"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

S/632/60/000/019/003/009
D053/D113

AUTHOR: Petunin, A.N.

TITLE: Direct measurement of the mean value of several pressures

SOURCE: Moscow. Tsentral'nyy aero-gidrodinamicheskiy institut. Promyshlennaya aerodinamika, no. 19, 1960. Izmereniye vozdushnykh potokov, 21-47.

TEXT: The author describes a method and instrumentation for directly measuring the mean value of several pressures. The method is particularly important for determining the effectiveness, i.e. the losses and the degree of compression, or rarefaction, of compressors and gas turbines. It consists in the use of comb-like pressure pickups enabling the pressure distribution to be measured at the flow-through section or at the pitch of the straight or annular airfoil lattice. Two types of comb-like pressure pickups are described: an averaging total-pressure pickup and a non-averaging pickup using a receiver with a manometer for indicating the average pressure. Both were used in testing airfoil lattices in compressors and turbines. The results obtained indicated that: (1) The application of

Card 1/2

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNIN, A.N.

Pickups for measuring pressures and speed in gas flows. Prom. aerodin. no.19:78-175 '60. (MIRA 14:6)
(Aerodynamic measurements) (Measuring instruments)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

S/124/61/000/011/042/046
D237/D305

11.7400

AUTHOR: Petunin, A.N.

TITLE: Recording instruments for pressure and velocity measurements in gaseous streams

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 11, 1961, 139 - 140, abstract 11B917 (Sb. Prom. aerodinamiki, no. 19, M., Oborongiz, 1960, 78 - 175)

TEXT: Instruments are described, used for measuring total (p_0) and static (p) pressure and direction of flow, determination of Mach number and derived velocity (λ). Elementary theory is given of the pressure, velocity and direction of flow meters, for compressible and incompressible fluids. Total and statical pressure meters are described and the influence of the angle of flow and derived velocity on their readings, is mentioned. A battery of pressure recorders and small size velocity meter are described as well as the instruments used for velocity and directional measurements. These are cylindrical triple-orifice meters, meters with three

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Card 1/2

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

KURCHATOV, I.V., [deceased]; FEYNBERG, S.M.; DOLLEZHAL', N.A.; ALESHCHENKOV, P.I.; DROZDOV, F.S.; YEMEL'YANOV, I.Ya., ZHIRNOV, A.D.; KAZACHENKO, M.A.; KNYAZEVA, G.D.; KONDRAT'YEV, F.V.; LAVRENIKOV, V.D.; MORGUNOV, N.G.; PETUNIN, B.V.; SMIRNOV, V.P.; TALYZIN, V.M.; FILIPPOV, A.G.; CHIKHLADZE, T.L.; CHULKOV, P.M.; SHEVELEV, Ya.V.

Pulse graphite reactor IGR. Atom. energ. 17 no.6:463 D '64 (MIRA 18:1)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

14C

L 24218-65 EWT(m) EPF(c)/EPF(n)-2/EPR Pr-4/Ps-4/Pu-4 DM

ACCESSION NR: AP5001268 S/0089/64/017/006/0463/0474

B

AUTHOR: Kurchatov, I. V. (deceased); Feynberg, S. M.; Dollezhal', N. A.; Aleshchenkov, P. I.; Drozdov, F. S.; Yemel'yanov, I. Ya.; Zhirnov, A. D.; Kazachenko, M. A.; Knyazeva, G. D.; Kondrat'yev, F. V.; Lavrenikov, V. D.; Morgunov, N. G.; Petunin, B. V.; Smirnov, V. P.; Talyzin, V. M.; Filippov, A. G.; Chikhladze, I. L.; Chulkov, P. M.; Sheveley, Ya. V.

TITLE: Pulse graphite reactor IGR

SOURCE: Atomnaya energiya, v. 17, no. 6, 1964, 463-474

TOPIC TAGS: pulse graphite reactor, high neutron flux pulse, nuclear reactor

ABSTRACT: The paper is a summary of the SSSR #322a report at the International Conference on Peaceful Uses of Atomic Energy in Geneva, 1964. It represents an elaboration of the description of the pulse graphite reactor IGR given by S. M. Feinberg at the Second International Conference. The pulse reactors are used when a high neutron flux is desirable. The described reactor was in opera-

Card 1/2

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L 24218-65

ACCESSION NR: AP5001268

tion for several years, and is still working without failure. Orig. art. has: 6 figures

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: NP

NR REF SOV: 002 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PHASE I BOOK EXPLOITATION SOV/5063

Petunin, Boris Vladimirovich

Teploenergetika yadernykh ustanovok (Heat Power Engineering of Nuclear Plants) Moscow, Atomizdat, 1960. 231 p. Errata slip inserted. 10,000 copies printed. (Series: Osnovy yadernoy energetiki).

Ed. (Title page): I.I. Novikov, Corresponding Member, Academy of Sciences USSR, Professor; Ed.: A.V. Matveyeva; Tech. Ed.: Ye.I. Mazel'.

PURPOSE: This book is intended for nuclear physicists, especially those specializing in the design and engineering of nuclear power plants.

COVERAGE: The book, one of the series being published under the general title, Osnovy yadernoy energetiki (Principles of Nuclear Power Engineering), presents a theoretical and technical discussion of various phases of the design and engineering of nuclear power plants. No personalities are mentioned. There are 59 references: 53 Soviet (including 3 translations) and 6 English.

Card 1/10

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

ACC NR: AP6034405 SOURCE CODE: UR/0017/66/000/011/0017/0017

AUTHOR: Petunin, F. (Krasnodar; Doctor of veterinary sciences; Professor); Kozin, N. (Krasnodar; Candidate of veterinary sciences); Rusman, L. (Krasnodar; Chief of civil defense course)

ORG: /Rusman/ KSKhI

TITLE: Simple, inexpensive [Disinfecting equipment]

SOURCE: Voyennyye znaniya, no. 11, 1966, 17

TOPIC TAGS: veterinary medicine, chemical sprayer, animal husbandry, disinfection, decontamination, insect exterminator, pest control, insect control, agricultural machinery

ABSTRACT: Such decontamination devices as the DUK, DDU, LSD, and VMOK units specifically designed for the disinfection of animals, are not being produced in sufficient quantity. However, several types of orchard and vegetable spraying and dusting units and pumps can be used for this purpose, either directly or after simple modification. These include: 1) a combined duster-sprayer assembly mounted on a DSSh-14 self-propelled unit. It consists of an OSSh-10 duster and an OSSh-15 sprayer, which are normally used for pest control on plants; 2) the horse-drawn, motorized OMP-A sprayer, which can be mounted on a two-wheeled trailer towed by the KhTZ-7-, DT-14-, and DT-20-type tractors, or installed on a truck. It comes with its own gasoline engine (ODV-300), a plunger pump delivering 25 to 27 l/min at a pressure of 25 atm, two garden-type gun sprayers, a 410-l tank, and a suction cock to fill

Card 1/2

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

ACC NR: AP6034405

the water container in 5—6 minutes. For insect extermination and the general veterinary treatment of animals, a special pipe boom can be used in addition to the spray gun. 3) an ONK-B sprayer-duster combination is also highly recommended. Its basic equipment includes a 40-l/min pump, a 70-kg dust or powder tank, a 550-l liquid reservoir, and a suction cock for delivering water or solvent to the spray head. 4) for dusting animals, an OPS-30B automobile duster is used. Mounted on a GAZ-51 truck, it includes a 180-kg tank, and its blower delivers a 2700-m^3/hr blast. 5) one technique for exterminating insects on animals is shown in Fig. 1. Orig. art. has: 1 figure. [WA-50]

Fig. 1. Insect extermination on animals

SUB CODE: 02, 13, 15/ SUBM DATE: none/

Card 2/2

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNIN, F. A.

