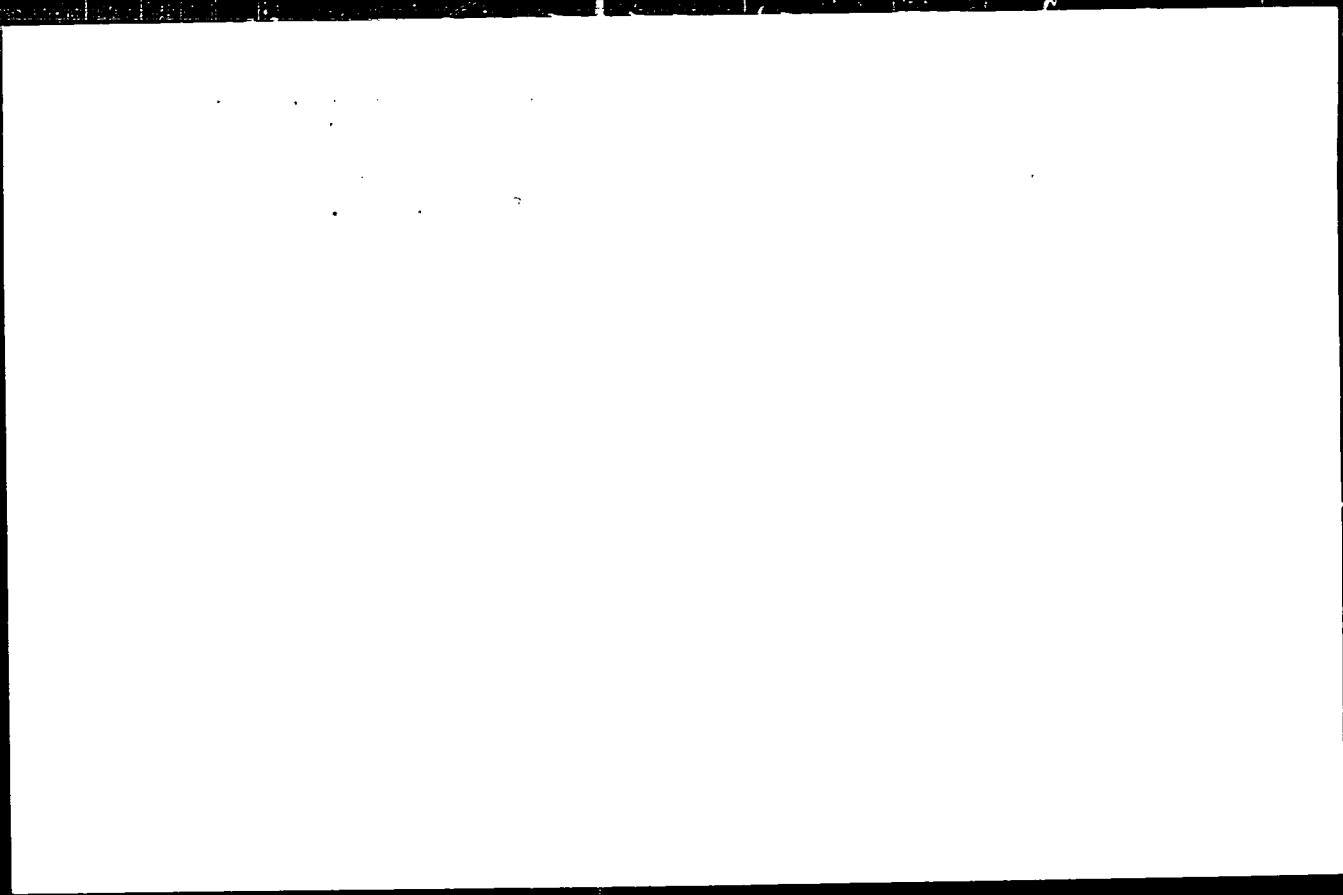
ENGL: 00

SUB CODE: IE, MM

NO REF SOV: 003

OTHER: 000

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Card 2/2



L 52977-65

ACCESSION NR: AP5009952

tributylphosphate the following complexes are formed: $(C_4H_9O)_3PO...HCl$ and $(C_4H_9O)_3PO...HReO_4$. When HCl or $HReO_4$ are introduced into tributylphosphate containing a small amount of water, hydration of the proton occurs at the expense of the destruction of bonds between water molecules and solvent, with production of $H_3O_4^+$ ion. This ion is joined to the P=O group of tributylphosphate. When HCl and $HReO_4$ are extracted from water, complexes of the following type are formed:

$[(C_4H_9O)_3PO...H_3O_4]^+Cl^-$ and $[(C_4H_9O)_3PO...H_3O_4]^+ReO_4^-$.

The presence of HCl in the aqueous phase is necessary for the creation of the cationic part of the extracted complex, however, since the extraction mechanism for HCl and $HReO_4$ is the same, the presence of excess HCl in water hinders the extraction of Re due to competition for the place in the anionic part of the extracted complex. An optimum value of the concentration of HCl in the solution was determined (3M), which is in agreement with the previously obtained experimental data. The increase of ReO_4^- concentration in the solution decreases the solubility of water in the organic phase. Orig. art. has: 2 tables and 5 figures.

Card 2/3

L 52977-65

ACCESSION NR: AP5009952

3

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo
AN SSSR (Institute of Geochemistry and Analytical Chemistry, AN SSSR); Volgograd-
skiy politekhnicheskii institut (Volgograd Polytechnic Institute); Gosudarstvennyy
institut redkikh metallov (State Institute of Rare Metals)

