Deep Seismic Sounding in Central Kazakhstan

from the Zailiyskiy Alatau to Lake Balkhash. The article is in four parts. In the first part the authors give a short history of deep seismic sounding and a short geological description of the region involved. The second part contains technical details concerning apparatus used and procedures applied during the sounding process. The third part gives a short geological interpretation of the results obtained. In the fourth part the authors consider the connection between the structure of the deep surfaces of separation of the earth's crust and the gravimetrid field. The vibrations were recorded with a specially adapted seismic detection instrument of the EKhO-1 type(manufactured in 1950). Into the amplifier of the seismic station an additional amplifier stage was introduced, for which the triode part of lamp 6G7 was used. As a result the signal was considerably intensified (800,000-900,000 as per voltage). The scientists at first used specially adapted apparatus of the

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Deep Seismic Sounding in Central Kazakhstan

SPM-16 type as seismic detectors. The sensitivity and stability of the remodelled detectors, however, proved so unsatisfactory that they were replaced by the usual detectors of the SPED-52 type with a resonance frequency of 19.2 cycles. With these detectors all the sounding operations were carried out. The sensitivity of the channels with SPED-52 detectors was checked with parallel recording on 12 channels by seismic detectors of the VEGIK type adjusted to a frequency of 1.5 cycles. For the evaluation of the sensitivity the scientists further used published seismograms on channels connected with detectors SEDS, VEGIK and NS-1. A comparison of the seismograms showed the high sensitivity and the broad transmission band in the field of low frequencies of the SPED-52 detectors. For the transmission of the blast point mark the scientists used the radio stations RAF-KV-0.5 and PARKS 0.08 and a thyratron relay. Thanks to the great length of the sections of continuous profiling and the tracing of the basic wave groups,

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Deep Seismic Sounding in Central Kazakhstan

the problem of correlation of the wave groups and of laying the refractory boundaries was solved satisfactorily. From the data, the scientists established three basic wave groups and the corresponding refractory boundaries characterized by velocity and depth values as given in the table. The authors discuss certain problems (reflection, character of the waves) referring in this connection to NIGGR, the Institut fiziki zemli AN SSSR (Institute of Physics of the Earth of the AS of the USSR), the scientist L.N. Malinovskaya [Ref 23,24], the scientist A.S. Alekseyev and a conference held on 25 February in the Ministry of Geology and Conservation of Mineral Resources of the USSR. The scientists established five metallogenetic zones intersected by the Lake Balkhash-Temir Tau profile. The first zone (Lake Balkhash) has copper and copper porphyry ores, polymetallic ores of pyrite type and, finally, tungsten-molybdenum deposits. The next zone (Aksoran-Kaskaygyr-Akdzhal) has

Deep Seismic Sounding in Central Kazakhstan

polymetallic ore formations. The third zone appears as a region of rare metal ore formations. The fourth zone is the well-known Uspenskaya polymetallic zone which has deposits other than the Uspenskoye. The fifth zone is the equally well known Spasskiy zone, which includes the Spasskiy and some other deposits. In the fourth part of the article the authors mention G.A. Gamburtsev and L.S. Veytsman [Ref 3,4], who first ascertained the connection between the deep surfaces of the earth's crust and gravity on the basis of the Tyan'-Shan' material obtained with deep seismic sounding. Subsequent experiments [Ref 9,5] on this subject were successfully continued by R.M. Demenitskaya [Ref 10], who on the basis of all known data proposed the following equation for the depth of the Mokhorovichich surface:
$H = 35(1 - th 0{,}0037 \Delta g)$. Fig 4 (graph) shows the actual relationship of the depth of the Mokhorovichich boundary to the gravity anomaly for the Lake Balkhash-

S/169/62/000/001/020/083
D228/D302

AUTHOR: Koristashevskaya, T. I. and Popov, A. A.

TITLE: Trial application of middle- and low-frequency seismic surveying in the Dzhezkazgan district

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 1, 1962, 27-28, abstract 1A229 (Izv. AN KazSSR, Ser. geol., no. 2 /43/, 1961, 110-116)

TEXT: In the Dzhezkazgan district seismic surveying was employed to expose the abyssal structures controlling copper mineralization. The standard middle-frequency apparatus of the correlation refraction method, having frequency characteristics in the frequency band from 20 to 60-90 c/s was compared with the low-frequency apparatus of deep seismic sounding, having a passage band of 6-15-22 c/s. By means of the apparatus of deep seismic sounding it was possible to realize a 3 - 4 times greater amplification, and to employ 8 - 12 times smaller charges, than was the case in the use of the middle-frequency apparatus. The noted advantage of the low-

Card 1/2

S/169/63/000/002/046/127
D263/D307

AUTHOR: Popov, A. A.

TITLE: On the problem of the nature of the Central Kazakhstan gravitational minimum

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1963, 4, abstract 2G13 (KazSSR Gylym. Akad. khabarlary, Izv. AN KazSSR, Ser. geol., 1962, no. 1,(46), 94-97)

TEXT: A discussion of a paper by F. S. Moiseyenko (RZhGfiz, 1961, 1A213), concerned with the structure of the Earth's crust in the region of the Central Kazakhstan gravitational minimum. [Abstracter's note: Complete translation.]

Card 1/1

S/169/62/000/012/003/095
D228/D307

AUTHORS: Antonenko, A.N. and Popov, A.A.

TITLE: Wave pattern features and some results of deep seismic sounding in North Kazakhstan

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1962, 8, abstract 12A62 (Izv. AN KazSSR, Ser. geol., no. 2, (47), 1962, 54-66 (summary in Kaz.))

TEXT: Deep seismic sounding was carried out along a line from Temir-Tau to Petropavlovsk. The equipment and the procedure used in these investigations are described, as is the wave pattern recorded at various points on the line. Waves corresponding to the folded Paleozoic basement, the 'granite' layer, and the Mohorovicic discontinuity were distinguished. The known complexity of the wave pattern is noted: there is little difference in the kinematic and dynamic characteristics of individual wave groups, and cophasal axes with small tracking intervals are numerous. Tentative interpretation allows the depth of the Mohorovicic discontinuity to

Card 1/2

SHCHERBA, G.N.; POPOV, A.A.

Some data on the thickness of the earth's crust in the southern part of eastern Kazakhstan. Izv. AN Kazakh. SSR. Ser.geol. no.3:18-27 '62. (MIRA 15:7)

(Kazakhstan--Earth--Surface)

POPOV, A.A.

Genesis of Chestnut soils in semihumid subtropics of eastern Transcaucasia [with summary in English]. Pochvovedenie no. 3:105-109 Mr '58. (MIRA 11:4)

1. Yuzhgiprovodkhoz, Rostov-na-Donu.
(Transcaucasia--Soils)

POPOV, A.A.