Sep 48

USSR/Medicine — Ticks
Medicine — Parasitology

"New Carrier of Theileria in Cattle (Tick Hyalomma Scupense F. Sch.)," Prof A. A. Markov, A. A. Gil'denblat, Cand Vet Sci, V. T. Yurchatov, Cand Biol Sci, F. A. Petunin, All-Union Inst of Experimental Vet Med, 1 p

"Veterinariya" No 9 p. 13

FA 22/49T79

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNIN, F. A.

PA 22/49T77

USSR/Medicine -- Ticks Sep 48
Medicine -- Parasitology

"Hyalomma Scupence P. Sch -- Carrier of the Causative Agent of Nuttalliosis in Horses," F. A. Petunin, Adygey Oblast Vet Bacteriol Lab, 1 p

Veterinariya" No 9 Vol 25, p.14

Presents experimental and epizootological data showing that subject tick is carrier of Nuttallia.

22/49T77

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNIN, F.A.

"The work of N.I. MOROSHKIN, Veterinarian."

SO: Veterinariya 27(8), 1950, p. 57

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

Toxicity of feeds sprayed with DDT dust [illegible] Petunin, M. D. Manzhos and N. I. Pocomareva, Krasnodar Vet. Exptl. Sta. [illegible] 27 [illegible] Field test with cows indicate that poisoning with DDT is unlikely under the usual conditions of dusting [illegible] dust. A mild chronic intoxication may arise after daily dusting for 3 mo. which would mean an intake of [illegible] mg./kg. Aerial dusting at 45-50 kg./ha. leaves unharmful residues on the plants. Milk becomes toxic to mice or guinea pigs after prolonged administration of DDT to cows (25-7 g. daily for 1.5 mo. is fatal to mice in 15-40 days; in a 2-mo. expt., the fatal period is 7-15 days). DDT is retained and accumulated in the body or the milk of cattle at toxic levels for at least 8 days. [illegible] M. K.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

USSR/Biology - Extermination of Pests May 51

"Aerosol Method for the Extermination of Ecto-parasites," V. I. Kurchatov, F. A. Petunin, V. M. Romanov, D. K. Nechinennyy

"Veterinariya" Vol XXVIII, No 5, pp 45-47

Describes constr of AAG appliance (automobile aerosol generator) which is portable and consists of a tank, siphon tube, and nozzle-equipped bent tube which serves for spraying and is attached to automobile exhaust tube in operation. Automobile exhaust gases disperse oil soln of DDT or hexa-chlorocyclohexane. Refers to larger and more

LC

182T2

USSR/Biology - Extermination of Pests (Contd) May 51

powerful aerosol sprayer and describes experience obtained with method and its possibilities in farm and vet practice.

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182T2

PETUNIN, F. A.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

CA

15-A

Experimental use of aerosols of DDT and benzene hexachloride in veterinary practice. [illegible] A. Petrum [illegible] narova 28, No. 7, 49-50(1951). Use of DDT and benzene hexachloride as aerosols in solar oil (10% and 4%) respectively leads to considerable economy in materials and manpower. The aerosols are effective against young forms of [illegible] and the hungry specimens of the adults. However, skin folds on the animals are not reached by the aerosols. Periodic applications do not seem to lead to signs of poisoning in birds or cattle.

G. M. Kosolapoff

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

C 4

12

Investigation of toxicity of feeds dusted with DDT. F. A. Petunin, M. D. Manzhos and N. L. Ponomareva (Kramatorsk Vet. Sta.). *Veterinariya* 28, No. 10, 29-32 (1951); cf. C.A. 45, 5871b. Cattle feeding on the wheat stalks left after harvesting wheat that had been dusted previously from airplanes with 5.5% DDT dust at 45-50 kg. per ha. led to no detectable ill effects after 1 month exptl. period. Feeding the cut stalks and grain after such dusting also showed no ill effects after 3 months, nor were exptl. dogs that were fed with milk from the exptl. cows affected. When a cow was deliberately fed heavy doses of DDT (250 g. 5.5% dust daily) toxic symptoms did develop after a total of 186 days. Her milk appeared to be harmless to a calf but mice fed with it became moribund and finally died after 15-40 days.

G. M. Kosolapoff

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNIN, F.A.

F.A. PETUNIN, Krasnodar NIVOS. Mechanization of the Anti-tick Processing of Cattle with the Aid of DUK (Truck Mark GAZ-51).
SO:Veterinariya;Vol.30;No.6;57; June 1953 uncl de g
Trans. # 121 by L.Lulich

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

[illegible], F. [illegible], [illegible]

[illegible] the [illegible] measures [illegible] infection. [illegible]

1. Kubanskiy se[illegible] kh[illegible] [illegible].

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNIN, F. A.

"The Zonal Characteristics of Epizootology of Cattle Hemosporidiosis in the Krasnodar Kray, and the Methods of Eradicating It."

Tenth Conference on Parasitological Problems and Diseases with Natural Reservoirs, 22-29 October 1959, Vol. II, Publishing House of Academy of Sciences, USSR, Moscow-Leningrad, 1959.

Kuban' Agricultural Institute, Krasnodar

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNIN, F. A. [redacted] Doc Vet Sci -- "Epizootology of hemosporidiasis in cattle of Krasnoyarskiy Kray and ~~methods for~~ means of controling it." Mos, 1961 (All-Union Order of Lenin Acad Agr Sci im V. I. Lenin. All-Union Inst of Experimental Vet Medicine). (KL, 4-61, 205)

300

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

USSR/Zooparasitology. Ticks and Insects - Vectors of Causal Organisms. Ticks. G

Abs Jour: Ref. Zhur. - Biol., No 23, 1958, 104098

Author : Petunin, F. A.

Inst : Kuban Agricultural Institute

Title : Epizootology of Hemosporidioses of Long-Horned Cattle of Psebayskiy Rayon of Krasnodarskiy Kray.

Orig Pub: Tr. Kubansk. s.-kh. in-ta, 1957, No 3(31), 214-219

Abstract: A considerable increase in hemosporidiosis morbidity of long-horned cattle has been noted in Psebayskiy Rayon in recent years. This is explained by the extensive development of cattle drives to summer pastures, by the infestation of all the routes of the drive

Card 1/2

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

USSR/Zooparasitology. Ticks and Insects - Vectors of Causal Organisms. Ticks. G

Abs Jour: Ref. Zhur. - Biol., No 23, 1958, 104098

with the Boophilus calcaratus tick and by the presence of Ixodes ricinus in tremendous numbers in places. As a result, an accumulation of ticks and a hemosporidial infestation of both ticks and animals occur. Of the hemosporidia in the region Piroplasma bigeminum, Babesiella colchica and B. bovis are noted. In the epizootological respect the author divides the entire territory of the rayon into the favorable mountain region, a threatening region and an unfavorable region situated lower than 850 meters above sea level. Systematic anti-tick treatment of long-horned cattle during the drives and the application of a special system of cattle drives are recommended for stopping the spread of hemosporidioses in the rayon. - L. V. Babenko.

Card 2/2

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

USSR/Diseases of Farm Animals - Diseases Caused by Protozoa. R-3

Abs Jour : Ref Zhur - Biol., No 10, 1958, 45437

Author : Petunin, P.A.

Inst : Kuban' Agricultural Institute.

Title : Epizootiology of Piroplasmosis and Babesiellosis of Cattle in Krasnodar Kray and the Methods of Combatting Them.

Orig Pub : Tr. Kubansk. s.-kh. in-ta, 1957, vyp. 3(31), 196-213

Abstract : No abstract.

Card 1/1

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNIN, F.A.

Use of DUK spraying apparatus for mechanizing tick control measures among cattle. Veterinariia 30 no.6:57-58 Je '53. (MLRA 6:5)

1. Krasnodarskaya nauchno-issledovatel'skaya veterinarnaya opytnaya stantsiya.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNIN, F.K., podpolkovnik meditsinskoy sluzhby. GVASALIYA, Sh.K.

