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Internal Combustion Engines, v. 1, Working Processes (Cont.)326

Kruglov, M.G. (Section 12), Leonov, O.B. (Section 13) and Chursin, M.M. (Sections 8-11); Chapter VI by Kruglov, M.G. and Leonov, O.B.; Chapters VIII and IX by Kruglov, M.G.; Chapter X by Leonov, O.B.; Chapters XI, XII and XIII by Kalish, G.G. In the preparation of Chapters II, III and V the studies of Lebedev, S. Ye. and Librovich, B.G. were used, and in the preparation of Chapter IX the work of Kalish, G.G. There are 31 references: 28 are Soviet, 2 English and 1 German.

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A.S., Zasluzhennyy deyatel' nauki i tekhniki, doktor tekhn. nauk, prof.

Development of structural systems of two-cycle high-power engines, and scavenging systems. Vest. mash. 37 no.8:3-8 Ag '57. (MLRA 10:9)

1. Moskovskoye Vyssheye tekhnicheskoye uchilishche imeni Baumana.
(Gas and oil engines--Design) (Marine engines)

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ORLIN, A.S.

ORLIN, Andrey Sergeyevich, prof.; VYRUBOV, Dmitriy Nikolayevich; KALISH, German Georgiyevich; KHUDLOV, Mikhail Georgiyevich; LEONOV, Oleg Borisovich; LEBEDEV, Sergey Yevgen'yevich; LIBROVICH, Bronislav Genrikhovich; CHURSIN, Mikhail Mikhaylovich; MEL'KUMOV, T.M., prof., retsenzent; YEGORKINA, L.I., inzh., red.; TIKHANOV, A.Ya., tekhn.red.

[Internal combustion engines] Dvigateli vnutrennego sgoraniia. Pod red. A.S.Orlina. Izd. 2-oe, perer. i dop. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry. Vol.1. [The working principles of engines and their units] Rabochie protsessy v dvigateliakh i ikh agregatakh. 1957. 396 p. (MIRA 11:3)
(Gas and oil engines)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A.S., red.; PUL'MANOV, N.V., kand.tekhn.nauk, red.; MORGULIS, Yu.B., kand.tekhn.nauk, retsenzent; BASENTSYAN, A.A., inzh., red.izd-va; EL'KIND, V.D., tekhn.red.

[Calculating working processes of internal combustion engines; a manual] Raschet rabochikh protsessov v dvigateliakh vnutrennego sgoraniia; spravochnoe posobie. Izd. 2-oe. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1958. 158 p. (MIRA 11:5)
(Gas and oil engines)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

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ORLIN, A. S. , ed.

N/5
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Dvigateli vnutrennego sgoraniya Internal combustion engines Moskva, Mashgiz, 1958.

102 p. illus., Diagrs., graphs, tables.
Includes references.

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A.S., doktor tekhn. nauk; KRUGLOV, M.G., kand. tekhn. nauk.

Development of two-cycle marine and locomotive diesel engines.
[Trudy] MVTU no.76:5-24 '58. (MIRA 11:5)
(Marine diesel engines) (Diesel locomotives)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A.S., doktor tekhn. nauk.

Fiftieth anniversary of the "Internal combustion engines" department at the Moscow Technical College. [Trudy] MVTU no.83:7 '58.
(Moscow—Technical education) (MIRA 11:6)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A.S., doktor tekhn. nauk.

Determining the parameters for exhaust processes in combined engines. [Trudy] MVTU no.83:133-136 '58. (MIRA 11:6)
(Gas and oil engines)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, Andrey Sergeyevich; KRUGLOV, Mikhail Georgiyevich; KORCHAGIN, M.I., kand. tekhn. nauk, retsenzent; POPOV, A.A., kand. tekhn. nauk, red.; BASHENTSYAN, A.A., inzh., red. izd-va; EL'KIND, V.D., tekhn. red.

[Heavy-duty two-stroke marine diesels] Sudovye dvukhtaktnye dizeli bol'shoi moshchnosti. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1958. 95 p. (MIRA 11:10)
(Marine diesel engines)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A.S.

Present status and future development of two-cycle engines.
Nauch.dokl.vys.shkoly; mash. i prib. no.1:3-5 '59.
(MIRA 12:8)
(Diesel engines)

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A.S., doktor tekhn.nauk, zasluzhennyy deyatel' nauki i tekhniki;
CHURSIN, M.M., kand.tekhn.nauk

"Theory of automobile engines" by I.M.Lenin. Reviewed by A.S. Orlin, M.M.Chursin. Avt.prom. no.1:45 Ja '59. (MIRA 12:1)

1. Moskovskoye vysshoye tekhnicheskoye uchilishche im. Baumana.
(Automobiles--Engines) (Lenin, I.M.)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A.S., prof., doktor tekhn.nauk

Two-cycle engines with valve distribution. Izv.vys.ucheb. zav.; mashinostr. no.2:153-154 '59. (MIRA 13:3)

1. Moskovskoye vysshoye tekhnicheskoye uchilishche imeni N.Ye.Baumana.
(Gas and oil engines)

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A.S., doktor tekhn.nauk, red.; YEGORKINA, L.I., red.izd-va; KL'KIND, V.D., tekhn.red.

[Increasing the power and improving the efficiency of internal combustion engines; reports at the scientific technical conference of the Department of Internal Combustion Engines of the Moscow Higher Technical School] Povyshenie moshchnosti i uluchshenie ekonomichnosti dvigatelei vnutrennego sgoraniia; doklady i soobshcheniia na nauchno-tekhnicheskoi konferentsii kafedry "Dvigateli vnutrennego sgoraniia" MVTU imeni Baumana. Pod red. A.S.Orlina. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 219 p. (MIRA 12:8)

1. Moscow. Moskovskoye vysshaye tekhnicheskoye uchilishche. (Gas and oil engines)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A.S., professor; VYRUBOV, D.N.; KOSTYGOV, N.I.; LEBEDEV, S.Ye. [deceased]; ROGANOV, S.G.; SIMAKOV, F.F.; CHURSIN, M.M.; PETROV, V.A., professor, retsenzent [deceased]; PONOMAREVA, K.A., redaktor; MODEL', B.I., tekhnicheskiy redaktor

[Internal combustion engines] Dvigateli vnutrennego sgoraniia. Pod red. A.S.Orlina. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry. Vol.2. [Design and calculations] Konstruktsii i raschet. 1955. 534 p. (MLRA 9:8)
(Gas and oil engines)

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Moscow. Vyssheye tekhnicheskoye uchilishche

Povysheniye moshchnosti i uluchsheniye ekonomichnosti dvigateley vnutrennego sgoraniya; doklady i soobshcheniya na nauchno-tekhnicheskoy konferentsii kafedry "Dvigateli vnutrennego sgoraniya" MVTU imeni Baumana (Increasing the Output and Improving the Economy of Internal Combustion Engines; Reports and Transactions Presented at the Scientific and Technical Conference Held by the Department of Internal Combustion Engines, MVTU imeni Bauman) Moscow, Mashgiz, 1959. 219 p. Errata slip inserted. 4,500 copies printed.

Ed.: A.S. Orlin, Doctor of Technical Sciences; Ed. of Publishing House: L.I. Yegorkina; Tech. Ed.: V.D. El'kind; Managing Ed. for Literature on Automotive, Tractor, and Agricultural Machine Building: I.M. Bauman, Engineer.

PURPOSE: This collection of articles is intended for scientific and engineering personnel of research institutes and machine-building plants.

COVERAGE: The collection contains reports and papers dealing with better

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economy and greater capacities for internal combustion engines. Experimental results are stated and their effectiveness evaluated. The conference took place in 1957. The introduction to the collection contains short summaries of the articles. No personalities are mentioned. References follow several of the articles.

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of loop scavenging are evaluated. The types of diesel engines discussed are mostly non-Soviet.

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efficient and economical method of utilizing exhaust gas is by combining the kinetic energy of the air (transformed into pressure as it leaves the blower wheel) with variable pressure in the outlet. Tests have shown that fuel consumption in this type of engine is 150 to 155 grams per effective-horsepower hour.

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TRANSACTIONS

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

Metering Systems in Carburetors 214

The author describes the joint operation of the main jet and the idling jet and the way in which these two systems, when properly proportioned, compensate one another. The problem is exemplified on a K-25A carburetor.