Classification of the flooded soils of the Volga-Akhtuba Lowland and the Volga Delta. Pochvovedenie no.5:64-71 My '60. (MIRA 14:4)

1. Yuzhgiprovodkhoz Rostov-na-Donu.
(Volga Valley--Soils--Classification)
(Akhtuba Valley--Soils--Classification)

POPOV, A.A.

Change of soil properties in banked sections of the Volga-Akhtuba Flood Plain. Pochvovedenie no.7:63-73 '60. (MIRA 13:7)

1. Yuzhgiprovodkhoz, Rostov-na-Donu.
(Volga-Akhtuba Flood Plain--Solonchak soils)

KONOVALOV, N.N.; POPOV, A.A.

Comparative characteristics of the water permeability of soils of various moisture. Pochvovedenie no. 5:104-105 My '61.
(MIRA 14:5)

1. Yuzhgiprovodkhoz.

(Soil percolation)

YEGOROV, V.V.; POPOV, A.A.; KONOVALOV, N.N.

Consolidated zoning of the Volga-Akhtuba Flood Plain for soil improvement purposes. Pochvovedenie no.3:16-29 Mr '62. (MIRA 15:7)

1. Pochvennyy institut imeni V.V.Dokuchaeva i Yuzhnyy gosudarstvennyy institut po proyektirovaniyu vodnogo khozyaystva.
(Volga-Akhtuba Flood Plain--Reclamation of land)

YEGOROV, V.V.; POPOV, A.A.; KONOVALOV, N.N.

Schematic zoning of the Volga Delta for soil improvement purposes.
Pochvovedenie no.9:4-13 S '62. (MIRA 16:1)

1. Pochvennyy institut imeni V.V.Dokuchayeva.
(Volga Delta--Saline and alkali soils)

A.A. POPOV (USSR)

"On the acidity and alkalinity of hydrothermal solutions."

Report presented at the Conference on Chemistry of the Earth's Crust, Moscow, 14-19 Mar 63.

POPOV, A.A.; PROZOROV, Yu.S.

Characteristics of peats of the water-logged larch forests in the Boloh' lake basin (Khabarovsk Territory). Soob. DVFAN SSSR no.18: 83-86 '63. (MIRA 17:11)

1. Dal'nevostochnyy filial imeni Komarova i Institut lesa i drevesiny Sibirskogo otdeleniya AN SSSR.

POPOV, A.A.

Salt conditions of the soils in the Volga-Akhtuba Floodplain as related to the regulation of the flow of the Volga River by the Volgograd Reservoir. Pochvovedenie no.5:57-68 My '64. (MIRA 17:9)

1. Yuzhnyy gosudarstvennyy institut po proyektirovaniyu vodokhozyaystvennogo i meliorativnogo stroitel'stva.

POPOV, A.A.

Novyy Metod Grafo-Analiticheskogo Integrirovaniya. D. A. N, 38 (1943), 298-300.

SO: Mathematics in the USSR, 1917-1947
edited by Kurosh, A. G.
Markushevich, A. I.,
Rashevskiy, P K.
Moscow - Leningrad, 1948.

POPOV, Alekseĭ Aleksandrovich.

New method of integration by the aid of orthogonal focuses. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1947. 83 p. (49-33715 rev.)

1. Mechanics, Analytic.

Popov, A. A.

PHASE I TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 286 - I

BOOK Call No.: AF 579436

Author: POPOV, A. A., Professor, Doctor of Technical Sciences
Full Title: METHOD OF ORTHOGONALI FOCI IN CONSTRUCTION MECHANICS
Transliterated Title: Metod ortogonal'nykh fokusov v stroitel'noy mekhanike
Publishing Data
Originating Agency: None
Publishing House: State Publishing House of Literature on Construction and Architecture
Date: 1953 No. pp.: 160 No. of copies: 5,000
Editorial Staff
Editor: None
Scientific Editor: Afanas'yev, A. M., Kandidat of Technical Sciences
Editor-in-Chief: None
Appraisers: None
Others: None

Text Data
Coverage: The author describes an original graphical and analytical method of calculation of bending moments applicable to the solution of problems of the strength of materials and of construction mechanics, which he calls "The Method of Orthogonal Foci".

1/2

ARTYUKHOV, P.N., kand.tekhn.nauk; STEFANOVSKIY, G.V.; POPOV, A.A., gornyy inzhener

Replies to the article by V.I.Pechkovskii, A.A.Chernegov, and A.A. Nechitailo "Expedient means of draining the pit areas of the Nikopol'manganese basin." Gor. zhur. no.3:71-73 Mr '63. (MIRA 16:4)

1. Gosudarstvennyy trest margantsevykh razrabotok Nikopol'skogo rayona.

POPOV, A. A., writer on the resistance of materials.

Strength of materials; textbook. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1953. 226 p. (53-31639)

TA405.P64

POPOV, A. A.

RUBININ, M.V.; KISELEV, V.A., doktor tekhnicheskikh nauk, professor, retsenzent; POPOV, A.A., doktor tekhnicheskikh nauk, professor, retsenzent; LEVIT, M.A., dotsent, redaktor.

[Manual for practical studies on the strength of materials] Rukovodstvo k prakticheskim zaniatiiam po sopretivleniiu materialov. Izd. 2-e, ispr. i dop. Moskva, Ges. nauchno-tekhn. izd-vo mashinostroitel'noi lit-ry. 1953. 307 p. (MLRA 7:7)
(Strength of materials)

POPOV, A.A., professor, doktor tekhnicheskikh nauk (Moscow)

Graphic calculation of continuous beams and frames with the aid of focal points. Issledovaniia po teorii sooruzhenii. Sbornik statei no.6:197-219 '54. (MLRA 7:11)
(Structures, Theory of) (Strains and stresses) (Elastic plates and shells)

POPOV, A.A., doktor tekhnicheskikh nauk, professor.

Graphic method of determining the spring sag in two-axle cars. Trudy TSNII MPS no.105:66-74 '55. (MLRA 9:2)
(Railroads--Cars)

POPOV, Aleksey Aleksandrovich, doktor tekhnicheskikh nauk, professor; NIKOL'SKIY, L.N., doktor tekhnicheskikh nauk, retsenzent; RUBININ, M.V., kandidat tekhnicheskikh nauk, retsenzent; AFANAS'YEV, A.M., kandidat tekhnicheskikh nauk, redaktor; MATVEYEVA, Ye.N., tekhnicheskiy redaktor

[Strength of materials; theory and practice] Soprotivlenie materialov; teoriia i zadachi. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. 475 p. (MLRA 10:2)
(Strength of materials)

Popov, A. A.