Some psychological problems in aviation. Voen.-med.zhur. no.9: 8-9 S '51. (MLRA 9:9)
(SPYCHOLOGY, APPLIED) (AIR PILOTS)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

DECEASED

PETUNIN, IVAN MAKSIMOVICH

(1904 - 1959)

SEE ILC

AGROMETEROLOGISTS

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

GALAKTIONOV, A.T.; DENISOV, Yu.A.; KOPYTOV, G.T.; MASLOV, Yu.A.; NIKONOV, I.P.; PETUNIN, I.V.; KOCHEVA, G.N.; KUZNETSOV, A.P.; LELEKO, N.M.; RAZIKOV, M.I.; SPESHKOV, V.V.; STEPANOV, B.V., STEPANOV, V.V.; kand. tekhn. nauk; SHELOMOV, B.Ye.; YUNYSHEV, G.P.; YES'KOV, K.A., dots., retsenzent; BAKSHI, O.A., dots., retsenzent; BEREZKIN, P.N., dots., retsenzent; PATSKEVICH, I.R.,dots., retsentzent; RUDAKOV, A.S., dots., retsenzent; FIZHBEYN, N.B., inzh., retsenzent; KHRUSTALEV, L.Ya., inzh., retsenzent; KRUTIKHOVSKIY, V.G., inzh., red. BOBROV, Ye.I., kand. tekhn. nauk, red. DUGINA, N.A., tekhn. red.

[Welding handbook] Spravochnik rabochego-svarshchika. Pod red. V.V.Stepanova. Moskva, gos. nauchno-tekhnizd-vo mashinostroit. lit-ry, 1960. 640 p. (MIRA 14:6)

(Welding)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNIN, I.V., kandidat tekhnicheskikh nauk.

Investigating the stability of a sustained three-phase arc.
Trudy Ural. politekh. inst. no.62:34-42 '56. (MLRA 10:2)

(Electric welding)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

MIKHAYLOV, G.P.; MASLOV, Yu.A.; FOFONOV, A.A.; GALAKTIONOV, A.T.; BOBKOV, Ye.I.; NIKONOV, I.P.; DENISOV, Yu.A.; SHAPKOV, B.K.; SHATOV, M.Ya.; MIKHAYLOV, S.I.; PETUNIN, I.V.; KHOVANETS, V.K.; KOCHEVA, G.I.; LABUTINA, E.A.

In memory of A. I. Akhun; an obituary. Svar.proizv. no.12:46 D '57. (MIRA 11:1)

1.Sotrudniki Kafedry "Oborudovaniye i tekhnologiya svarochnogo proizvodstva" Ural'skogo politekhnicheskogo instituta imeni S.D. Kirova.

(Akhun, Alekdandr Il'ich, d. 1957)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNIN, I. V.

"Investigating the Welding Processes Involved in Welding with Powerful Three-Phase Arcs (As Applied to the Welding of Flaws in Cast Steel)." Cand Tech Sci, Ural Polytechnic Inst, Sverdlovsk, 1954. (Rzhkhim, No 8, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14).

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNIN, N.S., inzh. (g.Lugansk)

Remote control of the main surface substation of the mine. "gol'
35 no.1:30-33 Ja '60. (MIRA 13:[illegible])
(Remote control) (Lugansk Province--Electricity in mining)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

SERGEYEV, I.N., inzhener; KHVEDELIDZE, G.R., inzhener; ROZENTUL, A.S., inzhener; ALEKSANDRI, L.; VOLCHOK, P.S., arkhitektor; PETUNIN, N.V., arkhitektor; MIKHAYLOV, V.V., professor

Precast rafter construction for large-panel apartment houses. Rats. i izobr. predl. v stroi. no.101:28-29 '55.
(Roofs) (MLRA 8:10)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

L 27342-66 EWT(d)/EWP(h)/EWP(1)

ACC NR: AP6007704 (A) SOURCE CODE: UR/0413/66/000/003/0083/0083

AUTHOR: Petunin, P. I.

ORG: none

27
26
B

TITLE: An electric inductance detector for measuring forces. Class 42, No. 178555

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 3, 1966, 83

TOPIC TAGS: measuring instrument, electric inductance

ABSTRACT: This Author Certificate presents an electric inductance detector for measuring forces. The detector includes two electromagnetic systems connected differentially and a moving element placed between the poles of the systems. The moving element is in the form of a hollow disk which deflects under the action of the test forces. The design increases the precision of the force measurement. The disk-shaped moving element of the detector has rings of different diameters, positioned coaxially at both sides of the element (see Fig. 1). The rings are pressed to the surface of the element by the action of test forces. To eliminate the effect of misalignments of the moving element, the electromagnets of the

Card 1/2

UDC: 620.172/.174:681.2.083.8

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

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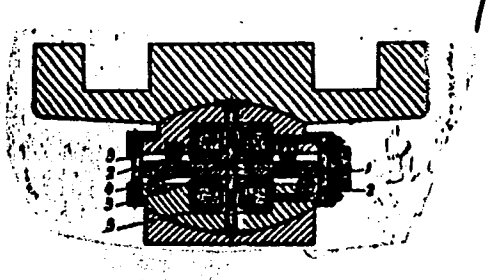
L 27342-66

ACC NR: AP6007704

Fig. 1. 1 - disk-shaped moving element; 2 - ring; 3 - armatures; 4 - axle; 5 - spring.



detector are fitted with disk-shaped armatures mounted on a common axle passing freely through a hole in the center of the moving element. The armatures are pressed to the element surface by springs mounted along the rings of the axle. Orig. art. has: 1 figure.

Measuring Instrument

SUB CODE: 14, 09/ SUBM DATE: 10May63

Card 2/2

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

BARDYSHEV, A.A., inzh.; VASIL'YEV, V.N., kand. ~~ekon. nauk~~; VOLKOV, V.G., inzh.; MIKHAYLOV, B.V., kand. tekhn. nauk; MIKHAYLOV, V.A., kand. tekhn. nauk; MIKHAYLOV, V.I., inzh.; PETUNIN, P.I., inzh.; SAVEL'YEV, N.P., inzh.; SOKHIN, V.G., inzh.; STUGAREV, A.S., kand. tekhn. nauk, nauchnyy red.; ZAYCHIKOVA, E.A., red. izd-va; BOROVNEV, N.I., tekhn. red.

[Production of rock, gravel and sand for construction; present state and prospects for development] Proizvodstvo nerudnykh stroitel'nykh materialov; sostoianie i perspektivy razvitiia. [By]A.A.Bardyshev i dr. Moskva, Gosstroiizdat, 1962. 201 p. (MIRA 16:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut nerudnykh stroitel'nykh materialov i gidromekhanizatsii. 2. Vsesoyuznyy nauchno-issledovatel'skiy institut nerudnykh stroitel'nykh materialov i gidromekhanizatsii (for all except Zaychikova, Stugarev, Borovnev).
(Crushed stone industry)
(Sand and gravel industry)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNIN, P.I., inzh.

Organization of telecommunications. Energ.stroi. no.5:72-73 '58. (MIRA 12:5)

1. Glavnyy inzh. uchastka svyazi Kuybyshevgidrostroya.
(Volga Hydroelectric Power Station--Telecommunication)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNIN, V.

Reconditioning of brake cylinders. Avt.transp. 39 no.4:51-52 Ap '61. (MIRA 14:5)

(Motor vehicles--Brakes)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

ACCESSION NR: AP4007538 S/0020/63/153/006/1295/1298

AUTHOR: Petviashvili, V. I.

TITLE: Acoustic ion oscillation generated by electric current

SOURCE: AN SSSR. Doklady*, v. 153, no. 6, 1963, 1295-1298

TOPIC TAGS: plasma, acoustic oscillation, acoustic ion, Landau damping, plasma turbulence, plasma dynamics

ABSTRACT: When the ion temperature is considerably lower than the electron temperature, an ion sound develops in a plasma in which the electron velocity is greater than the velocity of the ion sound. It is demonstrated in the present paper that the growth of the amplitude of the acoustic ion oscillations is limited by the Landau type ion damping due to the slow wave beats. The latter occur only when the waves propagate under an angle to each other. Therefore, the problem must be solved for the three dimensional case, in order to take into consideration the interference of oblique waves. As a result of this interference, the amplitude

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ACCESSION NR: AP4007538

ceases to grow. The plasma enters into a stationary state of weak turbulence. The turbulence spectrum is computed by using the nonlinear equation of A. V. Nedospasov (Report #217, Saltzbury Conference on plasma physics 1961).