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, Andrey Sergeyevich; KRUGLOV, Mikhail Georgiyevich; KHANIN, N.S., kand. tekhn. nauk, retsenzent; YEGORKINA, L.I., inzh., red.; TIKHANOV, A.Ya., tekhn. red.; MODEL', B.I., tekhn. red.

[Two-cycle interval-combustion engines] Dvukhtaktnye dvigateli vnutrennego sgoraniia. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1960. 555 p. (MIRA 14:8)
(Gas and oil engines)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A.S., prof., doktor tekhn.nauk; KRUGLOV, M.G., kand.tekhn.nauk

Gas exchange processes in medium and low powered two-cycle engines. Izv.vys.ucheb.zav.; mashinostr. no.9:155-162 '60. (MIRA 13:11)

1. Moskovskoye vysshoye tekhnicheskoye uchilishche im. Baumana.

(Gas and oil engines)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A.S.; KRUGLOV, M.G.; [illegible], Yu.L.

Investigating the gas exchange in two-cycle diesel engines with loop scavenging. Trakt.i sel'khozmash. 30 no.2:5-8 F '60.
(MIRA 13:5)

(Diesel engines)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ANDREYEV, B.V.; ARTEM'YEV, S.P.; ARKHANGEL'SKIY, V.M; AFANAS'YEV, L.L.; BABKOV, V.F.; BRONSHTEYN, L.A.; BURKOV, M.S.; BURYANOV, V.A..; VARSHAVSKIY, I.L.; VELIKANOV, D.P.; VOINOV, A.N.; VYRUBOV, D.N.; DORMIDONTOV, A.V.; D'YACHKOV, A.K.; YEFREMOV, V.V.; ZHABIN, V.M.; ZELENKOV, G.I.; KALABUKHOV, F.V.; KALISH, G.G.; KRAMARENKO, G.V.; KRASIKOV, S.M.; LAKHTIN, Yu.M.; MIKULIN, A.A.; ORLIN, A.S.; OSTROVSKIY, N.B.; OSTROVTSOV, A.N.; RUBETS, D.A.; STEPANOV, Yu.A.; STECHKIN, B.S.; KHACHATUROV, A.A.; KHOVAKH, M.S.; CHARUMSKIY, A.D.; SHARAPOV, K.A.

Nikolai Romanovich Briling; obituary. Avt.transp. 39 no.4:57 Ap '61. (MIRA 14:5)

(Briling, Nikolai Romanovich, 1876-1961)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A.S., doktor tekhn.nauk, prof.; CHURSIN, M.M., doktor tekhn.nauk, prof.

All-Union conference on combined engines. Vest. mash. 41 no.6:79-82 Je '61. (MIRA 14:6)
(Gas and oil engines)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A.S., prof.; VYRUBOV, D.N.; ALEKSEYEV, V.P.; KALISH, G.G.; KOSTYGOV, N.I.; KRUGLOV, M.G.; KRUTOV, V.I.; MIZERNYUK, G.N.; ROGANOV, S.G.; STEPANOV, Yu.A., prof., retsenzent; YEGORKINA, L.I., red. izd-va; SOKOLOVA, T.F., tekhn. red.

[Internal combustion engines]Dvigateli vnutrennego sgoraniia. Pod red.A.S.Orlina. Moskva, Mashgiz. Vol.3. [Systems, regulation, automatic control]Sistemy. Regulirovanie. Avtomatizatsiia. 1962. 307 p. (MIRA 16:1)
(Gas and oil engines) (Automatic control)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A.S., prof.; VYRUBOV, D.N.; KRUGLOV, M.G.; ROGANOV, S.G.; SIMAKOV, F.F.; CHURSIN, M.M.; GALANOVA, M.S., red.izd-va; SOKOLOVA, T.F., tekhn. red.

[Internal combustion engines]Dvigateli vnutrennego sgoraniia. Pod red. A.S.Orlina. Moskva, Mashgiz. Vol.2.[Design and construction]Konstruktsiia i raschet. Izd.2., perer. i dop. 1962. 379 p. (MIRA 15:11)
(Gas and oil engines—Design)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A. [illegible], prof., zasluzhennyy deyatel' nauki i tekhniki

Development of combined engines. Izv.vys.ucheb.zav.; mashinostr. no.1 [illegible]. (MIRA [illegible])
(Gas and oil engines Technological innovations)

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A.S., zasluzhennyy deyatel' nauki i tekhniki, doktor tekhn. nauk, prof.

Determination of the shape and dimensions of the cylinder ports of two-cycle engines. Energomashinostroenie 9 no.1:6-7 Ja '63. (MIRA 16:3)

(Gas and oil engines)

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A.S., doktor tekhn.nauk, prof., zasluzhennyy deyatel' nauki i tekhniki: KRUGLOV, M.G., kand.tekhn.nauk

Prospects for using a two-cycle diesel engine with loop scavenging. Energomashinostroenie 9 no.4:26-28, 42 Ap '63. (MIRA 16:5)
(Diesel engines) (Tractors)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A.S., doktor tekhn.nauk, prof., zasluzhennyy deyatel' nauki i tekhniki RSFSR.

Outlook for the development of free-piston gas producers. Vest.mashinostr. 44 no.3:33-34 Mr '64. (MIRA 17:4)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, A.S., doktor tekhn. nauk, prof.

Calculating the distribution group for two-cycle internal combustion engines. Izv.vys.ucheb.zav.; mashinostr. no.4:57-61 '64.

(MIRA 18:1)

1. Moskovskoye vysshaye tekhnicheskoye uchilishche imeni N.E.Baumana.

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L 8177-66 EWT(1)/EWP(m)/EWT(m)/EPF(c)/EWA(d)/T/FCS(k)/EWA(1) DJ

ACC NR: AP5025426 SOURCE CODE: UR/0145/65/000/007/0093/0097

AUTHORS: Orlin, A. S. (Doctor of technical sciences); Baryshnikov, O. A. (Candidate of technical sciences)

ORG: MVTU im N. E. Bauman (MVTU)

TITLE: Character of transient flow of the working fluid in the exhaust system of a combined engine during the initial period of free exhaust

SOURCE: IVUZ. Mashinostroyeniye, no. 7, 1965, 93-97

TOPIC TAGS: transient flow, wave mechanics, exhaust gas kinetics

ABSTRACT: The process of pressure pulse formation during the opening of an arbitrary nozzle is considered in a qualitative way. The problem is posed in the geometry shown in Fig. 1, where at time t_1 after opening the clearance, certain regions can be identified. Regions I and V contain gas particles which are unaffected by the exhaust process; region IV contains particles pressurized by the compression wave a-b; region III contains gases which have passed through the decompression wave (line 1-2 represents separation between gases A and B); region II contains the rarefaction region. The remainder of the article discusses qualitatively the difficulties which are encountered in trying to solve this problem. No indication is given as to how to handle these difficulties which include: the effects of the velocity of one side

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ACC NR: AP5025426

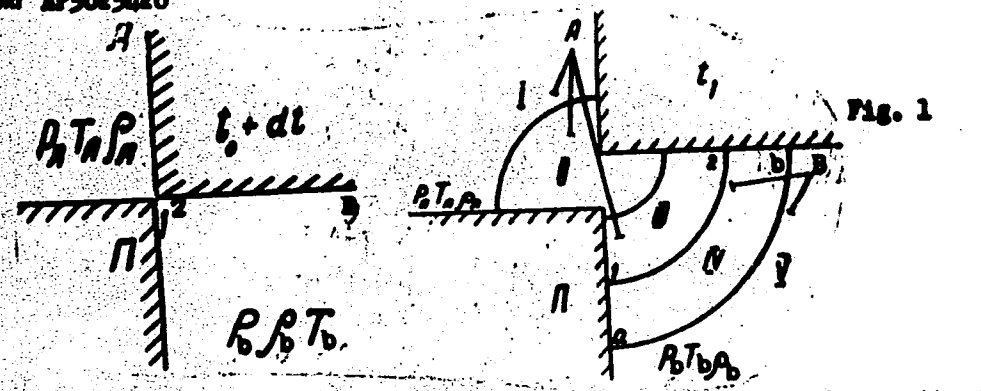

Fig. 1

of the nozzle during opening on the flow; the fact that in a real case the flow at the opening must be considered three-dimensional and can only be considered two-dimensional at some distance from the opening; in a real situation there are additional surfaces which interact with the pressure and rarefaction waves. Orig. art. has: 4 figures.