Distr: AF1

Popov, A. A. Numerical harmonic analysis using focal ordinates. Inžen. Sb. 23 (1956), 214–230. (Russian)

A method of numerical harmonic analysis of periodic functions given approximately by broken straight lines is presented in this paper. Use is made of special points called orthogonal focuses by the author [C. R. (Doklady) Acad. Sci. URSS (N.S.) 38 (1943), 286–288; Method of orthogonal foci in structural mechanics, Gosstroĭizdat, Moscow, 1953; MR 5, 160]. S. Kulik (Columbia, S.C.)

1-F\W

POPOV, Aleksey Aleksandrovich; SHADUR, Leonid Abramovich; NEVZOROVA, [redacted]; VERSHINSKIY, S.V., kandidat tekhnicheskikh nauk, redaktor; VERINA, G.P., tekhnicheskiy redaktor.

[Investigation of the strength of freight car truck frames and ways of decreasing their weight.] Issledovanie prochnosti ramy teleshki gruzovykh vagonov i puti snizheniia ee vesa. Moskva, Gos. transp. shel-dor.izd-vo, 1957. 263 p. (Moscow, Vsesoiuznyi nauchno-issledovatel'skii institut zheleznodorzhnogo transporta. Trudy, no. 139). (MLRA 10:7)

(Railroads--Freight cars)

SOV/124-58-4-4668

Translation from: Referativnyy zhurnal, Mekhaniak, 1958, Nr 4, p 142 (USSR)

AUTHOR: Popov, A. A.

TITLE: Bending and Torsion of the Thick-walled Bars of Railroad Car Truck Frames (Izgib i krucheniye tolstostennykh sterzhney ram vagonnykh telezhek)

PERIODICAL: Tr. Vses. n.-i. in-ta zh.-d. transp., 1957, Nr 139, pp 5-70

ABSTRACT: The article presents an approximate theory of the calculation of thick-walled bars for bending and torsion. For the derivation of the formulas the bar is divided into a number of beams by means of longitudinal planes. The equations of continuity of the linear deformations ε_x are based on the assumption that the beams are jointed at points located on the middle plane of the bar. The article considers transverse bending and restrained torsion of a prismatic bar. Considerations are expressed about the applicability of the deSaint-Venant principle to bars having profiles with thick and thin walls. Data are presented on experiments with an I-beam subjected to a longitudinal load P at a point of the edge of a flange. The article also considers the problem of the determination of the external

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SOV/124-58-4-4668

Bending and Torsion of the Thick-walled Bars (cont.)

second-order moments pertaining to simultaneous bending and torsion.

A. I. Strel'bitskaya

1. Beams--Stresses 2. Beams--Torque 3. Mathematics 4. Railroads--Equipment

Card 2/2

POPOV, A. A.

14(10) PHASE I BOOK EXPLOITATION SOV/1377

Raschety na prochnost'; teoreticheskiye i eksperimental'nyye issledovaniya prochnosti mashinostroitel'nykh konstruktsiy. Sbornik statey, vyp. 3. (Calculations for Strength; Theoretical and Experimental Research on the Strength of Elements Used in Machine Construction. Collection of Articles, Vol. 3) Moscow, Mashgiz, 1958. 355 p. 4,000 copies printed.

Ed.: Tarabasov, N.D., Doctor of Technical Sciences; Editorial Board: Tikhomirov, Ye.N., Honored Worker of the RSFSR in Science and Technology, Professor (Chairman); Sorensen, S.V., Active Member, Ukrainian SSR Academy of Sciences, Doctor of Technical Sciences, Professor; Glushkov, G.S., Doctor of Technical Sciences, Professor; Ponomarev, S.D., Doctor of Technical Sciences, Professor; Sokolov, S.N., Doctor of Technical Sciences, Professor; Tarabasov, N.D., Doctor of Technical Sciences, Professor; and Makushin, V.M., Candidate of Technical Sciences, Docent (Secretary); Tech. Ed.: Tikhanov, A.Ye.; Managing Ed. for Literature on General Technical and Transport Machine Building (Mashgiz): Ponomareva, K.A., Engineer.

PURPOSE: This collection of articles is intended for engineers and designers working in the field of machine construction, for research fellows, and scientific workers.

COVERAGE: The collection is an inter-vus publication of transactions concerning strength problems. It contains original reports on calculations for a number of structures used in machine building and their components. Considerations are given to calculations of the columns of hydraulic presses, the nonlinear theory of spiral springs, problems in the calculation of rubber components, theoretical and experimental investigations of circular plates of constant and variable stiffness, investigations of conical shells and of stressed assemblies of machine components. Calculations in the elasto-plastic domain are represented by an investigation of forced fits of discs and the creep of operating turbine blades. Problems of contact in the case of impact and the stability theory of elastic systems "in general terms" are considered. There are 114 references, 99 of which are Soviet, 9 English, 4 German, 1 French, 1 Polish.

- - -/-

Popov, A.A., Doctor of Technical Sciences, Professor. Application of Orthogonal Foci to Plastic Bending 220

Assemblies of Machine [illegible] Technical Sciences, Professor. Stressed

POPOV, A. A., Doctor of Technical Sciences, Professor.

"Graphical Determination of the Velocities in the Straight Central Impact of Spheres"

Calculations for Strength; Theoretical and Experimental Research on the Strength of Elements Used in Machine Construction. Collection of Articles, Vol. 2, Moscow, Mashgiz, 1958, 360pp.

POPOV, Aleksey Aleksandrovich, prof., doktor tekhn.nauk; YEGORKINA, L.I., red.; MODEL', B.I., tekhn.red.

[Course in the strength of materials; theory and problems] Kurs soprotivleniia materialov; teoriia i zadachi. Izd. 2., perer. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1958. 511 p. (MIRA 12:2)

(Strength of materials)

POPOV, A.A., doktor tekhn.nauk, prof.

Graphic determination of speeds at direct central impact of balls. Rasch.na prochn. no.2:342-346 '58. (MIRA 12:2)
(Impact)

POPOV, A.A., prof., doktor tekhn.nauk

Applying the method of orthogonal foci in analyzing plastic bending. Rasch. na prochn. no.3:220-236 '58. (MIRA 12:2)
(Strains and stresses)

SOV/145-58-7/8-8/24

25 (1)

AUTHOR: Popov, A.A., Doctor of Technical Sciences, Professor

TITLE: Graphoanalytical Estimation of Shaft Subjected to Plastic Torsion

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Mashinostroyeniye, 1958, Nr 7-8, pp 70-76 (USSR)

ABSTRACT: The author begins the article by giving a graphoanalytical definition of the integral $\int_0^t f(x)\varphi(x)dx$ by means of focal points (Fig 1). On the basis of the theorem of function mean value, the above integral is expressed by formula: $\int_0^t f(x)\varphi(x)dx = y\int_0^t \varphi(x)dx = y\,\Omega$, where Ω is area limited by the curve $\varphi(x)$ and the axis x (Fig 1-b); y - mean value of the function $y = f(x)$ at the integration distance 1. In Fig 2, determining the focus by means of a scale is illustrated. Details on pre-

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Popov, A. A.