SUBMITTED: 19May64

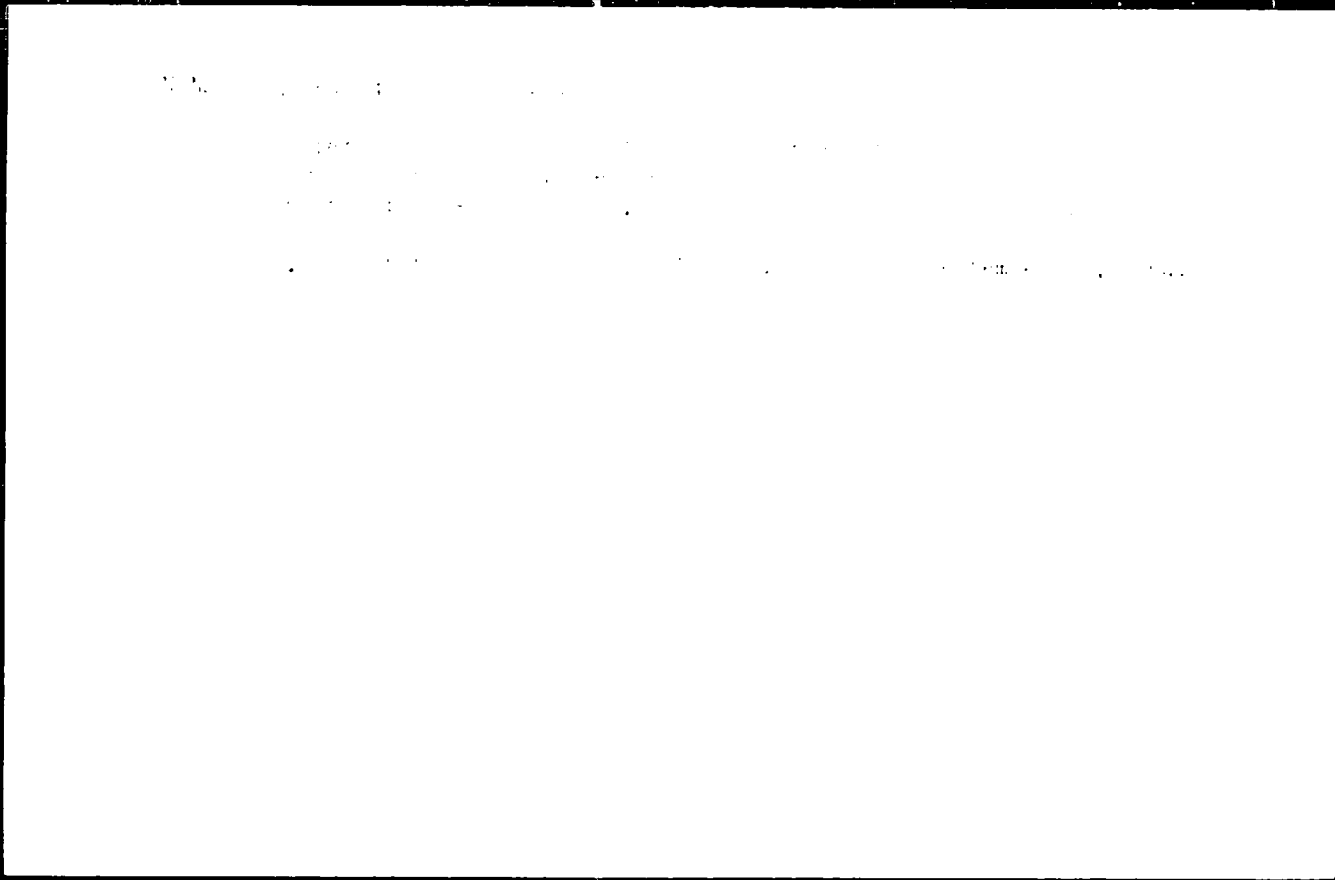
ENCL: 00

SUB CODE: GC, OP

NO REF SOV: 006

OTHER: 005

LL
Card 3/3



SI AVIN, G.A., kand. tekhn. nauk; PETROV, A.V., kand. tekhn. nauk

Automatic welding with pulsation of various MI types
Svar. proizv. no. 12-19-10-10... MIRA 19 1

L.11211-66 EWT(m)/EWP(t)/EWP(k)/EWP(b)/EWA(c) LJP(c) JD/HW

ACC NR: AP6000617

SOURCE CODE: UR/0135/65/000/012/0018/0020

AUTHOR: Slavin, G. A. ^{44,55} (Candidate of technical sciences); Petrov, A. V. ^{44,55} (Candidate ⁵⁷ of technical sciences); Smirnova, S. V. ^{44,55} (Engineer); Korotkova, G. M. ^{44,55} (Engineer) ^B

ORG: none

TITLE: Automatic pulsed-arc welding of thin aluminum-alloy sheets with a nonconsumable electrode ^{44,55 18} ^{44,55 27}

SOURCE: Svarochnoye proizvodstvo, no. 12, 1965, 18-20

TOPIC TAGS: aluminum, aluminum alloy, ~~alloy sheet~~, ~~thin sheet~~, ~~sheet welding~~, ~~alloy welding~~, arc welding, ~~pulsed arc welding~~, ~~nonconsumable electrode welding~~, TIG welding/AMg6 alloy

⁴
ABSTRACT: Aluminum-alloy sheets 0.2—1.0 mm thick can be successfully joined by pulsed-arc TIG welding in which two arcs are employed: a continuously maintained low-ampere pilot arc and a pulsed welding arc. Such a pulsed arc under optimum conditions produces better penetration with a considerably lower heat input, thus reducing warpage and the danger of burning through. The effectiveness of the pulsed arc is determined by the current and duration of pulse, the ratio of pause duration to pulse duration (G), and the pitch of the weld spots. Experiments conducted with AMg6 alloy sheets showed that for each thickness within 0.2—1.0 mm there is an optimal range of parameters. The minimum warpage in sheets 0.5 and 0.7—1.0 mm thick is achieved at a G of 1.5—3.0 and 1.0—2.0, respectively. The optimum duration