SUB CODE: PR/ SUBM DATE: 22Apr65/ ORIG REF: 002

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L 21649-66 EWT(d)/EWT(m)/EWP(t)/T-2 (A)
ACC NR: AP6006136 SOURCE CODE: UR/0114/65/000/010/0006/0008

AUTHORS: Orlin, A. S. (Meritorious scientist and technician, Doctor of technical sciences, Professor); Maryakhkov, O. A. (Candidate of technical sciences) 39 B

ORG: none

TITLE: Initial stages of pressure pulse formation in the exhaust manifold of a combined engine

SOURCE: Energomashinostroyeniye, no. 10, 1965, 6-8

TOPIC TAGS: compression shock, rarefaction wave, engine exhaust system, unsteady flow

ABSTRACT: Pressure pulse formation and dissipation of the discontinuity created by the opening of the discharge valve of a combined engine (piston and turbine) are qualitatively discussed. The authors do not agree with the simplifying assumptions made by other authors (no references) and qualitatively describe the initial formation of pressure and rarefaction shocks at the opening. The similarity to the shock tube problem is discussed, but it is decided that the

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ORLIN, A.S., zasluzhennyy deyatel' nauki i tekhniki, doktor tekhn. nauk, prof.; VYRUBOV, D.N., doktor tekhn. nauk, prof.

Outlook for the development of piston and combined internal combustion engines. Vest. mashinostr. 45 no.4:3-8 Ap '65. (MIRA 18:5)

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

L 32768-66 EWP(f)/T-2 WW

(A)

ACC NR: AP6010126 SOURCE CODE: UR/0122/66/000/003/0025/0030

AUTHOR: Orlin, A. S. (Doctor of technical sciences, Professor); Terskiy, O. V. (Engineer)

ORG: None

TITLE: The study of processes in exhaust systems of two-stroke combined motors

SOURCE: Vestnik mashinostroyeniya, no. 3, 1966, 25-30

TOPIC TAGS: exhaust gas dynamics, engine exhaust system, exhaust gas removal system

ABSTRACT: Difficulties encountered in the design of efficient complex power blocks, particularly of their exhaust systems which incorporate the gas turbine, pulse converters, and other units, compel researchers and designers to employ overly simplified solutions and approximations leading to significant errors. Consequently, the authors consider it useful to survey the papers by numerous researchers and subject them to a critical re-appraisal leading to useful conclusions and recommendations presented in this article. The discussion extends from the influence of exhaust systems on the processes within cylinders of multicylinder and single-cylinder engines to the effects within the associated turbine of

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UDC 621.432.4.068.2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, G., mekhanik-rulevoy

Structural defects in tank vessels of project No.866. Rech.transp. 20 no.6:48 Je '61. (MIRA 14:6)

1. Tanker "Tyumen'" Alekseyevskoy remontno-ekspluatatsionnoy bazy.
(Tank vessels)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLIN, V.A., kand.med.nauk

Pararectal fistulae or chronic paraproctitis. Sov.med. 22 no.3: 93-87 Mr '58. (MIRA 11:4)

1. Iz kafedry gospital'noy khirurgii (zav. - prof. L.N.Kuzmenko) L'vovskogo meditsinskogo instituta.
(RECTUM, fistula
pararectal, surg. (Rus))

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

NEUDACHIN, V.G.; ORLIN, V.N.

Compatibility of single-particle excited states with a modeling description of light nuclei. Zhur.eksp.i teor.fiz. 41 no.3: 874-876 S '61. (MIRA 14:10)

1. Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta.

(Nuclear models)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ACCESSION NR: AP4024059 S/0048/64/028/002/0326/0336

AUTHOR: Neudachin, V.G.; Orlin, V.N.; Smirnov, Yu.F.

TITLE: Monopole part of the Majorana forces and nucleon quadrupling in light nuclei /Report, Thirteenth Annual Conference on Nuclear Spectroscopy held in Kiev 25 Jan to 2 Feb 1963/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.2, 1964, 326-336

TOPIC TAGS: nucleon quadrupling, α cluster, shell model, Majorana forces, Majorana monopole, light nucleus, nucleon coupling, α decay energy, polonium

ABSTRACT: It is known (J.M.Blatt and V.Weisskopf, Theoretical Nuclear Physics,N.Y. 1952; J.P.Elliott and A.M.Lane, Handbuch der Physik,39,1957) that in light nuclei Majorana forces are largely responsible for the specific effect of quadrupling or α-clustering, i.e., the following effects: "sawtooth" variation of the nucleon coupling energy as a function of A, exceptionally high location of the lowest level with T = 1 in nuclei with N = Z = 2m, persistence of LS coupling with N = Z = 2m, a relatively low α-particle detachment energy, etc. Interpretation of these phenomena from the standpoint of the α-particle model proved to be unsatisfactory, for, as analysis

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of the experimental data shows, the overlapping of the α-clusters is very significant. As a result the level diagrams of light nuclei are not correctly described by the α-particle model, but, on the other hand, the spectra of p shell nuclei, for example, are satisfactorily described by the shell model. Hence it is more logical to analyze quadrupling in the framework of the shell model, wherein the effect is associated with the Young diagram $[f]$ of the orbital part of the wave function. Such an analysis has been carried out by J.P.Elliott and A.M.Lane (Handbuch der Physik 39,1957). In the present paper the role and significance of Majorana forces are discussed and analyzed. More specifically, there is considered the Majorana monopole M(0) which, as analysis of the experimental data shows, is the principal "carrier" of quadrupling in light nuclei, i.e., responsible for the effect that the more symmetrical $[f]$, the higher the coupling energy. The energy role of quadrupling factors, i.e., the Majorana molopole M(0), is particularly great in p shell nuclei and decreases in going to heavier nuclei. This is connected with increase of both the principal quantum number N_0 and the length parameter of the oscillator well. Among the factors discussed is the influence of M(0) forces on the positions of levels with T = 1 and the relation between the energy effects of quadrupling and reduced α widths. Consideration is also given to the effect of the forces and clustering in Po isotopes. In conclusion, it is noted that the inference that nucleon

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quadrupling in light nuclei is due to M(0) forces was formulated briefly in a review by two of the authors (V.N.Orlin and Yu.F.Smirnov) in collaboration with V.V. Balashov and I.B.Teplov, devoted to the structure of light nuclei and presented at the Twelfth All-Union Conference on Nuclear Spectroscopy held in Leningrad in January 1962. "The authors are grateful to L.A.Pokrovskii for carrying out a number of the calculations and to S.S.Vasil'yev and I.B.Teplov for assistance in carrying out the work." Orig.art.has: 33 groups of formulas and 2 figures.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 08Apr64

ENCL: 00

SUB CODE: NS

NR REF SOV: 004

OTHER: 021

Card 3/3

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

CRUINA M.M.

USSR/General Problems of Pathology - Tumors. S-4

Abs Jour : Referat Zhur - Biologiya, No 16, 1957, 71580

Author : Orlina, M.M., Cherkasova, A.M.
Inst :
Title : Diagnostic Significance of Venous Pressure in Lung Cancer.

Orig Pub : Vracheb. Delo., 1956, No 6 641-642

Abstract : No abstract.

Card 1/1 - 51 -

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLINA, M.M.; OVSYANNIKOV, A.I.; KHAYDUROVA, V.S. (Kiybyshev-obl.)

Liver function in atherosclerosis. Kaz. med. zhur. no.6:85 N-D '60.
(MIRA 13:12)

(LIVER) (ARTERIOSCLEROSIS)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

L 3375-66 EWT(1)/EPA(s)-2/EWT(m)/EPF(c)/EEC(k)-2/ETC/EWG(m)/EPA(w)-2/T/EWP(t)/EWP(b)/EWA(b) IJP(c) DS/JD/TT/WW/JG/GS/AT

ACCESSION NR: AT5023101 UR/0000/65/000/000/0261/0264

AUTHOR: Orlina, N. A.; Rzhanova, Ya. S.