14(10); 18(7) PHASE I BOOK EXPLOITATION SOV/3189

Raschety na prochnost' tsentrobezhnykh i aerodinamicheskikh nagruzok lopatochnykh mashin; sbornik statey. Vyp. 4 (Strength Calculations: Theoretical and Experimental Studies of the Strength of Machine Structural Elements; Collection of Articles, No. 4) Moscow, Mashgiz, 1959. 393 p. Errata slip inserted. 3,600 copies printed.

Editorial Commission: Ye. M. Tikhomirov (Chairman) Honored Worker in Science and Technology of the RSFSR, Professor, S. V. Serensen, Corresponding Member, Ukrainian SSR Academy of Sciences, Doctor of Technical Sciences, Professor, G. S. Glushkov, Doctor of Technical Sciences, Professor, S.D. Ponomarev, Doctor of Technical Sciences, Professor, S. M. Scholov, Doctor of Technical Sciences, Professor, M. D. Tarabasov, Doctor of Technical Sciences, Professor V. M. Makushkin (Secretary) Candidate of Technical Sciences, Docent; Ed.: M. D. Tarabasov, Doctor of Technical Sciences, Managing Ed. for Literature on General Technical and Transport Machine Building: V. I. Kuharev, Engineer; Ed. of Publishing House: B. M. Kovalenko, and A. G. Nikitin; Tech. Eds.: Z. I. Chernova, and V. D. Elkind.

PURPOSE: This book is intended for engineers and designers/machine-building as well as for engineers of other specialties working on stress analysis. It may be used as a text by students in the field.

COVERAGE: This book contains original stress analysis calculations made on machinery elements and parts. Analyses are made of coiled springs with an arbitrary helix angle, bending of turbine discs, strain state of flat pistons, and a circular cylinder. A number of original applications of general methods of the theory of elasticity to the study of lateral bending and torsion of rods is given. In the calculations on stability, new methods of determining critical forces for compressed rods and analyzing the stability of circular and ring-shaped plates are applied. Calculations for dynamic loadings are represented by a study of the analysis of variations of the indicators of devices during vibration. References accompany individual articles.

Card 8/21

POPOV, A.A. (Moskva)

Graphic definition of moment integrals with the aid of a stencil.
Nom. sbor. no.1:70-91 '62. (MIRA 16:5)
(Nomography (Mathematics)) (Integrals, Generalized)

POPOV, A.A.

MAKSYUTA, V.I.

5(1)

PHASE I BOOK EXPLOITATION SOV/1520

USSR. Gosudarstvennyy nauchno-tekhnicheskiy komitet

Avtomatizatsiya khimicheskikh i koksokhimicheskogo proizvodstv; sbornik statey (Automation of the Chemical and By-product Coking Industries) Moscow, Metallurgizdat, 1958, 377 p. 4,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR. Institut nauchnoy i tekhnicheskoy informatsii.

Eds.: N.Ya. Fest, N.N. Yelshin, and Yu.N. Geralyaytis; Ed. of Publishing House: N.R. Lanovskaya; Tech. Ed.: M.P. Shvetsov.

PURPOSE: This book is intended for industrial engineers and technologists interested in the state of industrial automation and may be especially useful to organizations concerned with the multifarious automation problems of the chemical industry.

COVERAGE: This collection was compiled to fulfill to some degree the need for a readily accessible information source on the latest developments in the automation of industrial processes, both foreign and domestic, and to give supplementary information on the automation state of several chemical, metallurgical, petroleum and textile-cellulose production processes.

Card 1/4

Bogoslov, S.V., A.D. Rabotkin, and A.A. Popov. Automation of the Petroleum Refining and Petroleum-Chemical Industries 354

AVAILABLE: Library of Congress

TM/gmp
5-21-59

Card 4/4

SOV/112-59-4-7662

8(0), 11(4)

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 4, p 174 (USSR)

AUTHOR: Nesmelov, S. V., Bakutkin, A. B., and Popov, A. A.

TITLE: Automating Oil-Refinery and Petro-Chemical Industries

PERIODICAL: V sb.: Avtomatiz. khim. i koksokhim. proiz-v. M., Metallurgizdat, 1958, pp 354-378

ABSTRACT: A classification of degrees of automation applicable to the oil-refinery industry is presented; it is illustrated by examples. The expected effectiveness of automation at the Ryazan' and Moscow oil refineries is reported. The requirements of the processes scheduled for automation and the requirements of the apparatus are listed. Principal trends in automating oil-refinery and oil-chemical industries and the means of automation are considered. Atmosphere installations for refining the raw oil and the installations of 2-furnace thermal cracking which use a pneumatic monitoring and an automatic system are described. Expenses for automation at such installations amount to about 5%

Card 1/2

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SOV/112-59-4-7662

Automating Oil-Refinery and Petro Chemical Industries

of their cost. A scheme of an installation for polymerization of propane-propylene fraction for producing polypropylenes is described. Principal automation-and-monitoring means that are needed for raising the degree of automation at the existing oil refineries and for realizing a complex process automation at new plants are listed. A brief characterization of the state of automation of foreign oil refineries is given.

A.A.S.

Card 2/2

KATSOBASHVILI, Ya.R. (Moskva), POPOV, A.A. (Moskva)

Activity of aluminum-molybdenum catalysers with a small content of MoO_3 in the process of destructive hydrogenation of petroleum at low pressures. Izv. AN SSSR. Otd. tekh. nauk. Met. i topl. no.6:173-177 N-D '60. (MIRA 13:12)
(Hydrogenation) (Catalysts)

KATSOBASHVILI, Ya.R.; POPOV, A.A.

Effect of the content of nickelous oxide on the activity of alumina nickel oxide catalysts in the process of destructive hydrogenation at low pressures. Zhur.prikl.khim. 33 no.7: 1607-1613 Jl '60. (MIRA 13:7)
(Hydrogenation) (Nickel oxide) (Catalysts)

S/080/60/033/007/023/024/XX
D270/D304

AUTHORS: Katsobashvili, Ya.R. and Popov, A.A.