Card 1/2

UDC: 621.791.753.93-52:669.715-415

L 45104-65 EWT(d)/EPA(s)-2/EWT(m)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(h)/
 EWP(l)/EWA(o) FF-4 JB/HM
 UR/0286/65/000/007/0082/0083
 ACCESSION NR: AP5010894

AUTHORS: Slayin, G. A.; Gusev, A. T.; Korotkova, G. M.; Filippov, M. A.; Petrov, A. V. 34
 B

TITLE: Device for welding with a pulsed arc, Class 21, No. 164716

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 82-83

TOPIC TAGS: welding equipment, arc welding

ABSTRACT: This Author Certificate presents a device for welding with a pulsed arc. It contains an oscillator and a source of a pulsed operating arc and is provided with a welding transformer and a chopper, e.g., a thyatron. To increase the quality of the welded joint, a regulated supply of the on-duty arc is used, e.g., containing a transformer, a rectifier, and a potentiometer. The supply is connected to the welding electrodes in parallel with the pulsed arc source (see Fig. 1 on the Enclosure). To improve the pulse shape of the welding current, the pulsed operating arc source is provided with a four-winding saturation choke. The operating winding of this choke is made of two windings connected in opposition and is connected in series with the secondary of the welding transformer. The control winding of the choke is connected to the chopper, and the positive current

Card 1/1

L 42.04-65

ACCESSION NR: AP5010894

Feedback is connected in series in the electrode-product circuit. Orig. art. has:
1 diagram.