TITLE: Thermoelectric convertor with an yttrium-oxide cathode

SOURCE: Problemy bol'shoy metallurgii i fizicheskoy khimii novykh splavov (Problems of large-scale metallurgy and physical chemistry of new alloys); k 100-letiyu so dnya rozhdeniya akademika M. A. Pavlova. Moscow, Izd-vo Nauka, 1965, 261-264

TOPIC TAGS: thermoelectric convertor, yttrium compound, thermionic energy conversion, space charge

ABSTRACT: In connection with the development of the plasma diode as a more efficient heat-to-power convertor, the authors investigated the problem of selecting a cathode that could operate in a thermionic convertor in the temperature range 1400-1800°C. Such a cathode must have a maximally high and stable emission-current density when operating in the static regime, and moreover its work function must be sufficiently high to assure the formation of the number of ions required to neutralize the space charge in inter-electrode space. An yttrium-oxide

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ACCESSION NR: AT5023101

cathode is hence worth considering. In the static regime this cathode gives an emission current of the order of 2 a/cm^2; its working (luminance) temperature is 1500°C, and its work function is 2.9 v, assuming Richardson's constant to be 120 a/cm^2-deg^2. The cathode investigated was of the indirect-heating type, fabricated for another type of lamp, with a nickel anode. Cathode diameter: 5 mm. The nickel anode was at a distance of 0.1 mm from the cathode. A current of 8.75 a, with voltage of 12.0 v, flowed through the tungsten heater of the cathode. The cathode temperature was measured with the aid of an OPIR-09 optical pyrometer and the anode temperature, a chromel-alumel thermocouple. In the presence of the luminance temperature (1500°C) of the cathode, the load-dependence of the anode current, as well as the short-circuit current and the e.m.f. of the element, were measured. It is shown that in theory for an yttrium-oxide cathode at 1900°K the work function is 3.2 v, i.e. it is sufficient to assure the formation of the number of ions required to completely neutralize the space charge in inter-electrode space. The experimental work function, however, is lower, which indicates that the design of this particular cathode, originally designed for a lamp of another type, does not meet the requirements for this task. The calculations presented also show that the characteristics of the convertor can be markedly improved by im-

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ACCESSION NR: AT5023101

proving the cathode design and selecting more appropriate anode materials. Orig. art. has: 2 figures, 7 formulas.

ASSOCIATION: none

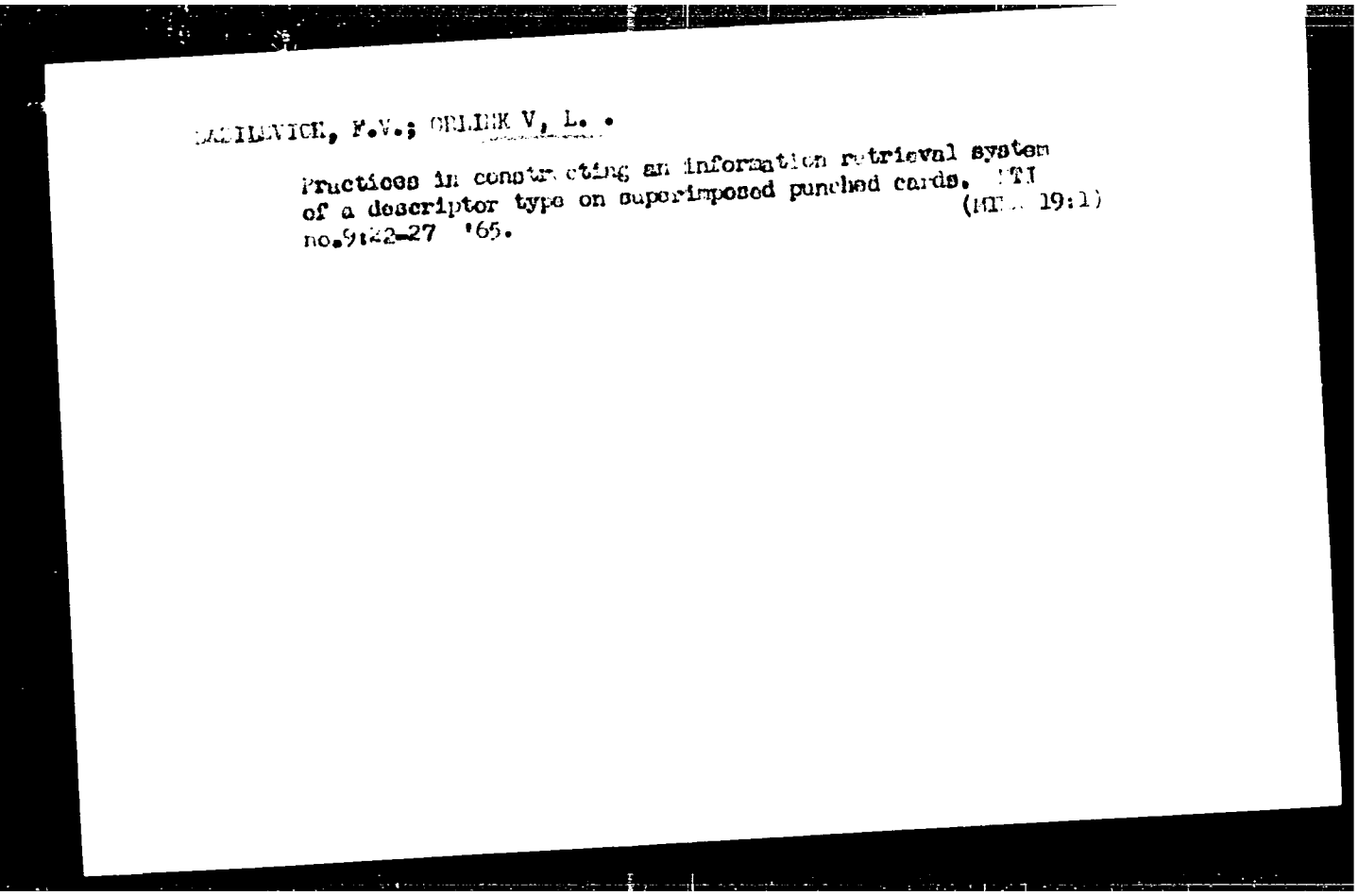
SUBMITTED: 00 ENCL: 00 SUB CODE: EE

NR REF SOV: 001 OTHER: 003

Card 3/3 lwd

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238



MARILEVICH, F.V.; ORLINK V, L. •

Practices in constructing an information retrieval system of a descriptor type on superimposed punched cards. VTI (MIRA 19:1) no.9:22-27 '65.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

L 33767-66 EXT(BF)

ACC NR: AP6006590 SOURCE CODE: UR/0315/65/000/009/0022/0027

AUTHOR: Bazilevich, F. V.; Orlinkov, L. L.

ORG: none

TITLE: Experience in constructing a descriptor type information retrieval system based on peek-a-boo punched cards

SOURCE: Nauchno-tekhnicheskaya informatsiya, no. 9, 1965, 22-27

TOPIC TAGS: information storage and retrieval, punched card

ABSTRACT: A system designed by the All-Union Scientific Research Institute for Technico-Economic Research and Information on Radioelectronics (VNIITEIR) for the retrieval of abstracts and annotations in the field of radioelectronics is described. The system consists of four elements: (1) the documents (600,000 peek-a-boo punched cards classified according to the UDC); (2) address catalogs consisting of punched cards with both verbal and alphanumeric descriptors; (3) a manual or electromechanical perforator; and (4) a peek-a-boo viewer with a numerical document addresses indicator. The problem of setting up descriptor glossaries and subglossaries is discussed in detail. Descriptors are arranged in a hierarchical tree, e. g., a search for abstracts on transformer production proceeds from *production*, *equipment*, to *machine tools*, and finally, to *transformers*. A parallel system exists for similar, but not synonymous, descriptors,

UDC: 002.513.5:676.815.2

Card 1/2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

L 33767-66

ACC NR: AP6006590

not amenable to the hierarchical system. The author cautions against going into detail in indicating areas of application for various units or components since this would greatly increase the bulk of the glossary. It is stressed that the above system must be viewed as a forerunner to an automated information retrieval system and accordingly must be set up so as to facilitate an easy changeover to a computerized system. Orig. art. has: 1 table, 1 figure.

SUB CODE: 05/ SUBM DATE: 19May65/ ORIG REF: 008/ OTH REF: 005

Card 2/2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

BULGARIA/Electronics - Electronic Waves

Abs Jour : Ref Zhur - Fizika, No 11, 1958, No 25666

Author : Orlinov V.
Inst : Physics Institute of the Bulgarian Academy of Sciences, Bulgaria

Title : New Construction of Vacuum Tube with Negative Resistance.