TITLE: Influence of molybdenum oxide content on the activity of aluminomolybdenum catalysts during destructive hydrogenation under low pressure

PERIODICAL: Zhurnal prikladnoy khimii, v. 33, no. 7, 1960, 1613-1617

TEXT: The authors studied the optimum content of MoO_3 in aluminomolybdenum catalysts; according to Ya.R. Katsobashvili (Ref. 1: Sb. Pererabotka neftyanikh ostatkov (Treatment of petroleum residues), Gosinti, 190, 1958), this question largely governs the profitable use of such catalysts in the process of the destructive hydrogenation of petroleum residues. Tuymazy petroleum was hydrogenated in the presence of catalysts containing variable proportions of Al_2O_3 and MoO_3. The procedure devised by G.V. Antipina et al (Ref. 3: Vestn. Mosk. gos univ. 3-4, 119, 1946) was followed, with the following experimental conditions: Reactor dimensions - 250 cm^3; pressure

Card 1/3

Influence of molybdenum oxide...

- 30 atm; temperature - 432°; hydrogen consumption - 1000 l/kg of raw material; duration of reaction - 2 hrs. The results are given in graphic form. Assuming the conversion of material to be a first-order reaction, the catalyst activity was assessed from α' - the reaction-velocity constant - as defined by

$$\alpha' = v_s \ln \frac{1}{1 - y} - v_s \cdot \beta \cdot y,$$

where α' and β are constants, $v_s = v_o \frac{d}{f \cdot s_A d_H}$ is the rate of supply of material on one surface of the catalyst; f is the accessibility coefficient for the active surface; s_A is the specific surface; and d_H is the weight of 1 m^3 of dry catalyst. The constants α' and β were determined graphically. β has a value of 1.03, and α', which is proportional to the reaction-velocity constant, depends on the MoO_3 content of the catalyst, thus: 1.0% - 0.8 x 10^{-3}; 5.7% - 2.3 x 10^{-3}; 14.6% - 2.7 x 10^{-3}; 34.4% - 4.2 x 10^{-3}. The authors hence concludes that these data explain why the addition of up to 10% MoO_3 to catalyst samples increases their volumetric

Card 2/3

activity, which in turn promotes hydrogenation and desulfurization, although further increments of MoO_3 appear to be of little consequence in this latter respect. There are 4 figures, 3 tables and 3 Soviet-bloc references.

SUBMITTED: August 7, 1959

Card 3/3

POPOV, A. A.

Cand Tech Sci - (diss) "Study of the effect of chemical composition, physical, and structural properties of alumino-nickel and alumino-molybdenum catalysts on the destructive hydrogenation of petroleum under a 30-atmosphere pressure." Moscow, 1961. 34 pp; (Academy of Sciences USSR, Inst of Petrochemical Synthesis); 200 copies; price not given; (KL, 10-61 sup, 217)

KATSOBASHVILI, Ya. R. (Moskva); POPOV, A.A. (Moskva)

Structure and activity of aluminum-nickel and aluminum-molybdenum catalysts in the hydrogenization of petroleum under pressure of 30 at. Izv. AN. SSSR. Otd. tekh. nauk. Met. i topl. no.2:173-181 Mr-Ap '61. (MIRA 14:4)

(Hydrogenation)
(Catalysts)

KATSOBASHVILI, Ya.R. (Moskva); POPOV, A.A. (Moskva)

Effect of the composition and structure of catalysts on coke formation in the destructive hydrogenation of petroleum at low pressures. Izv.AN SSSR.Otd.tekh.nauk.Met.i topl. no.5:137-143 S-O '61. (MIRA 14:10)

(Hydrogenation) (Coke)

POPOV, A.A.

Problems of cybernetics in the petroleum refining and petrochemicals industry. Khim. i tekh. topl. i masel 9 no.3:52-54 Mr'64 (MIRA 17:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gazov i polucheniyu iskusstvennogo zhidkogo topliva.

POPOV, A.A., Cand Vet Sci--(diss) "~~Perfection~~ Refinement of allergic diagnosis of paratuberculosis of ~~large~~ cattle." Khar'kov, 1958. (Min of Agr USSR. Khar'kov Vet Inst), 200 copies (KL,26-58,114)

COUNTRY	:	USSR R
CATEGORY	:	Diseases of Farm Animals. Diseases Caused by Bacteria and Fungi
ABS. JOUR.	:	RZhBiol., No. 6 1959, No. 25963
AUTHOR	:	Popov, A.A.
INST.	:	[redacted]
TITLE	:	On the Allergic Diagnosis of Paratuberculosis in Cattle
ORIG. PUB.	:	Sots. tvarinnitstvo, 1958, No.1, 54-56
ABSTRACT	:	The author applied dry purified avian tuberculin as an allergen. According to his data this preparation permits to detect twice as many diseased animals as the unpurified one, and in diagnostic doses it does not produce allergic reactions in healthy animals.
CARD:		1/1

POPOV, A.A.

Out-of-town session of the Technical Research Council of the Ukrainian Experimental Poultry Station. Ptitsevodstvo 8 no.12:39-40 D '58. (MIRA 11:12)

(Crimea--Poultry breeding)

POPOV, A.A., kand.veterin. nauk; OSADCHUK, A.D., starshiy nauchnyy sotrudnik

Deep litter as a means of increasing egg yields of hens and the labor productivity of poultry maids. Ptitsevodstvo 9 no.9:26-31 S '59. (MIRA 12:12)

1. Ukrainskaya opytnaya stantsiya ptitsevodstva.
(Litter(Bedding)) (Poultry)

POPOV, A.A., nauchnyy sotrudnik; FED', L.S., nauchnyy sotrudnik

Automatic control of the lighting system in poultry houses. Mekh. sil'.hosp. 13 no.12:25 D '62. (MIRA 16:2)

1. Ukrainskiy nauchno-issledovatel'skiy institut ptitsevodstva.
(Ukraine—Poultry houses and equipment) (Lighting)
(Automatic control)

POPOV, A. A. (Candidate of Veterinary Sciences, Ukrainian Scientific Research Institute of Poultry Raising).

"Micro-climate in poultry houses with deep litters..."
Veterinariya, vol. 39, no. 2, February 1962 pp.71

AKIMOVICH, V.V.; NIKOLAYEV, N.I.; ZYKIN, L.F.; PONOMAREV, N.G.; POPOV, A.A.

In vitro selection of variants with vaccinal properties from virulent strains of Pasteurella pestis. Zhur. mikrobiol., epid. i immun. 42 no.6:64-68 '65. (MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy protivochumnyy institut "Mikrob", Saratov.

L 24198-66 EWT(1)/FCC GW

ACC NR: AP6011366 SOURCE CODE: UR/0362/66/002/003/0236/0247

AUTHOR: Galin, M. B.; Popov, A. A.; Rudenko, S. I.