"The author expresses his sincere gratitude to B. B. Kadsmtsev for guidance."

Orig. art. has: 12 Equations

ASSOCIATION: None

SUBMITTED: 14May63 DATE ACQ: 20Jan64 ENCL: 00

SUB CODE: PH NR REF SOV: 005 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

L 38717-66 EWT(d)/EWP(1) LJP(c) BB/GG

ACC NR: AR6014197 SOURCE CODE: UR/0271/65/000/011/B026/B026

AUTHOR: Ulin, O. V.; Petunin, V. K.

TITLE: Matrix computer for calculating correlation functions

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika, Abs. 11B217

REF SOURCE: Sb. Avtomat. kontrol' i metody elektr. izmereniy. T. 2, Novosibirsk, Sib. otd. AN SSSR, 1964, 78-83

TOPIC TAGS: computer, correlator, digital computer

ABSTRACT: A semi-automatic correlator that uses a matrix network for the multiplication operation is described. The source data in the form of a numerical table is inserted into the correlator by a keyboard device. The correlator includes a multiplication matrix designed with square-loop ferrites, transistorized block generators and amplifiers, and also ferrite-diode registers with a compensating core in each cell. A block diagram and a principal circuit of the correlator are presented, and its operation is described. The maximum relative error depends on the number of discrete levels in the multiplication matrix. The correlator speed of operation is determined by the product read time; average time of one reading is 0.1—0.15 sec. Four figures. Bibliography of 4 titles. B. G. [Translation of abstract]

SUB CODE: 09

Card 1/1 UDC: 681.142.4

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

L 63253-65 EWT(d)/T IJP(c) GS

ACCESSION NR: AT5013038 UR/0000/64/002/000/0078/0083

10
B+1

AUTHOR: Ulin, O. V. (Novosibirsk); Petunin, V. K. (Novosibirsk)

TITLE: Matrix computer for evaluating correlation functions 16

SOURCE: Vsesoyuznaya konferentsiya po avtomaticheskomu kontrolyu i metodam elektricheskikh izmereniy, 4th, Novosibirsk, 1962. Avtomaticheskiy kontrol' i metody elektricheskikh izmereniy; trudy konferentsiy, t. 2: Teoriya izmeritel'nykh informatsionnykh sistem. Sistemy avtomaticheskogo kontrolya. Elektricheskiye izmereniya neelektricheskikh velichin (Automatic control and electrical measuring techniques; transactions of the conference, v. 2: Theory of information measurement systems. Automatic control systems. Electrical measurement of nonelectrical quantities). Novosibirsk, Redizdat Sib. otd. AN SSSR, 1964, 78-83

TOPIC TAGS: matrix computer, semiautomatic correlator

ABSTRACT: A semiautomatic correlator is briefly described which uses a matrix for performing the multiplication $x_\nu \cdot x_{\nu+\mu}$. It determines the correlation

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L 63253-65

ACCESSION NR: AT5013038

function R_μ from this approximate formula:

$$R_\mu \approx \frac{1}{N-\mu}\sum_{\nu=1}^{N-\mu} x_\nu x_{\nu+\mu} - \left(\frac{1}{N}\sum_{1}^{N} x_\nu\right)^2$$

and permits an automatic evaluation of $(N-\mu)R_\mu$ and NM_x of the function $x(t)$ defined as a table of the numbers $X_1, X_2, \ldots, X_i, \ldots, X_n$. The correlator model was built with ferrite-transistor elements and is rated as "simple, small-sized, and reliable." The correlation error is claimed to be 5% or less. The average time of one reading is 0.1-0.15 sec which is considered sufficient for manual-input operation. Orig. art. has: 4 figures, 3 formulas, and 1 table.

ASSOCIATION: none

SUBMITTED: 17Nov64 ENCL: 00 SUB CODE: DP

NO REF SOV: 004 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

L [illegible]-65 EWT(d)/T IJP(c)

ACCESSION NR AM4043734 BOOK EXPLOITATION S/ 30 B+1

Vilenkin, N. YA.; Gomin, YE. A.; Kostyuchenko, A. G.; Krasnosel'skiy, M. A.; [illegible]; [illegible], V. [illegible]; Mitrayin, B. S.; Petunin, YU. I.; Rutitskiy, YA. [illegible]; [illegible], V. [illegible]; Stetsenko, V. YA.; Faddeyev, L. D.; Tsitlandze, E. S.

Functional analysis (Funktsional'nyy analiz), Moscow, Izd-vo "Nauka", 1964, 424 p. biblio., index. Errata slip inserted. 17,500 copies printed. Series note: Spravochnaya matematicheskaya biblioteka.

TOPIC TAGS: functional analysis, mathematics, operator equation, quantum mechanics, Hilbert space, Banach space, linear differential equation

PURPOSE AND COVERAGE: This issue in a series of Handbooks of the Mathematical Library contains much material grouped basically around the theory of operators and operator equations. It presents the basic concepts and methods of functional analysis, theory of operators in Hilbert space and in conical space, the theory of nonlinear operator equations, the theory of standard rings applied to equations in partial derivatives, to integral equations. A separate chapter is devoted to the basic operator of quantum mechanics. Citing of the theory of generalized functions takes up a large part of the book. The book explains mathematical facts; theorums and formulas, as a rule, are given

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ACCESSION NR AM4043734

without proofs. Main attention is given to concepts without excessive detail. The book is intended for mathematicians, mechanical engineers, and physicists. It contains much of value for students and graduate students.

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Ch. II. Linear operators in Hilbert space — 79
Ch. III. Linear differential equations in Banach space — 146
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Ch. V. Operators in space with a cone — 229
Ch. VI. Commutative standard rings — 256
Ch. VII. Quantum mechanics operators — 279
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SUBMITTED: 06Feb64

SUB CODE: MA

NO REF SOV: 038

OTHER: 012

Card 2/2

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

LEVIN, A.Yu.; PETUNIN, Yu.I.

Some problems connected with the concept of orthogonality in Banach space. Usp. mat. nauk 18 no.3:167-170 My-Je '63. (MIRA 16:9)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

KREYN, S.G.; PETUNIN, Yu.I.

Criterion of the affinity of two Banach spaces. Dokl. AN SSSR 139 no.6:1295-1298 Ag '61. (MIRA 14:8)

1. Voronezhskiy gosudarstvennyy universitet. Predstavleno akademikom A.N.Kolmogorovym.
(Banach spaces)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

VILENKIN, N.Ya.; GORIN, Ye.A.; KOSTYUCHENKO, A.G.; KRASNOSEL'SKIY, M.A.; KREYN, S.G.; MASLOV, V.P.; MITYAGIN, B.S.; PETUNIN, Yu.I.; RUTITSKIY, Ya.B.; SOBOLEV, V.I.; STETSENKO, V.Ya.; FADDEYEV, L.D.; TSITLANADZE, E.S.; LYUSTERNIK, L.A., red.; YANPOL'SKIY, A.R., red.; GAPOSHKIN, V.F., red.

[Functional analysis] Funktsional'nyi analiz. [by] N.IA. Vilenkin i dr. Moskva, Izd-vo "Nauka," 1964. 424 p. (MIRA 17:6)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNIN, Yu.I.

Conjugated Banach spaces containing subspaces of zero characteristic. Dokl. AN SSSR 154 no. 3:527-529 Ja '64. (MIRA 17:5)

1. Voronezhskiy gosudarstvennyy universitet. Predstavleno akademikom A.I.Mal'tsevym.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

KREYN, S.G.; PETUNIN, Yu.I.