Orig Pub : Dokl. Bolg. AN, 1957, 10, No 4, 273-276

Abstract : Description of the construction and characteristics of a vacuum tube, which has a diminishing volt-ampere characteristic.

Card : 1/1

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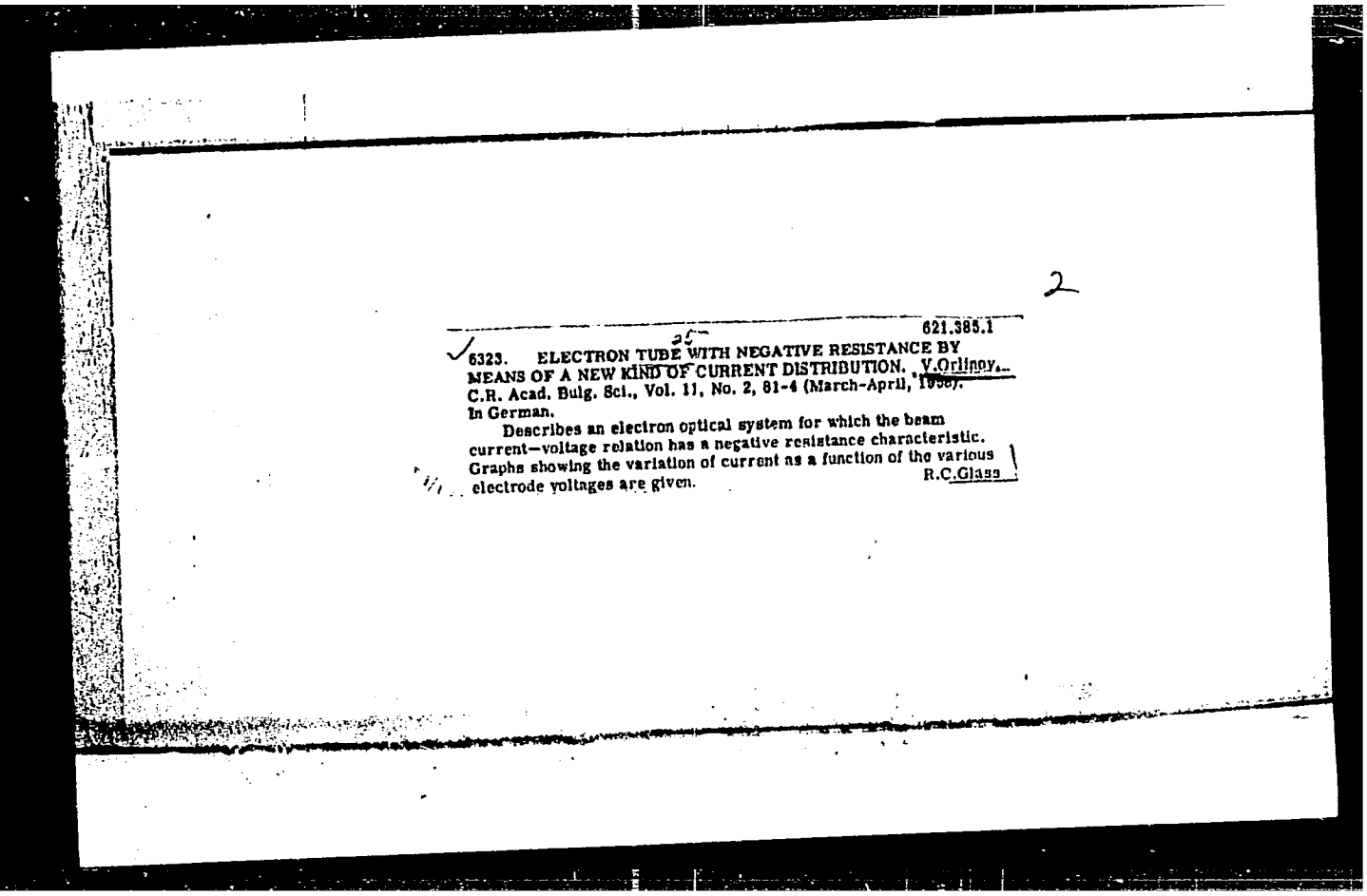

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621.385.1

6323. ELECTRON TUBE WITH NEGATIVE RESISTANCE BY MEANS OF A NEW KIND OF CURRENT DISTRIBUTION. V.Orlinov. C.R. Acad. Bulg. Sci., Vol. 11, No. 2, 81-4 (March-April, 1958). In German.

Describes an electron optical system for which the beam current—voltage relation has a negative resistance characteristic. Graphs showing the variation of current as a function of the various electrode voltages are given. R.C.Glass

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

S/194/61/000/012/063/097
D201/D303

9,4110

AUTHOR: Orlinov, V.

TITLE: Transitron-type negative resistances as obtained with multi-electrode frequency-changer tubes

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 12, 1961, 23, abstract 12G143 (Transitronni otritsatelni s' 'protivleniya pri mnogosheteochni preobrazovatelni lampi. Izv. Fiz. in-t s ANEB, 1960, v. 8, 141-152)

TEXT: The magnitude of the negative resistance of transitron connected electron tubes is smaller the greater the negative slope S_n and the anode-to-cathode resistance R_{ak} of the equivalent negative slope triode. It is shown that using pentodes and octodes, frequency changers of the older type (CB2H2 (SB2N2), 6A8, EK2, etc.), higher values of S_n and R_{ak} can be obtained and, therefore, the lowest

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D201/D303

Transitron-type negative ...

magnitudes of the transitron type negative resistances. A method of transitron connection of the pentode mixer 6A8 is given. Using a special negative resistance measurement bridge the variation of the negative resistance has been experimentally determined as a function of voltages applied to various 6A8 tube electrodes. The characteristics $|R_n| = f(U_1)$ and $|R_n| = f(U_2)$ have the same shape as those of a pentode and the shape of $|R_n| = f(U_4)$ and $|R_n| = f(U_{3-5})$ corresponds to that of $|R_n| = f(U_3)$ and $|R_n| = f(U_a)$ for a pentode. The anode potential U_a is immaterial for the operation. When increasing U_a from 20 to 200 V, R_n changes by less than 1%. The minimum value obtained of the negative resistance for example with the 6A8 tube R_n = -960 ohms. The published article is a preliminary communication. The following stage of the work will examine to what extent the transitron type negative resistances, as obtained with pentodes and octode-mixers, can be applied to the measurement technique. 8 references. [Abstractor's note: Complete translation.]

Card 2/2

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

33572

S/194/61/000/012/065/067
D201/D303

9.4110 (1003, 1138, 1144)

AUTHOR: Orlinov, V.

TITLE: A negative resistance electron tube based on a new principle of current distribution

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 12, 1961, 23, abstract 12G142 (Elektronna lampa s otritsatelno s" protivleniye na nov printsip na tokorazpredelyane Izv. Fiz. in-t s ANEB, 1960, 8, 153-170)

TEXT: A negative resistance electron tube has been designed using a new principle of current distribution. The figure shows the cross-section of the tube and the principle of obtaining the negative resistance. A tape-shaped electron beam is obtained by an electron gun, consisting of cathode K and two diaphragms with slots - the grid slot g and the anode slot a. The beam is directed between two electrodes $\mathcal{E}_1$ and $\mathcal{E}_2$" and in the absence of the deflecting

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A negative resistance ...

field between them reaches a third plane electrode $\mathcal{E}_3$. The electrodes $\mathcal{E}_2'$ and $\mathcal{E}_1''$ are directly interconnected and have a common potential U_2. If the potential U_1 of the first electrode $\mathcal{E}_1$ is kept constant and potential U_2 begins to increase above U_1, the electron beam is deflected and, beginning with a given potential difference U_2-U_2, the increasing part of it begins to reach the collector electrode $\mathcal{E}_3$ with potential $U_3 > U_2$. This process is accompanied by a decrease of the common current I_2 at the electrodes $\mathcal{E}_2'$ and $\mathcal{E}_1''$. It follows that within a determined range of values of potential U_2 the dependence $I_2 = f(U_2)$ has a decreasing negative voltage slope. Several experimental specimens were constructed and used for studying the effect of the respective positions and of the geometry of electrodes as well as of the voltages applied to them on the basic tube parameters. The new tube has several advantages over an ear-

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLINOV, V.