ORG: Mirovoy Meteorological Center (Mirovoy meteorologicheskiy tsentr)

TITLE: Propagation of disturbances in a baroclinic atmosphere in the presence of radiation and turbulent thermal conductivity

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 2, no. 3, 1966, 236-247

TOPIC TAGS: turbulent heat transfer, atmospheric model, adiabatic process

ABSTRACT: A four-level model (50, 150, 250, and 950 mbar levels) of the atmosphere was investigated by analyzing the stability of a zonal stream with respect to wave disturbances. The data were compared with those computed on the basis of Galin's two-level model (1959). The application of the four-level model to the study of the disturbance was partially based on theoretical studies by Galin (1964) and on differential equations of vortex transfer. The heat transfer in the atmosphere in the model was determined on the basis of a formula developed by Glinov (1964). The data show that the four-level model gives four wave types, one of which is similar to the Rossby wave. The Rossby waves and a second wave type correspond to the two wave types of the two-level model. The four-level adiabatic model is characterized by a new type of instability as compared with the two-level model. It was found that the stability cha-

UDC: 551.511.32

Card 1/2

POPOV, A.A.; KUCHMIN, V.D.

Scientific work organization. Stal' 25 no.12:1135-1138 D '65. (MIRA 18:12)

1. Chelyabinskiy metallurgicheskiy zavod.

POPOV, A.A.

Traumatic thrombosis of the renal vessels and total necrosis of the kidney in a parturient. Urologiia no.4:52-54 '64. (MIRA 19:1)

1. Urologicheskoye otdeleniye (nachal'nik A.A. Popov) Dorozhnoy bol'nitsy L'vovskoy zheleznoy dorogi.

L 63749-65 EWT(d)/EWP(l) IJP(c) BC

ACCESSION NR:AR5003349 S/0271/64/000/011/A071/A071
621.398.5

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika. Svodnyy tom, Abs. 11A395

32
B

AUTHOR: Popov, A. B. 65

TITLE: Receivers in the supervisory control frequency and time-frequency systems

CITED SOURCE: Tr. Kiyevsk. politekhn. in-ta, 55 v. 42, 1963, 42-46

TOPIC TAGS: supervisory control, frequency supervisory control, time frequency supervisory control, supervisory control receiver 9, 55

TRANSLATION: The differential and the automatic-bias filters are considered which are used as frequency-responsive elements in the systems operating with frequency and time-frequency codes. Such filters ensure the independence of the passband from the input-signal peak. In order to determine the repetition rate of the frequency packets in the link channel, the speed of operation and release of the differential filters is determined. Block diagrams of the receivers are presented. The input signal in the frequency-type supervisory-system receiver goes from the

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L 63749-65

ACCESSION NR: AR5003349 0

frequency-filter unit to a diode matrix that converts the frequency code into a decimal code. To increase the noise immunity, the input signal is also applied to a protective matrix. From the diode-matrix output, the signal is fed to the printer and if necessary to a mimic-bus panel. In the time-frequency receiver, the first code pulse excites one of the trunks of the first matrix; the second pulse, one of the trunks of the second matrix. From these matrices, the signals are applied to the diode matrix which represents the decimal output of the system. Ill.: 3. Bib.: 3.

SUB CODE: DP, IE ENCL: 00

mlb

Card 2/2

ACC NR: AT7004473 SOURCE CODE: UR/3245/66/000/002/0047/0052

AUTHOR: Popov, A. B.

ORG: Kiev Polytechnic Institute (Kiyevskiy politekhnicheskiy institut)

TITLE: Selective devices for frequency systems of remote control, with correction of the characteristics

SOURCE: Kharkov. Institut gornogo mashinostroyeniya, avtomatiki i vychislitel'noy tekhniki. Pribory i sistemy avtomatiki, no. 2, 1966. Promyshlennaya telemekhanika (Industrial telemechanics), 47-52

TOPIC TAGS: circuit design, remote control, frequency control, remote control system, control system stability, stabilitron, frequency selection/ D 808 stabilitron, D 813 stabilitron

ABSTRACT: Two bias circuits were developed to provide a correcting voltage at the output of the frequency selectors in a remote control system. These circuits were designed to overcome two defects: 1) the growth of the output signal in direct proportion to the growth of the input signal; 2) an increase in the pass band width at the triggering level when the input signal grows. The first circuit, designed on the assumption that the element connected to the output has a high resistance and a relay action with triggering, uses a blocked diode. The linearly increasing correcting voltage compensates the linearly increasing output voltage of the frequency selectors to give a constant voltage fed to the connecting element. The circuit

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ACC NR: AT7004473

parameters are adjusted to give a stable triggering pass band width or one which is narrowed as the input signal increases. Circuit tests confirmed the calculations. The second circuit uses a silicon stabilitron in place of a diode. Commercial silicon stabilitrons in the series D 808--D 813 with a power dissipation of 0.28 watt, a maximum reverse current of 0.033--0.02, and a breakdown voltage of 7.8--8.? V were found to be suitable. The main defect of such circuits is that, if the amplifier enters a clipping mode and the input voltage is taken from the amplifier, then the correcting voltage does not increase with further growth of the input signal. An amplifier saturated later than the main one when used in the bias circuit can overcome this defect. Orig. art. has: 4 figures and 22 formulas.

SUB CODE: 09/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 001

Card 2/2

ACC NR: AT6022313 SOURCE CODE: UR/0000/66/000/000/0076/0081

AUTHOR: Popov, A. B.

ORG: none

TITLE: Reception of multifrequency signals in remote control

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966. Sektsiya telemekhaniki. Doklady. Moscow, 1966, 76-81

TOPIC TAGS: telemetry, telemetry receiver, telemetry technique, remote control

ABSTRACT: The advantages and disadvantages of using frequency shift in remote control are discussed. Performances of a two-frequency system with symmetrical limiting and a two-frequency system with compensating shift of the received signal are evaluated. In a two-frequency shift with symmetrical limiting the maximum level of combinational noise is equal to 1/3 of the basic working signal if the two transmitted components have equal amplitude. The amplifiers in the filter signal path of a system with compensating shift begin to limit before the amplifiers in the compensating shift path. The compensating shift voltage increases with increasing input signal amplitude and causes the amplifiers in the filter signal path to limit; this shuts-off the outputs of all filters and thus eliminates the possibility of false operation due to excessively strong signals and noise. Orig. art. has: 3 figures.

SUB CODE: 17/09/ SUBM DATE: 24Mar66/

Card 1/1

ACC NR: AP7002544 (A,N) SOURCE CODE: UR/0413/66/000/023/0019/0019

INVENTOR: Popov, A. F.; Korneyev, N. N.; Korotkov, Ye. N.; Zhigach, A. F.; Rybakova, L. A.; Zakharov, G. S.; Kuritsyn, V. A.; Krol', V. A.; Lebedev, S. I.; Rabotnov, V. V.; Solov'yev, V. V.