Notion of the minimal scale of spaces. Dokl. AN SSSR 154 no.1: 30-33 Ja'64. (MIRA 17:2)

1. Voronezhskiy gosudarstvennyy universitet. Predstavleno akademikom I.G. Petrovskim.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNIN, Yu.I.

Criterion of the reflexivity of Banach space. Dokl. AN SSSR 140 no.1:56-58 S-O '61. (MIRA 14:9)

1. Voronezhskiy gosudarstvennyy universitet. Predstavleno akademikom P.S.Aleksandrovym.
(Banach space)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

ZIMON, A.D.; PETUNIN, Yu.N.

Methods for determining the dust-adhesive characteristics of lacquer-paint coatings. Lakokras.mat. i ikh prim. no.2:63-66 '61. (MIRA 14:4)

(Protective coatings) (Dust)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

TARYCHEVA, V.; GRITSKEVICH, I.; PETUNINA, A.

In cooperation with medical workers. Okhr. truda i sots. strakh. 5 no.8:21-22 Ag '62. (MIRA 15:7)

1. Strakhovyye delegaty sudoremontnogo zavoda Murmanskogo Arkticheskogo parokhodstva.
(Murmansk—Shipbuilding—Hygienic aspects)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

NOVIKOVA, Ye.N.; PETUNINA, M.P.

Alkylphenols and alkylarylphenols as inhibitors of α-pinene autoxidation. Dokl. AN BSSR 6 no.1:39-41 Ja '62. (MIRA 15:2)

1. Institut obshchey i neorganicheskoy khimii AN BSSR. Predstavleno akademikom AN BSSR N.F.Yermolenko.
(Pinene)(Phenols)(Oxidation)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

ANISKOVA, F. D.; BELETSKAYA, L. M.; PETUNINA, S. A.

Menstrual and parturient functions in workers at "Kauchuk" factory. Akush. i gin. no.2:89-92 '62. (MIRA 15:6)

1. Iz kafedry akusherstva i ginekologii (zav. - prof. K. N. Zhmakin) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I. M. Sechenova i mediko-sanitarnoy chasti zavoda "Kauchuk" (glavnyy vrach N. V. Mikhaylovskiy)

(MENSTRUATION) (PREGNANCY)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNINA, Ye.V., kand.tekhn.nauk

Inoculation of steel by nitrides (from foreign journals).
Metalloved. i term. obr. met. no.11:55-62 N '62. (MIRA 15:11)
(Steel—Metallurgy)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

ASTAF'YEV, A.S., kand.tekhn.nauk; PETUNINA, Ye.V., kand.tekhn.nauk

Quality of welding joints in low-alloy steels modified by nitrides. Svar. proizv. no.10:3-6 O '63. (MIRA 16:11)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii imeni Bardina.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

69387

18 1285

S/129/60/000/06/006/022
E073/E535

AUTHOR: Petunina, Ye. V., Candidate of Technical Sciences

TITLE: High Strength Titanium Base β-Alloys

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1960, Nr 6, pp 27-30 + 1 plate (USSR)

ABSTRACT: The author describes the results obtained on a β-alloy IMP-10 containing 13% V, 11% Cr and 3% Al. The alloy was produced by cermet methods, whereby the alloying elements were introduced by simultaneous reduction of the oxides (TiO_2, V_2O_5, Cr_2O_3, Al_2O_3) to ensure uniform distribution. From the obtained powder alloy specimens were produced by hydrostatic pressing and sintering in vacuum. A density of 98% of the theoretical value was achieved. From the blanks, rods of 13 and 16 mm diameter were forged and rolled into sheets 1.0 to 0.1 mm thick. The forging was effected in the temperature range 900 to 1000°C, hot rolling at 900°C, "warm" rolling at 650 to 700°C. In Table 1 the results are given of the mechanical tests of specimens after forging, annealing

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High Strength Titanium Base β-Alloys

and quenching from 1000°C; for any speed of cooling from elevated temperatures the alloy remained plastic. The mechanical properties in the hardened, annealed and forged states were practically equal (strength over 100 kg/mm^2, elongation at least 20%). Microstructure studies (Fig 1, plate) showed that the β-phase is sufficiently stable during annealing, forging and quenching; the structure after quenching and annealing is identical. The influence of ageing on the stability of the β-phase was studied on specimens quenched from 900°C and on specimens aged after this quenching at 200, 300, 400, 500 and 600°C for durations of 10, 30, 50 and 100 hours. The plot, Fig 2, showing the change in hardness as a function of the temperature and ageing duration, indicates that insignificant hardening takes place at 200°C. Soaking at 300 and 400°C for over 50 hours brings about a drop in the hardness. At 500°C the hardness is lower than at 400 and at 600°C it is insignificant; the maximum hardness was achieved after

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E073/E535

High Strength Titanium Base β-Alloys

ageing at 400°C for 40 to 50 hours. The results of tensile tests of specimens aged for 40 and 50 hours at 400°C are given in Table 2 as a function of the hardening temperature and it can be seen that these do not depend greatly on the hardening temperature. The strength properties of a 1.5 mm thick sheet after ageing at 400°C for 40 hours are entered in Table 3. Table 4 gives the strength properties of this alloy at 500°C in short duration tensile tests. Ageing at 200°C does not bring about a change in the phase composition of the alloy (Fig 3). The microstructure of specimens aged at 400°C is characterized by the presence of a finely dispersed rejected phase which is uniform along the entire body of the grain (Fig 4); X-ray diffraction pictures show, in addition to the β-phase, weak lines indicating the presence of a small quantity of the α-phase. Even after 10 hours soaking at 500°C a metallographic specimen shows clearly the α-phase which is less finely dispersed than at 400°C;

Card 3/5

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E073/E535

High Strength Titanium Base β-Alloys

soaking for 50 and 100 hours at 500°C leads to a considerable coarsening of the α-phase particles (Fig 5); the X-ray diffraction patterns show clearly the lines of the α-phase. At 600°C the coarsening of the α-phase particles is very intensive and the hardening is insignificant; Fig 6 shows the microstructure of a specimen aged for 10 hours at 600°C. Metallographic and X-ray diffraction studies showed that hardening during ageing is due to the rejection of the α-phase which is present in a highly dispersed state. The following conclusions are arrived at:

1) In the cermet titanium β-alloy IMP-10 the β-phase remains stable at any speed of cooling from elevated temperatures and as a result of this the metal has a high ductility.

2) Without ageing the alloy IMP-10 has a combination of high ductility and high strength (above 100 kg/mm^2). As a result of ageing under the conditions pertaining in the investigations the ultimate strength was raised

Card 4/5

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S/129/60/000/06/006/022
E073/E535

High Strength Titanium Base β-Alloys

to 177 kg/mm^2.
There are 6 figures, 4 tables and 3 references, 2 of which are Soviet and 1 English.

ASSOCIATION: TsNIIChM

LX

Card 5/5

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L 40554-65 EWT(m)/EWP(w)/EPF(c)/EPF(n)-2/EWA(d)/EPR/T/EWP(t)/EWP(z)/
EWP(b) Pr-4/Pad/Ps-4/Pu-4 IJP(c) MJW/JD/WW/JW/JG
ACCESSION NR: AP5002975 S/0133/65/000/001/0056/0060

57
39
B

AUTHOR: Klausting, Ye. A.; Petunina, Ye. V.