ASSOCIATION: none

SUBMITTED: 18Jul62

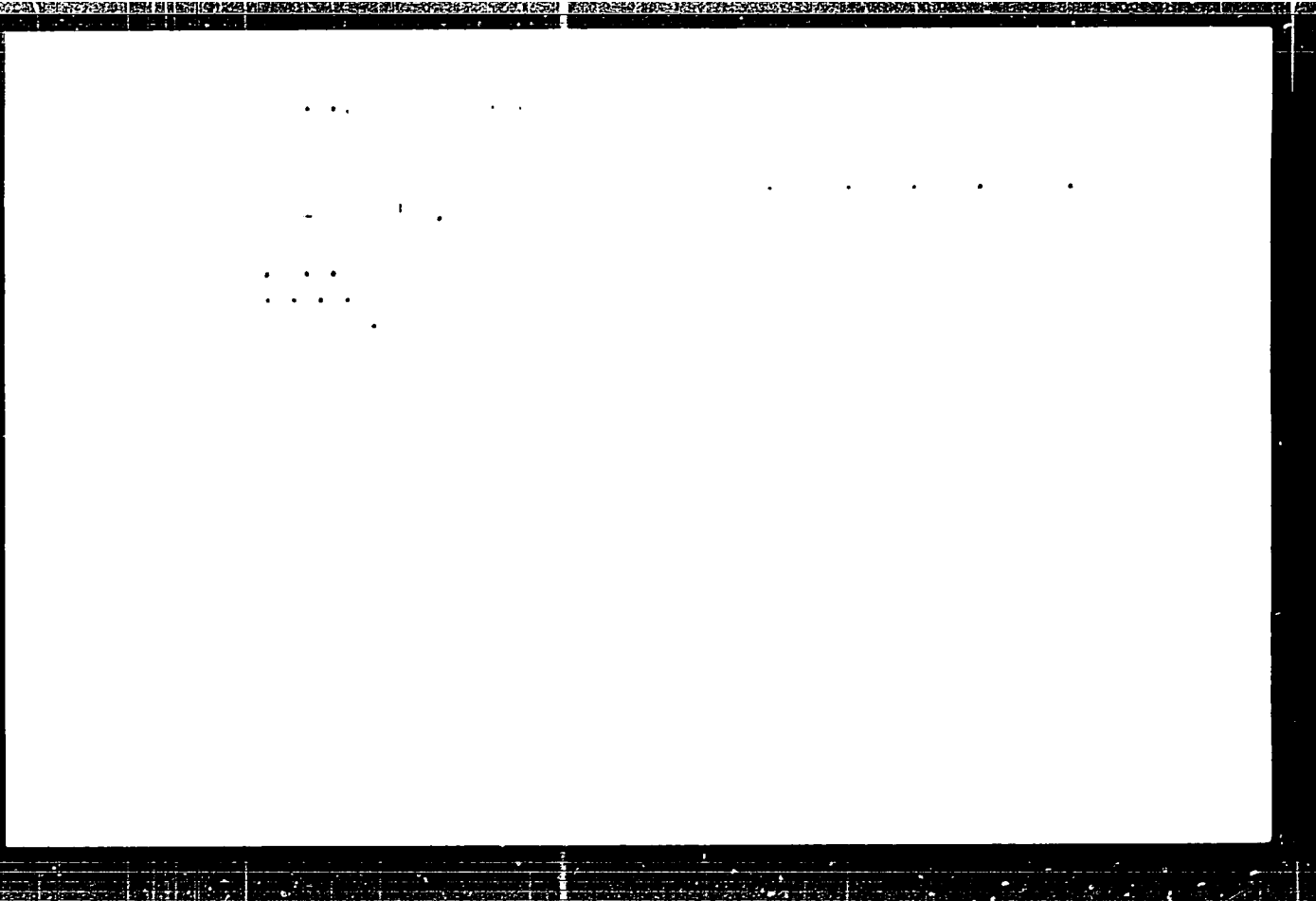
ENCL: 01

SUB CODE: IE, MI

NO REF SOV: 000

OTHER: 000

Card 2/3



L 15741-65 ENT(m)/EWA(d)/EWP(v)/EWP(t)/EWP(k)/EWP(b) Pf-4 JD/HM/HW
ACCESSION NR: AP4045460 S/0125/64/000/009/0075/0078

AUTHOR: Petrov, A. V. (Candidate of technical sciences, Moscow);
Slavin, G. A. (Candidate of technical sciences, Moscow); Shnayder, B.I. (Engineer)

TITLE: Warping of edges in welding steel sheets thinner than 0.6 mm

SOURCE: Avtomaticheskaya svarka, no. 9, 1964, 75-78

TOPIC TAGS: welding thin steel sheet welding, thin stainless sheet welding, sheet edge warpage, warpage prevention, clamping device

ABSTRACT: Clamping devices and various factors affecting their effectiveness in preventing warping of the edges in structures welded from sheets thinner than 0.6 mm have been investigated. The best results were obtained with a pneumatically operated, piano-key-type clamping device the keys of which were 40--50 mm long and 20--40 mm wide, and were made of a nonmagnetic material (to reduce arc straying). In butt welding of stainless steel sheets 0.3--0.6 mm thick, the optimum pressure for clamping sheets to the back-up plate was 2.0--2.5 kg/cm²; the optimum distance between the clamp keys increased from 4--6 mm for sheets 2--3 mm thick to 5--7 and 6--8 mm for sheets

Card 1/2

L 15741-65

ACCESSION NR: AP4045460

0.4--0.5 and 0.6 mm thick, respectively. Welding in a helium atmosphere reduced edge warping 1.5 times, compared with welding in argon, but maintaining a stable low-amperage arc is difficult, and the weld shape is unsatisfactory. A stable arc is best maintained in a mixture of 40--50% He and 40--50% Ar, but in this medium the edge warping is reduced by only 12--15%. Orig. art. has: 3 figures and 1 table.

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

SUBMITTED: 10Jan64

ENCL: 00

SUB CODE: IE

NO REF SOV: 000

OTHER: 000

Card 2/2