ORG: none

TITLE: Preparative method for alkylaluminums. Class 12, No. 188973

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 19

TOPIC TAGS: alkylaluminum, chemical synthesis, aluminum compound, HYDROCARBON

ABSTRACT: An Author Certificate has been issued for a method of preparing alkylaluminums. The method involves the reaction of aluminum with hydrogen and olefins in the presence of trialkylaluminum and of a halide of a group IV or V metal. [W. A. 77] [BO]

SUB CODE: 07/ SUBM DATE: 18Apr64

UDC: 547.256.2.07

Card 1/1

L 2771-66 EWP(e)/EPA(s)-2/EWT(m)/EWP(i)/EPF(n)-2/T/EWP(t)/EWP(b) IJP(c)
ACCESSION NR: AP5021333 JD/WW/JG/RM UR/0120/65/000/004/0070/0072
539.1.074.8

42
38
B

AUTHOR: Popov, A. B.; Yazvitskiy, Yu. S.

TITLE: Liquid scintillator neutron detector with cooled photomultipliers

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1965, 70-72

TOPIC TAGS: scintillator, scintillation detector, scintillation counter, neutron detector, photomultiplier

ABSTRACT: One of the basic difficulties encountered during the development of liquid boron-containing scintillation neutron detectors is due to the fact that the photomultiplier pulses corresponding to neutron registration are within the range of the photomultiplier noise. On the other hand, the smallness of the neutron momentum excludes the use of multichannel coincidence circuits. The present authors designed a highly efficient liquid boron-containing neutron scintillation detector with a 500 cm^2 area containing eight FEU-13 photomultipliers operating at -15 to -20C. The liquid scintillator (50% toluol, 50% methyl borate, 4 g/liter PPO, 0.5 g/liter POPOP) is enclosed within a metallic disc 25 cm in diameter and 3 cm high. The block diagram of the detector is given and its

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L 2771-66

ACCESSION NR: AP5021333

operation described. The neutron lifetime within the detector is about 2 μsec. "The authors thank I. M. Stoletova, K. G. Rodionov, and A. A. Omel'yanenko for their help during the work." Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy, Dubna (Joint Institute of Nuclear Research)

SUBMITTED: 27Jun64 ENCL: 00 SUB CODE: NP, OP

NO REF SOV: 002 OTHER: 001

Card 2/2

KATKOV, Fedor Aleksandrovich, kand. tekhn. nauk; POPOV, Aleksey Borisovich, inzh.; IL'IN, A.A., kand. tekhn. nauk, retsenzent; KOVAL'CHUK, A.V., inzh., red. izd-va; STARODUB, T.A., tekhn. red.

[Frequency remote control systems using busy communication channels] Chastotnye sistemy teleupravleniia po zaniatym kanalam sviazi. Kiev, Gostekhizdat USSR, 1963. 86 p. (MIRA 16:7)

(Remote control) (Telephone)

KATKOV, Fedor Aleksandrovich, kand. tekhn. nauk. Prinimali uchastiye: STULOV, V.A., inzh.; POPOV, A.B., inzh.; DIDYK, B.S., inzh.; SHESTOPALOV, V.N., kand. tekhn. nauk, retsenzent; PISARENKO, M.G., inzh., red.izd-va; STARODUB, T.A., tekhn. red.

[Teoretical principles of remote control] Teleupravlenie; osnovy teorii. Kiev, Gostekhizdat USSR, 1963. 231 p. (MIRA 16:11)

(Remote control)

POPOV, A. B., SHARAPOV, E. I., YAZVITSKIY, Y. S., VIZI, I., ZHUKOV, G. P., ZABIYAKIN, G. I., KARZHAVINA Ye. N., and PIKELNER, L. B.

"Liquid scintillation Detectors for Registering Neutrons."

Joint Institute for Nuclear Research, Dubna, USSR.

report submitted for the IAEA conf. on Nuclear Electronics, Belgrade, Yugoslavia 15-20 May 1961

S/194/62/000/006/224/232
D256/D308

AUTHORS: Katkov, F.A., and Popov, A.B.

TITLE: Using busy telephone lines for sending frequency signals of remote control and remote signalling

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 6, 1962, abstract 6-8-7 kh (Tr. Kiyevsk. politekhn in-ta. Sb. statey elektrotekhn. fak., Kiev, 1961, 220-227)

TEXT: Various methods of sending remote control and remote signalling (RC-RS) impulses by telephone communication lines are considered using hyper-audio and sub-audio frequencies as well as artificial lines with multifrequency narrow-band systems. Circuit diagrams for RC-RS cutting-in systems are presented as well as circuit diagrams of a transistorized generator and a receiver. Practical suggestions are included concerning the construction of such circuits. It is pointed out that the most suitable for RC-RS systems is the band from 300 to 500 c/s for direct use, and the band from 2400 to 3200 c/s using RC-RS frequency signals ranging from

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L 29925-65 EEC-4/EWT(d)/EEC(t)/FSS-2 Pn-4/Pj-4/Pq-4/Pac-4/Pae-2
ACCESSION NR: AR5004730 S/0272/64/000/011/0041/0042

SOURCE: Ref. zh. Metrol. i izmerit. tekhn. Otd. vyp., Abs. 11.32.269

37
B

AUTHOR: Popov, A. B.

TITLE: Receivers for frequency and frequency-time systems of remote control and remote signalization

CITED SOURCE: Tr. Kiyevsk. politekhn. in-ta, v. 42, 1963, 42-46

TOPIC TAGS: filter, differential filter, frequency sensitive element, frequency code, frequency-time code, remote control, remote signalization

TRANSLATION: Filters assembled in accordance with a differential circuit are considered, as well as filters with automatic bias, used as frequency-sensitive elements in systems with frequency and frequency-time codes. Such filters ensure practical independence of