TITLE: Research on structural steel with improved strength

SOURCE: Stal', no. 1, 1964, 56-60

TOPIC TAGS: structural steel, steel nitriding, steel modification, steel mechanical property, low alloy steel / steel 18G2, steel 18G2AF

ABSTRACT: The construction industry uses perlite-ferrite, readily weldable, non-heat-treated steels with a yield point of 30-25 kg/mm². Higher yield levels cannot be achieved by alloying since this causes the formation of martensite, lower plasticity and much poorer weldability. Since low-alloy 18G2 steel can be modified and its yield point improved to 40 kg/mm² by nitriding, the authors undertook a detailed experimental study with the following results. Modification of 18G2 steel by the addition of small amounts of N (0.02%) and of nitride-forming elements (Al, V, Ti, Zn) substantially influences its mechanical properties. In the presence of aluminum nitrides the point of cold brittleness of hot-rolled steel shifts toward lower temperatures while the strength remains unchanged. Upon normalization of such steel

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ACCESSION NR: AP5002975

the yield point rises while the point of cold brittleness goes still lower. Steels modified by zirconium and titanium nitrides have a lower point of cold brittleness for material hot-rolled according to conventional procedures. No positive effect has been obtained by steel modification with tungsten, molybdenum and niobium nitrides. 18G2AF steel modified with V nitrides shows increased brittleness when hot rolled. Upon normalization at 930C, the yield point of this steel reaches 40 kg/mm^2. At the same tim e it maintains high ductility and a low cold brittleness threshold. Ori. art. has: 2 figures and 3 tables.

ASSOCIATION: TsNIIChM

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NO REF SOV: 000 OTHER: 003

Card 2/2

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PART I Rec 20[illegible] [illegible]

Akademiya nauk SSSR. Institut metallurgii

Titan [illegible] Alloys, M., 1[illegible] Metal Science of Titanium. M., [illegible], 1961, 161 p. Errata slip inserted. 2,700 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni A.A. Baykova.

Resp. Ed.: N.V. Agreyev, Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House: M.L. Podgayetskiy; Tech. Ed.: Ye. V. Mazani.

PURPOSE: This collection of articles is intended for scientific research workers and metallurgical engineers.

COVERAGE: The articles summarize results of experimental studies of titanium-base alloys. The microstructure and mechanical properties of titanium-base alloys containing aluminum, chromium or other metals are analyzed along with the effect of oxygen, hydrogen and heat treatment on alloy structure and properties. The tendency of titanium alloys to embrittlement as a result of strain aging is explained, and the nitriding of titanium, carried out to increase the surface strength and wear resistance of titanium alloys, is described. Transformations occurring in commercial titanium under conditions of electric heating are examined. Attempts to develop titanium-base alloys capable of withstanding temperatures over 400°C are discussed as are problems of titanium-powder metallurgy and weldability of certain titanium-base alloys. No personalities are mentioned. Most of the articles have bibliographic references, the majority of which are Soviet.

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18(7) PHASE I BOOK EXPLOITATION SOV/1843

Gulyayev, A. P. and Ye. V. Petunina

Metallograficheskoye issledovaniye prevrashcheniya austenita v martensit (Metallographic Investigation of the Austenite-Martensite Transformation) Moscow, Mashgiz, 1952. 90 p. (Series: Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya. [Trudy] kn. 47) 3,000 copies printed.

Reviewer: N. A. Pasternak, Engineer; Tech. Ed.: Ye. N. Matveyeva; Managing Ed. for Literature on Heavy Machine Building (Mashgiz): S. Ya. Golovin, Engineer.

PURPOSE: This book is intended for scientific personnel at research institutes and industrial laboratories.

COVERAGE: Methods of investigating the austenite-martensite trans-

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formation are described. In particular, metallographic methods of study are discussed, and the design of an instrument in current use is described. The theory of the martensite transformation is set forth, particular emphasis being laid on the ideas that nuclei of martensite crystals appear as a result of plastic deformation of austenite grains and that shear planes serve as centers of crystallization. Personalities mentioned as having made contributions in this field include G. V. Kurdyumov, N. T. Gudtsov, and N. Ya. Selyakov. There are 25 references, of which 23 are Soviet, 2 German, and 1 English.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNINA, Ye.V., kand.tekhn.nauk; POPLAVSKAYA, V.L.

Effect of a small hydrogen content on the mechanical properties of titanium alloys. Metalloved. i term. obr. met. no.4:25-27 Ap '61. (MIRA 14:3)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Titanium alloys—Hydrogen content)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNINA, Ye.V., kand.tekhn.nauk

Effect of a high content of oxygen and nitrogen on the mechanical properties of titanium. Metalloved. i term. obr. met. no.6:50-53 Je '61. (MIRA 14:6)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Titanium)
(Gases in metals)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

TIMOSHENKO, N.N., PETUNINA, Ye.V.

Investigating the microstructure and the mechanical properties of titanium-aluminum alloys. Titan i ego splavy no.3:3-9 '60. (Titanium-aluminum alloys)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

89624

S/129/61/000/004/005/012
E073/E535

18 1285

AUTHORS: Petunina, Ye. V., Candidate of Technical Sciences, and Poplavskaya, V. L.

TITLE: Influence of Low Hydrogen Contents on the Properties of Titanium Alloys

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1961, No. 4, pp. 25-27 + 1 plate

TEXT: Published results on the influence of hydrogen on titanium and titanium alloys (Refs. 2-4) were obtained for circular or square specimens with or without notches. The results described in this paper were obtained for flat specimens of industrially produced sheets of a composition as shown in Table 1 and with the mechanical properties as given in Table 2. Commercially pure titanium ИМП1А (IMP1A) and the titanium alloy ИМП7 (IMP7) for a single-phase α-structure are less prone to hydrogen embrittlement than alloys with a two-phase structure. In the initial state the alloy IMP1A had a hydrogen content of 0.010 to 0.015% and the alloy IMP7 had a hydrogen content of 0.004 to 0.006%. The influence of degassing of sheets, 3, 2, 1.5, 1, 0.75 and 0.5 mm thick, on the mechanical properties in short duration tensile tests was investigated.

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Influence of Low Hydrogen Contents S/129/61/000/004/005/012
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The degassing was in a vacuum of 10^{-3} mm Hg at 800°C for two hours After degassing, the hydrogen contents were 0 003-0 0015% and 0.0015-0.001%, respectively The influence of degassing on the mechanical properties as a function of the thickness of the specimens, mm, are plotted in Fig 2, where curves 1 refer to the degassed state and curves 2 refer to the non-degassed state The graph, Fig.2a - UTS σ_b, kg/mm^2, b -bending angle, α°, β - elongation, δ%. A reduction of the hydrogen content from 0 004 to 0.001% in the case of the alloy IMP7 showed a considerable influence on the mechanical characteristics, a hydrogen content below 0 001% showed a considerable influence on the strength of titanium foils in the thickness range 0 1 to 0 02 mm. The two alloys showed a differing behaviour in the degassed state and this is attributed to the fact that these alloys had a differing proneness to hydrogen embrittlement. Obviously, the sensitivity to hydrogen embrittlement depends on the nature of the alloying Changes in the strength, bending angle and elongation for very low hydrogen contents, established in specimens less than 3 mm thick, indicates that with decreasing thickness of the material the test conditions change considerably. The smaller the thickness of the specimen, the larger

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will be the ratio of the surface to the cross-section. The effect of brittle lamellae of titanium hydride protruding to the surface of the specimen is similar to that of micro-notches; this effect is slight in the case of small surface to cross-section ratios but increases with increasing ratio. The obtained results show that the specifications regarding hydrogen contents should be more rigid for thin sheets and foils of titanium and titanium alloys than for thicker material. There are 2 figures, 2 tables and 4 references: 1 Soviet and 3 non-Soviet.