Method of delay curves with the application of an intermediate accelerating grid. Fiz.tver.tela 3 no.4:1211-1218 Ap '61. (MIRA 14:4)

1. Fizicheskiy institut Bolgarskoy Akademii nauk, Sofiya.
(Electron optics)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

DJAKOV, E. [Dzhakov, E.]; ORLINOV, V.; ZARKOVA, L.; KONSTANTINOV, E.

High-frequency oscillations in a thermionic converter under the low pressure of cesium vapors. Doklady BAN 15 no.7: 707-710 '62.

1. Institute of Physics at the Bulgarian Academy of Sciences.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

DJAKOV, E. [Dzhakov, E.]; ORLINOV, V.; ZARKOVA, L.; KONSTANTINOV, E.

Low-frequency oscillations in thermionic converter with cesium vapors. Doklady BAN 16 no.1:23-26 '63.

1. Physical Institute at the Bulgarian Academy of Sciences.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLINOV, V.; ZARKOVA, L.; KONSTANTINOV, E.

Cesium thermionic converter with tungsten cathode at high cathode temperature. Doklady BAN 16 no.5:493-496 '63.

1. Institute of Electronics, Bulgarian Academy of Sciences. Submitted by Corresponding Member E. Djakov [Dzhakov, E.].

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLINOV, V.; NANEV, K.

Eleventh Conference on Physical Bases of Cathode Electronics in Kiev (U.S.S.R.). Fiz mat spisanie BAN 7 no.1:68-70 '64.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

L 41792-65 EWT(1)/EPA(s)-2/EWT(m)/EPF(c)/EEC(k)-2/EWG(m)/EPR/EPA(w)-2/
T/EWP(t)/EPA(bb)-2/EWA(g)/EWP(b)/EWA(h) Ps-6/Pab-10/Pr-4/Ps-4/Pt-7/Peb
IJP(c) RWH/JHB/JD/TT/AW/JG/AT
ACCESSION NR: AT5004296 B/2503/64/012/01-/0047/0062

AUTHOR: Orlinov, V.; Zarkova, L.

TITLE: Low-frequency current oscillations in a cesium thermoelectronic converter with a tungsten cathode operating at low temperatures

SOURCE: Bulgarska akademiya na naukite. Fizicheski institut. Izvestiya na Fizicheskiya institut s ANEB, v. 12, no. 1/2, 1964, 47-62.

TOPIC TAGS: current oscillation, tungsten cathode, thermoelectronic converter, volt ampere characteristic, cesium converter

ABSTRACT: A study has been made of low-frequency current oscillations (f = 2-200 kc/s) in a cesium thermoelectronic converter with a tungsten cathode operating at low temperatures ($T_{cath} \leq 2000K$). This type of low-frequency oscillations exists in a very narrow cathode temperature range near the low-temperature desorption maximum of the short-circuit current I_0. In contrast to the first type of low-frequency oscillations observed earlier by the authors and described in Compt. rend. Acad. bulg. sci., 16, No. 1, 23, 1963, existing only in the descending part of the volt-ampere characteristic of the converter, the second type of low-frequency oscillations described in this paper exists only in the region of saturation of the volt-ampere characteristic (Fig. 1 of the Enclosure). The region of this type of

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low-frequency oscillations is situated directly along the line of total compensation of the space charge in the case of low-temperature operation of the converter (Fig. 2 of the Enclosure). The nondependance of the frequency f of this type of low-frequency oscillations on the working point of the volt-ampere characteristic of the converter and on cathode temperature T_{cath}, the form of the dependence $f = f(t_{Cs})$ and the fact that the oscillations exist only in an arc plasma operating regime of the converter provide a basis for assuming that the low-frequency oscillations in the thermoelectronic converter are caused by processes transpiring in the region near the anode of the low-voltage cesium arc. "The authors wish to thank Prof. K. Dzhakov for useful discussions during review of the study, and Doctor E. Konstantinov for assistance rendered during the course of the experiment." Orig. art. has: 15 figures.

ASSOCIATION: None

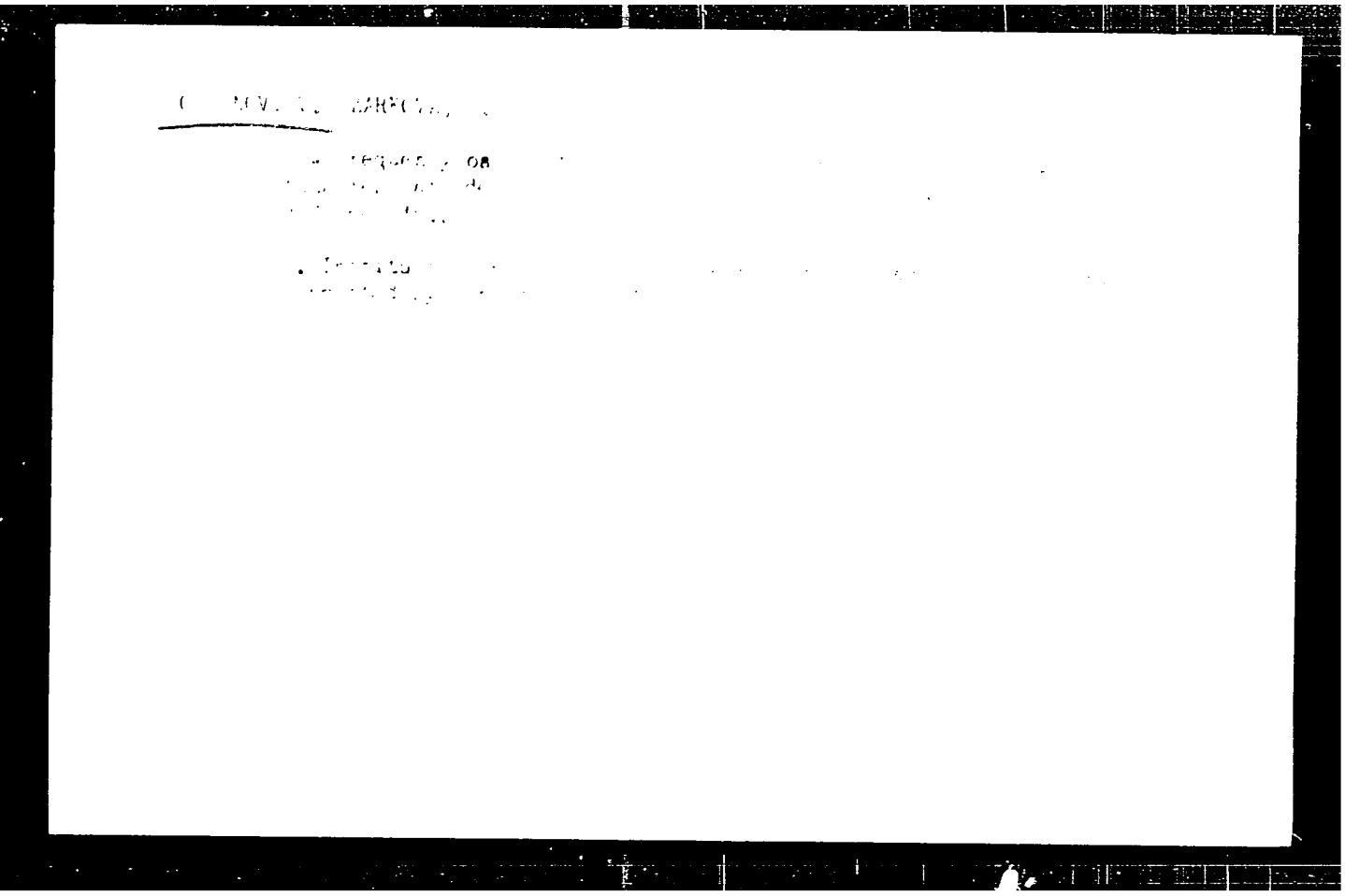
SUBMITTED: 02Nov63 ENCL: 02 SUB CODE: GP, EC

NO REF SOV: 006 OTHER: 010

Card 2/4

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238



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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

L 2646-65 EPA(s)-2/EPF(c)/EEC(k)-2/EPF(n)-2/EWG(m)/EPA(w)-2/T/EWP(t)/EPA(bb)-2/EWP(b)/EWA(h) Pz-6/Pab-10/Pr-4/Pt-7/Peb/Pu-4 IJP(c) RWH/JHB/JD/TT/WW/JG/AT
ACCESSION NR: AP5013550 BU/0011/65/018/001/0015/0018

AUTHOR: Orlinov, V.; Stefanov, B.; Zarkova, L.; Konstantinov, E.