ASSOCIATION: TsNIIChM

Table 1

Contents in %

Марка сплава Alloy type	Содержание элементов в %						
	Al	V	O	N	H	Si	Fe	Ni
ИМП1А (IMP 1A)	—	—	0,18	0,04	0,004	0,06	0,25	0,15
ИМП7 (IMP 7)	3	2	0,16	0,03	0,01	0,06	0,3	0,10

Table 2

Mechanical Properties

Марка сплава Alloy type	Механические свойства				
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
ИМП1А (IMP 1A)	68,5	56,6	25,5	48	6,0
ИМП7 (IMP 7)	85,2	76,6	20,0	50	5,5

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Influence of Low Hydrogen Contents... S/129/61/000/004/005/012
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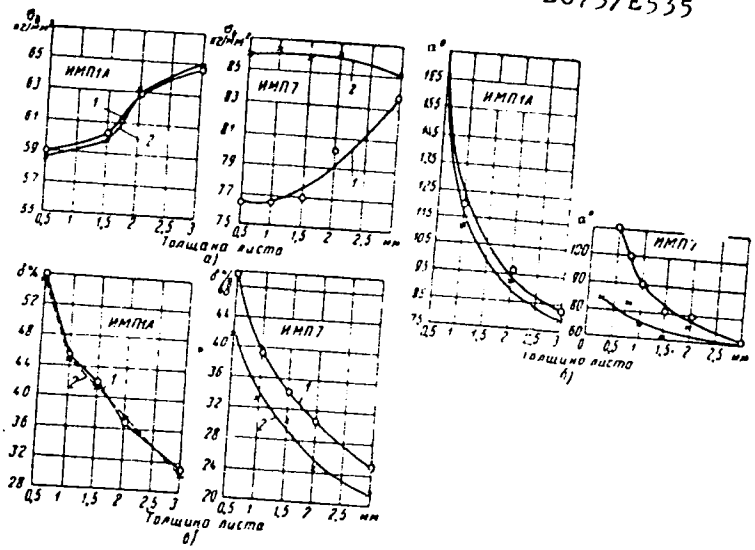

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Fig.2

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PHASE I BOOK EXPLOITATION SOV/4508

Akademiya nauk SSSR. Institut metallurgii

Titan i yego splavy, vyp. 3: Metallovedeniye titana (Titanium and Its Alloys, No. 3: Metal Science of Titanium) Moscow, Izd-vo AN SSSR, 1960. [illegible] p. Errata slip inserted. 2,700 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni A.A. Baykova.

Resp. Ed.: N.V. Ageyev, Corresponding Member, Academy of Sciences USSR, Ed. of Publishing House: M.L. Podgoyetskiy; Tech. Ed.: Ye. V. Makuni.

PURPOSE: This collection of articles is intended for scientific research workers and metallurgical engineers.

COVERAGE: The articles summarize results of experimental studies of titanium-base alloys. The microstructure and mechanical properties of titanium-base alloys containing aluminum, chromium or other metals are analyzed along with the effect of oxygen, hydrogen and heat treatment on alloy structure and proper ties. The tendency of titanium alloys to embrittlement as a result of strain

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[illegible] of [illegible], and the nitriding of titanium, carried out to increase the surface strength and wear resistance of titanium alloys, is described. Transformation [illegible] during in commercial titanium under conditions of electric heating [illegible]. Attempts to develop titanium base alloys capable of withstanding temperatures over 400°C are discussed as are problems of titanium-powder metallurgy and [illegible] of certain titanium base alloys. No personalities are mentioned. Most of the articles have bibliographic references, the majority of which are [illegible].

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TIMOSHENKO, N.N., PETUNINA, Ye.V.

Developing and testing titanium-base ceramic metal alloys. Titan i ego splavy no.3:99-106 '60. (MIRA 13:7)
(Ceramic metals) (Titanium alloys)

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E071/E435

AUTHORS: Timoshenko, N.N., Borok, B.A., Petunina, Ye.V., Shchegoleva, R.P. and Golubeva, L.S.

TITLE: Titanium Based Metalloceramic Alloys

PERIODICAL: Tsvetnyye metally, 1960, Nr 3, pp 68-74 (USSR)

ABSTRACT: The branch of Powdered Metallurgy of the Central Iron and Steel Scientific Research Institute produces titanium based alloys in the form of sintered semis up to 80 kg which are worked into rods, sheets, strip, plates and wire. At present equipment is being introduced for pressing semis up to 250 kg in weight. The experimental material on the influence of various alloying elements on titanium (IMP 1A) accumulated in the Institute is briefly described. The influence of aluminium, vanadium, iron, manganese, tin and niobium on the mechanical properties of IMP 1A alloy (strength at +20 and + 400°C, reduction in area (neck) at +20 and -60°C) is shown in the plot Fig 1. Of the titanium alloys for the production of sheets the most systematic investigation was carried out for the ternary system Ti-Al-V. The alloy IMP 7 (Ti + 3% Al + 2% V) is

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Titanium Based Metalloceramic Alloys

being produced; the properties of this alloy are given in Table 1. The manufacture of an alloy of Ti + 4% Al + 2% V (IMP-9) is proposed for the production of sheets for operating at elevated temperatures (400 to 500°C; properties given in Table 2) Alloys for the production of hot rolled tubes, forging and stamping (IMP-6/1 and IMP-6/2, composition as given Table 4), after hot working by pressure, possess the structure of metastable β phase with a small amount of α phase. This makes it possible to limit thermal treatment only to annealing of forged and not rolled metal. The dependence of hardness of the above alloys on annealing temperature (200 to 600°C) is shown in Fig 3. The heat resistant alloy T.4 is a six component metalloceramic alloy (composition not given) and was developed for forging and stamping. The dependence of its mechanical properties on temperature is plotted in Fig 4. Titanium alloys possessing the best strength and plasticity for the production of parts by sintering (with minimum subsequent machining) were

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E071/E435

Titanium Based Metalloceramic Alloys

found to belong to binary systems of Ti-V and Ti-Mo and ternary alloys of the above systems with aluminium. Their compositions and mechanical properties are given in Table 5. Properties of γ phase of heat resistant alloys of the Ti-Al system are briefly discussed. Data on the hardness of this type of alloy and its susceptibility to oxidation are given in Table 6, and Fig 5 respectively. Alloying of the alloy Ti + 35% Al with 2% nickel improves its working properties. A high resistance of this type of alloy to oxidation, a low decrease in strength with increasing temperature, low specific gravity (about 3.5 g/cm^3) and the possibility of improving their technological properties by alloying makes them suitable for the development of heat resistant alloys. There are 5 figures, 6 tables and 4 references, 3 of which are Soviet and 1 English.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

GULYAYEV, A.P.; PETUNINA, Ye.V.; PASTERNAK, N.A., inzhener, retsenzent; MATVEYEVA, Ye.N., tekhnicheskiy redaktor.

[Metallographic investigation of the austenite to margensite transformation] Metallograficheskoe issledovanie prevrashcheniia austenita v martensit. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1952. 90 p. (Moscow.TSentral'nyi nauchno-issledovatel'skii institut tekhnologii i mashinostroeniia [Trudy]. no.47) (MLRA 10:2)
(Steel--Metallography) (Austenite) (Martensite)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNINA, Ye. V.

Metallographic investigation of the transformation of austenite into martensite. A. P. Gulyaev and E. V. Petunina. Zhur. Tekh. Fiz. 23, 602-12(1953).—Detailed discussion of many photomicrographs. J. P. Danehy

2

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNIN, Ye. V.

"Metallographic Investigation of Austenite Martensite Transformation." Sub 1; Oct 51, Central Sci Res Inst of Technology and Machine Building (TsNIITMash)

Dissertations presented for science and engineering degrees in Moscow during 1951.

So: Sum. No. 480, 9 May

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[illegible], [illegible],
[illegible] (Ar[illegible]. [illegible]. [illegible]ol. [illegible], 19[illegible]5,
3[illegible], [illegible]83-3[illegible], [illegible]-40[illegible])

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNKINA, N.; ZHILINA, Yu.

Creative activity of Kuznetsk metalworkers is growing. Metallurg 7 no.11:36-37 N '62. (MIRA 15:10)

1. Predsedatel' soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov Kuznetskogo metallurgicheskogo kombinata (for Petunkina). 2. Literaturnyy sotrudnik mnogotirazhnoy gazety "Metallurg" (for Zhilina).

(Novokuznetsk—Iron and steel plants—Technological innovations)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

PETUNKINA, N.