TITLE: High-pressure cesium thermionic converter with a tungsten cathode

SOURCE: Bulgarska akademiya na naukite. Doklady, v. 18, no. 1, 1965, 15-18

TOPIC TAGS: high pressure thermionic converter, cesium thermionic converter, thermionic converter, cesium vapor, cesium pressure, low voltage arc, arc mode

ABSTRACT: A brief description is given of three series of experiments with a cesium thermionic converter using a tungsten wire cathode, an interelectrode spacing of 0.3 mm, and a cylindrical nickel anode. At T_c = 1950K and t_{Cs} = 260C, the maximum power w_{max} was 2.77 w/cm^2 at U_T = 1.10 v, and the efficiency η was 9.35%. When voltage was increased, w_{max} and η increased, respectively, from 4 w/cm^2 and 9.7% to 7 w/cm^2 and 16.6%. At T_c = 2000K and t_{Cs} = 340C, w_{max} was 16 w/cm^2 and η was 24%. In this latter case, the characteristic was typical of volume ionization, and a comparison with theoretical data revealed that the value of the emf was determined by plasma processes, the electrode properties having a negligible influence. The experiments were made with the use of an improved version of a previously described converter (Orlinov, V., L. Zarkova, and E. Konstantinov, Compt. Rend. Acad. Bulg.

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

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ACCESSION NR: AP5013550

Sci., 16, 5, 1963, 493). The low specific power and efficiency of the original model were attributed to a large electrode spacing (2.5—3 mm) and low cesium pressure (below 0.6 mm Hg). The authors hope to obtain better results by further increasing the cesium temperature and optimizing the temperature of the cathode. [ZL]
Orig. art. has: 4 figures.

ASSOCIATION: Institute of Electronics, Bulgarian Academy of Science

SUBMITTED: 00 ENCL: 00 SUB CODE: EC

NO REF SOV: 002 OTHER: 003 ATD PRESS: 4012

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APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLINSKA, Hanna

Improved organization of working conditions in meat factories.
Gosp miesna 14 no.4:10-12 Ap '62.

1. Instytut Przemyslu Miesnego, Warszawa.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

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LEMPART, Stanislaw, inz.; KACPRZAK, Kazimierz, inz.; ORLINSKI, Henryk, mgr; CHNACKI, Jan, inz.; WARCHAL, Boguslaw, mgr ins.; WOJCIECHOWSKI, Jacek, mgr ins.

Analysis of the utilization of supporting pillars with concrete stowing. Rudy i metale 6 no.9:389-394 S '61.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

OHLIŃSKI, R.

Auto-observations of the course of Weil's disease. Polski tygod.lek. 5 no.35-36:1281-1286 4 Sept 50. (CLML 20:5)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLINSKIY, B M

PHASE I BOOK EXPLOITATION SOV/5502

Vsesoyuznoye soveshchaniye po vnedreniyu radioaktivnykh izotopov i yadernykh izlucheniy v narodnom khozyaystve SSSR. Riga, 1960.

Radioaktivnyye izotopy i yadernyye izlucheniya v narodnom khozyaystve SSSR; trudy Vsesoyuznogo soveshchaniya 12 - 16 aprelya 1960 g. g. Riga, v 4 tomakh. t. 4: Poiski, razvedka i razrabotka poleznykh iskopayemykh (Radioactive Isotopes and Nuclear Radiation in the National Economy of the USSR, Transactions on the Symposium Held in Riga, April 12 - 16, 1960; in 4 volumes. v. 4: Prospecting, Surveying, and Mining of Mineral Deposits) Moscow, Gostoptekhizdat, 1961. 284 p. 3,640 copies printed.

Sponsoring Agency: Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov SSSR. Gosudarstvennyy komitet Soveta Ministrov SSSR po ispol'zovaniyu atomnoy energii

Eds. (Title page): N. A. Petrov, L. I. Petrenko, and P. S. Savitskiy; ed. of this volume: M. A. Speranskiy; Scientific ed.: M. A. Speranskiy; Executive Eds.: N. N. Kuz'mina and A. G. Ionel',

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

Radioactive Isotopes and Nuclear (Cont.) SOV/5592

Tech. Ed.: A. S. Polosina.

PURPOSE : The book is intended for engineers and technicians dealing with the problems involved in the application of radioactive isotopes and nuclear radiation.

COVERAGE: This collection of 59 articles is Vol. 4 of the Transactions of the All-Union Conference of the Introduction of Radioactive Isotopes and Nuclear Reactions in the National Economy of the USSR. The Conference was called by the [illegible] nauchno-tekhnicheskiy komitet Soveta Ministrov SSSR (State Scientific-Technical Committee of the Council of Ministers of the USSR), Academy of Sciences USSR, Gosplan SSSR (State Planning Committee of the Council of Ministers of the USSR), Gosudarstvennyy komitet Soveta Ministrov SSSR po avtomatizatsii i mashinostroyeniyu (State Committee of the Council of Ministers of the USSR for Automation and Machine Building), and the Council of Ministers of the Latvian SSR. The reports summarized in this publication deal with the advantages, prospects, and

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Radioactive Isotopes and Nuclear (Cont.) SOV/5592

development of radioactive methods used in prospecting, surveying, and mining of ores. Individual reports present the results of the latest scientific research on the development and improvement of the theory, methodology, and technology of radiometric investigations. Application of radioactive methods in the field of engineering geology, hydrology, and the control of ore enrichment processes is analyzed. No personalities are mentioned. There are no references.

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

DVORKIN, I.L.; ORLINSKIY, B.M.; PLOKHOTNIKOV, A.N.

Radioactive logging of oil wells during the flow production period. Neft.khoz. 38 no.8:19-26 Ag '60. (MIRA 13:8)
(Oil well logging, Radiation)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLINSKIY, B.M.; BEREZAYEV, A.N.

Determination of the dynamic fluid level in the casing space by radiometry. Neft. khoz. 39 no.6:42-45 Je '61. (MIRA 14:8)
(Oil well logging, Radiation)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLINSKIY, B.M.; LEYBSON, V.G.

First results of the use of radiometric methods for controlling the flooding of the Mukhanovo field. Neft. khoz. 40 no.10: 33-39 O '62. (MIRA 16:7)

(Mukhanovo region—Oil field flooding)

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

BORZUNOV, N. A. and ORLINSKIY, D. V.

"Distribution of the Intensity of the Neutron Radiation along the Axis of a Straight Tube for a Strong Pulse Discharge in Deuterium. (Work - 1954); pp. 156-164.

"The Physics of Plasmas; Problems of Controlled Thermonuclear Reactions." Vol. II. 1958, published by Inst. Atomic Energy, Acad. Sci. USSR.
resp. ed. M. A. Leontovich, editorial work V. I. Kogan.

Available in Library.

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLINSKIY, D. V.

"Stabilization of a Plasma with the Help of a System of Rods." (Work carried out in 1958); pp. 49-53.

"The Physics of Plasmas: Problems of Controlled Thermonuclear Reactions." Vol. IV. 1958, published by Inst. Atomic Energy, Acad. Sci. USSR.
resp. ed. M. A. Leontovich, editorial work V. I. Kogan.

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APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

Orlinskiy, D. V.

AUTHORS: Borzunov, N. A., Orlinskiy, D. V., Osovets, S. M. 89-2-6/35

TITLE: Investigation of an Intense Pulsed Gas Discharge by Means of a High-Speed Photography (Issledovaniye moshchnogo impul'snogo razryada v gazakh s pomoshch'yu skorostnoy fotos"yemki)

PERIODICAL: Atomnaya Energiya, 1958, Nr 2, pp. 149-153 (USSR).