Saving rubles, losing thousands. Izobr.i rats. no.7: 38-39 Jl '60. (MIRA 13:8)

1. Predsedatel' soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov Kuznetskogo metallurgicheskogo kombinata, g.Stalinsk.
(Stalinsk--Steelworks)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

Petunnikov, G. BAUXITE DEPOSITS OF MONTENEGRO. *Montan. Rundschau*, **27**, 1-7 (1935). The deposits are in the form of irregular nests and lenses in eroded limestones. The composition is somewhat variable, but most of the many analyses given show Al_2O_3 50 to 60, Fe_2O_3 15 to 25, SiO_2 5 to 10, loss on ignition 12 to 15%. The quantity available may be 30 million tons.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001240710010-5

Petunnikov, G. Properties of Serbian magnesite. *Montan. Rundschau*, 21, 276-79 (1929). The occurrence of large magnesite deposits in Serbia, the quality, composition, and other properties of the magnesite are discussed.

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Petunnikov, G. MAGNESITE IN YUGOSLAVIA. *Rud i Top. Vesnik*, 9, 42-49 (1937). 10, 1-8 (1938). Numerous deposits of magnesite occur. The veins are up to 10 m. wide and sometimes extend for 2.5 km., though as yet but comparatively little has been worked. They are chiefly gelatinized magnesite, and when crystalline there is usually so much $CaCO_3$ that it becomes almost dolomite. Analyses of 5 samples give $MgCO_3$ 93.22 to 97.08, $CaCO_3$ 0.06 to 2.88, R_2O_3 0.33 to 1.52, SiO_2 0.14 to 3.30, H_2O 0.15 to 0.50. Material contaminated with serpentine contains more $MgCO_3$ than that which is quite or nearly free therefrom.

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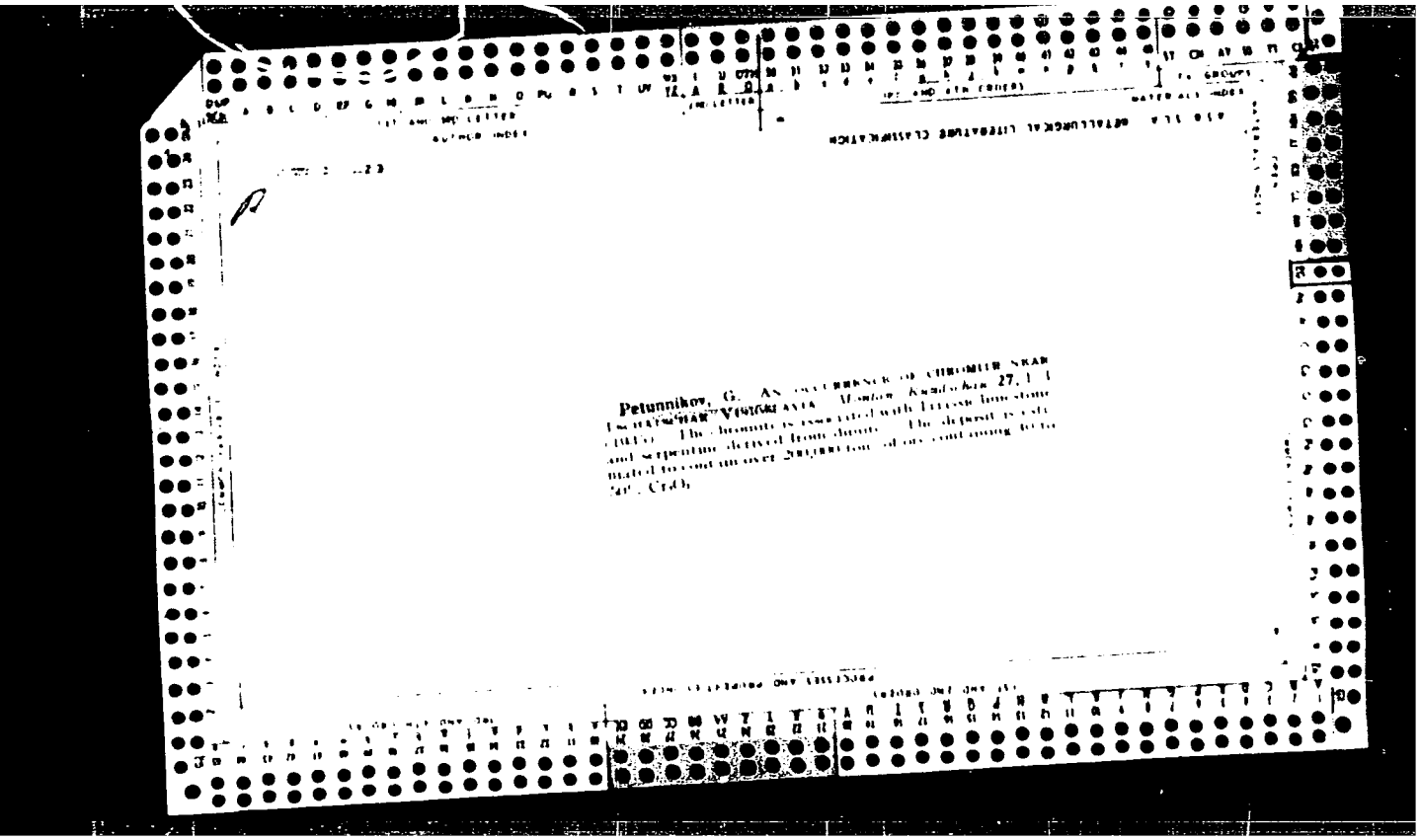

Petunnikov, G. An occurrence of chromite near Tschatschar, Vinogradovia. Montan. Kundschau 27, 1-1 (1935). The chromite is associated with Triassic limestone and serpentine derived from dunite. The deposit is estimated to contain over 200,000 tons of ore containing 10 to 50% Cr_2O_3.

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Asphalt deposits at Vrgorać, Yugoslavia. G. Petunnikov. *Montan Rundschau* 33, 147-150(1947). Details are given of the geology and origin of the deposits, which occur in the form of stalactites. Anal. data are: mineral residue 55.6 (67.3), insol. matter 42.5 (31.1) and H_2O at 110° 1.9 (1.6)%. Distn. yields (mean values): H_2O 4.3, oil 25.7, residue 66.6 and noncondensible gas 4.3%. Distn. up to 520° yields oil 19.25, gases 4.05 and C residue 76.7%. Dry distn. of the oil yields H_2O 2.5, light oil 18 and middle and heavy oils (high in phenols, used in the manuf. of heating, fuel and lubricating oils) 79.5%. Mineral residue analysis shows the presence of bitumen 35.1, SiO_2 2.1, $CaCO_3$ [illegible], Al_2O_3 [illegible] and $MgCO_3$ 4.8%. [illegible]

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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An occurrence of molybdenum in Jugoslavia Gregor Petunnikov *Montan Rundschau* 31, 449-52 1939. Molybdenite occurs with galena, pyrite, chalcopyrite and chlorite along fissures in mica schist at Stari Glog, some 20 km east of Vranje. Results of a no. of test shafts are given. Michael Fleischer

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Petunnikov, G. DEPOSIT OF CHROME ORE IN YUGOSLAVIA. *Montan Rundschau*, 32, 261-62 (1940) 5-A new chrome ore deposit is reported in the Lazac region on the northern slope of the Jelica Mts. Exploratory excavations showed a chromite vein 6.10 m. long, 1.66 m. high, and 0.84 m. thick. It is known that the vein goes deeper and widens out.

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AUTHOR: Binevich, M.A., and Petunov, B.I.

TITLE: Jigboring Holes on a Lathe (Rastochka koordinatnykh otverstiy na tokarnom stanke)

PERIODICAL: Stanki I Instrument, 1957, No. 1, pp. 37-3[illegible]. (U.S.S.R.).

ABSTRACT: [illegible] photographs and 1 set of diagrams accompanies a description of the process.

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