ABSTRACT: Discharges are produced in deuterium, argon, krypton and xenon with the help of a current exceeding 10^5 A at a gas pressure of o'ol to 1,o mm of mercury. A glass tube with a diameter of 18,5 cm served as discharge tube, the electrodes being at a distance of 97 cm. A condenser battery with a capacity of 35 F served as a current source, which was charged up to 40 kv. The course taken by the gas discharge is recorded photographically by means of a high-speed camera (10^6 exposures per second). The pictures obtained are shown for all 5 gases. On the basis of these pictures the course of the gas discharge in its initial state is compared in a qualitative way for the different gases. The results of this comparison show a good accord with the theoretical predictions,

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89-2-6/35

Investigation of an Intense Pulsed Gas Discharge by Means of a High-Speed Photography

which can be made with respect to the contraction in area of the plasma from the "inertia-theory" by Leontovich (reference 5). There are 9 figures, and 5 Slavic references.

SUBMITTED: September 11, 1957.

AVAILABLE: Library of Congress

Card 2/2

1. Gas discharges-Photographic analysis 2. Gas discharges-Test results 3. High speed photography-Applications

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

GRUNSKIY, P.V.

AUTHOR: [illegible] 56-2-12/35

TITLE: Estimation [illegible] and the degree of ionization in [illegible] powerful pulsed discharge (Otsenka elektronnoy temperatury [illegible] ionizatsii v nachal'noy stadii moshchnogo impul'snogo razryada).

PERIODICAL: Atomnaya energiya, 1958, Nr 2, pp. 180-183 (USSR).

ABSTRACT: In a glass tube of a diameter of 18,5 cm and a distance between the electrodes of 97 cm the discharge takes place. As source of current a charged condenser battery of 35 μF was used. In all experiments the current in the maximum of the first half period attained about [illegible]. As apparatus for the registration of the radiation of discharge [illegible]-vacuum photo-tube was used which had an integral sensitivity of [illegible] mA/Lumen. The distance between the cell and the discharge tube was 3300 mm, of the discharge tube only 20 cm being eyposed. The signals from the photo-tube were directed to the deffector plate of a two beam oscillograph. With hydrogen pressure values of 0,3, 0,5, 1,0 and [illegible] mm Hg (initial pressure) the corresponding oscillograms were made. The experimental data - measured intensity of radiation in the visible part of the spectrum-express the following:

Card 1/2 a) With a given initial pressure T_e changes only little within a long

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Estimation of Electron Temperature and the Degree of Ionization 89-2-12/2
in the First Stage of a Powerful Pulsed Discharge.

interval, that is to say, within the range in which a salient point is to be expected in the current curve.
b) With increasing initial pressure T_e reaches a value of about 1,6 at 0,1 mm Hg and a value of about 2,5 eV at 2 mm Hg.
c) The degree of ionization averaged with respect to the gas-discharge cross-section amounts, as regards the salient point t_{oc}, to several percents.
There are 4 figures, 2 tables, and 3 Slavic references.

SUBMITTED: September 11, 1957.

AVAILABLE: Library of Congress.

Card 2/2 1. Electrons-Ionizing effects-Estimation 2. Hydrogen-Ionization
3. Gas discharges-Properties

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

10(4), 21(7) SOV/56-36-3-10/71

AUTHORS: Borzunov, N. A., Orlinskiy, D. V., Osovets, S. M.

TITLE: Investigation of a Strong Pulse Discharge in Conical Chambers (Issledovaniye moshchnogo impul'snogo razryada v konicheskikh kamerakh)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 36, Nr 3, pp 717-726 (USSR)

ABSTRACT: The present paper contributes towards solving the hitherto unsolved problem of the theoretical description of the contraction of conical plasma envelopes at high current pulse discharges. In this paper the behavior of a gas plasma of conical shape (in a conical container) through which a rapidly increasing current flows, the magnetic field of which endeavors to contract the plasma in the direction of the container's axis, is, at first, theoretically investigated. The main part of the paper deals with results obtained by experimental investigations in a single and in a double cone vessel. Investigation results are given by diagrams and by a number of photographs. Thus, figure 9 shows series of photographs of a discharge in a conical chamber filled with deuterium taken at intervals of $0.5.10^{-6}$ sec. The discharge

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Investigation of a Strong Pulse Discharge in Conical Chambers

source was a condenser pile with a capacity of 35 - 45 F, primary voltage at the condensers: U_o = 25 - 40 kv at a deuterium primary pressure of 0.02 to 1.0 torr. The "double cone" chamber (Fig 10) had its greatest radius (100 mm) in the middle and consisted essentially of a symmetric glass vessel enclosed by a copper feeder (angle of inclination of the lateral walls: 7°. Figure 11 shows a photograph of a discharge in such a vessel filled with deuterium (p_o = 0.2 torr) with the corresponding oscillogram, and figure 12 shows the same for an argon filling (p_o = 0.05 torr). Data for deuterium filling: C = 43 F, U_o = 35 kv ($J_m \approx$ 410 ka); data for argon filling: U_o = 32 kv ($J_m \approx$ 350 ka). An investigation of the neutron emission of the plasma showed that this emission is in no connection with respect to the time with the singularities of the current- and voltage diagrams and is not accompanied by X-ray radiation. Figure 16 shows oscillograms of the discharge current J, of the voltage U between the electrodes and the neutron radiation in the case of a discharge in a double cone chamber (hydrogen filling, wall:

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Investigation of a Strong Pulse Discharge in Conical Chambers

2.5 cm porcelain, 0.1 cm Cu, 0.3 cm Pb, 0.5 cm Al); no hard X-ray radiation could be observed. The oscillograms indicate a possiblity of attaining stabilization of the plasma column by means of the primary discharge form mentioned. There are 16 figures and 7 references, 5 of which are Soviet.

SUBMITTED: August 26, 1958

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APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

L 59620-65 EWT(l)/EPF(n)-2/EWG(m)/EPA(w)-2 Pz-6/Po-4/P1-4 IJP(c) MM/DM/AT

ACCESSION NR: AP5012465 UR/0089/65/018/004/0323/0329
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B

AUTHOR: Orlinskiy, D. V.

TITLE: Interaction between a direct plasma pinch and a variable magnetic field of quadrupole configuration

SOURCE: Atomnaya energiya, v. 18, no. 4, 1965, 323-329

TOPIC TAGS: plasma pinch, dc discharge, plasma pinch stabilization, plasma containment, plasma lifetime

ABSTRACT: The purpose of the investigation was to determine qualitatively the main features of a direct discharge in a high frequency magnetic field of quadrupole configuration. The study was made with very simple diagnostic means, namely photography of the discharge, measurement of the magnetic field, and registration of the longitudinal magnetic flux. A pulsed discharge was produced in deuterium in a glass tube 8 cm in diameter and 80 cm

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denum electrodes spaced 60 cm apart. The discharge was fed from an artificial line producing a rectangular current pulse of 120 μsec duration with a rise time of 4 μsec. Most experiments were made with initial voltage between electrodes 10 -- 30 kV (current through gas 1.2 -- 3.6 kA) and with initial deuterium pressure p_0 = 0.02 -- 0.05 mm Hg. The high frequency field was produced by a push-pull generator operating at 1278 kcs. The power supply was approximately 200 kW. The quadrupole field was capable of stabilizing the plasma pinch produced on the tube axis. Its intensity was ~100 Oe. Plots are presented of the distribution of the radial magnetic field at various instants of time following the start of the discharge, and of the distribution of the density of the direct current through the gas at various instants of time. The pinch lifetime was found to be quite short, on the order of several microseconds, and in the author's opinion a larger current through the gas is necessary in order to produce longer plasma containment. The author thanks S. M. Osovets and Yu. F. Nasedkin for advice and a discussion of the results, and

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also V. M. Agamalov, G. M. Batkov, V. I. Moskalenkov, V. G. Markin

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ACCESSION NR: AP5012465

evskiy and A. Ya. Chermoshentsev for help with the work.' Original article has: 6 figures and 1 formula

ASSOCIATION: None

SUBMITTED: 22May64 ENCL: 00 SUB CODE: ME

NR REF SOV: 003 OTHER: 000

APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

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"APPROVED FOR RELEASE: Wednesday, June 21, 2000 CIA-RDP86-00513R001238

ORLI[illegible], I. . .

Orlinskiy, I. S. "An account of [illegible]," [illegible], No. 1, [illegible] -42

SO: U-[illegible], 11 A[illegible], (List[illegible] Channel [illegible] State[illegible])

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