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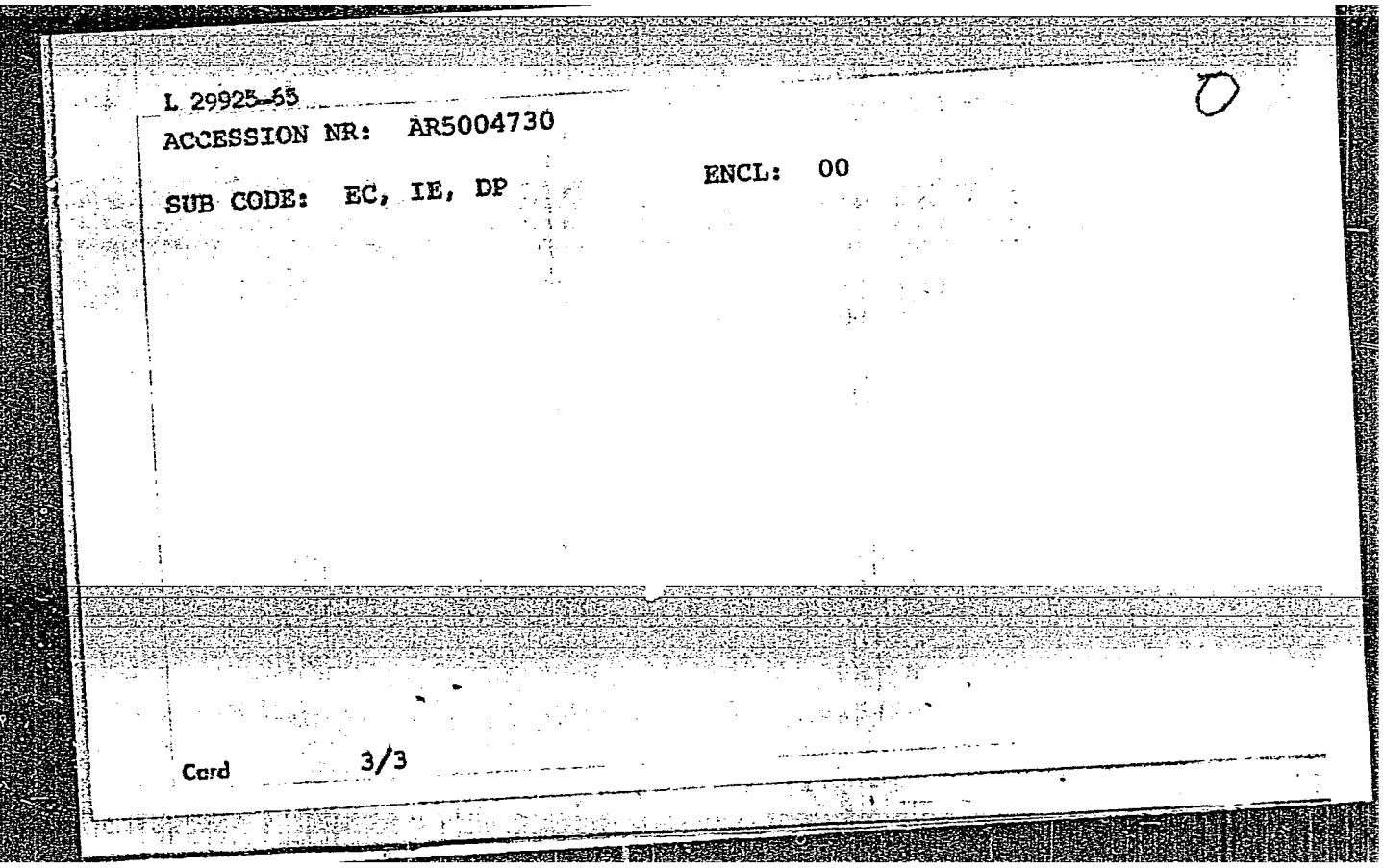
L 29925-65
ACCESSION NR: AR5004730

the pass band of the amplitude of the input signal. To determine the repetition rate of the frequency messages in the communication channel, the authors determine the rate of operation and drop-out of filters assembled in accordance with a differential scheme. Block diagrams of the receivers are presented. The input signal in the receiver of the remote-control and remote-signalization system, made up of a block of frequency filters, is fed to a diode matrix, which transforms the frequency code at the input into a decimal code at the output. To increase the interference immunity, the signal is applied also to a guarding matrix. The signal from the outputs of the diode matrix is fed to a floating block, and if necessary also to the memory circuit. In the receiver, of the frequency-time system, the first pulse of the code excites one of the busses of the first matrix, while the second excites one of the busses of the second matrix. The signals from these matrices are applied to a diode matrix, forming the decimal output of the circuit. Three demonstrations; Bibliography, 3 titles.

Card 2/3



L 29925-65

ACCESSION NR: AR5004730

SUB CODE: EC, IE, DP ENCL: 00

Card 3/3

VAN NAY-YAN' [Wang Nai-yen]; VIZI, I.; YEFIMOV, V.N.; KARZHAVINA, E.N.; KIM KHI SAN; POPOV, A.B.; PIKEL'NER, L.B.; PSHITULA, M.I.; STADNIKOV, T.; CHEN LIN-YAN'; CHARAPOV, E.I.; SHELONTSEV, I.I.; SHIRIKOVA, N.Yu.; YAZVITSKIY, Yu.S.

Neutron resonances in Rh^{103}. Zhur. eksp. i teor. fiz. 45 no.6:1743-1753 D '63. (MIRA 17:2)

1. Ob"yedinennyy institut yadernykh issledovaniy.

VAN NAY-YAN' [Wang Nai-yen]; ILIYESKU, N.; KARZHAVINA, E.N.; KIM KHI SAN; POPOV, A.B.; PIKEL'NER, L.B.; STADNIKOV, T.; SHARAPOV, E.I.; TAZVITSKIY, Yu.S.

Neutron resonances in praseodymium and therbium. Zhur. eksp. i teor. fiz. 47 no.1:43-51 Jl '64. (MIRA 17:9)

1. Ob"yedinennyy institut yadernykh issledovaniy.

POPOV, A. D. and A. D. DOMASHNEV.

Model'shchik. Sverdlovsk. Mashgiz, 1947. 47 p. diagrs.

Bibliography: p. 47

The pattern maker. DLC: TS233.D58

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

POPOV, A. D.

Chistota poverkhnostei otlivok.
Moskva, Mashgiz, 1950. 95,(5)p. illus. (Tekhnologiia Mashinostroenii: Liteinoe delo)

Bibliography: p.(99)

Cleanliness of casting surfaces.

DLC: TS233.P6

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

POPOV A.D.

VOLPYANSKIY, Lev Markovich; POPOV, A.D., kandidat tekhnicheskikh nauk,, retsenzent; GORSHKOV, A.A., doktor tekhnicheskikh nauk, professor, redaktor; YERMAKOV, N.P., tekhnicheskiy redaktor

[Charge for iron and steel casting] Shikhta dlia chugunnogo i stal'nogo lit'ia. Pod red. A.A.Gorshkova. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroit.lit-ry, 1957. 61 p. (Nauchno-populiarnaia biblioteka rabochego-liteishchika, no.10) (MLRA 10:8)
(Open hearth process)

POPOV, ANDREY DMITRIYEVICH

GUSEV, Aleksandr Semenovich; KUZIN, Roman Petrovich; POPOV, Andrey Dmitriyevich; DUGINA, N.A., tekhnicheskiy redaktor

[Reducing metal loss in riser heads] Snizhenie raskhoda metalla na pribyli otlivok. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1956. 26 p. (MLRA 10:5)
(Founding)

POPOV, A.D.

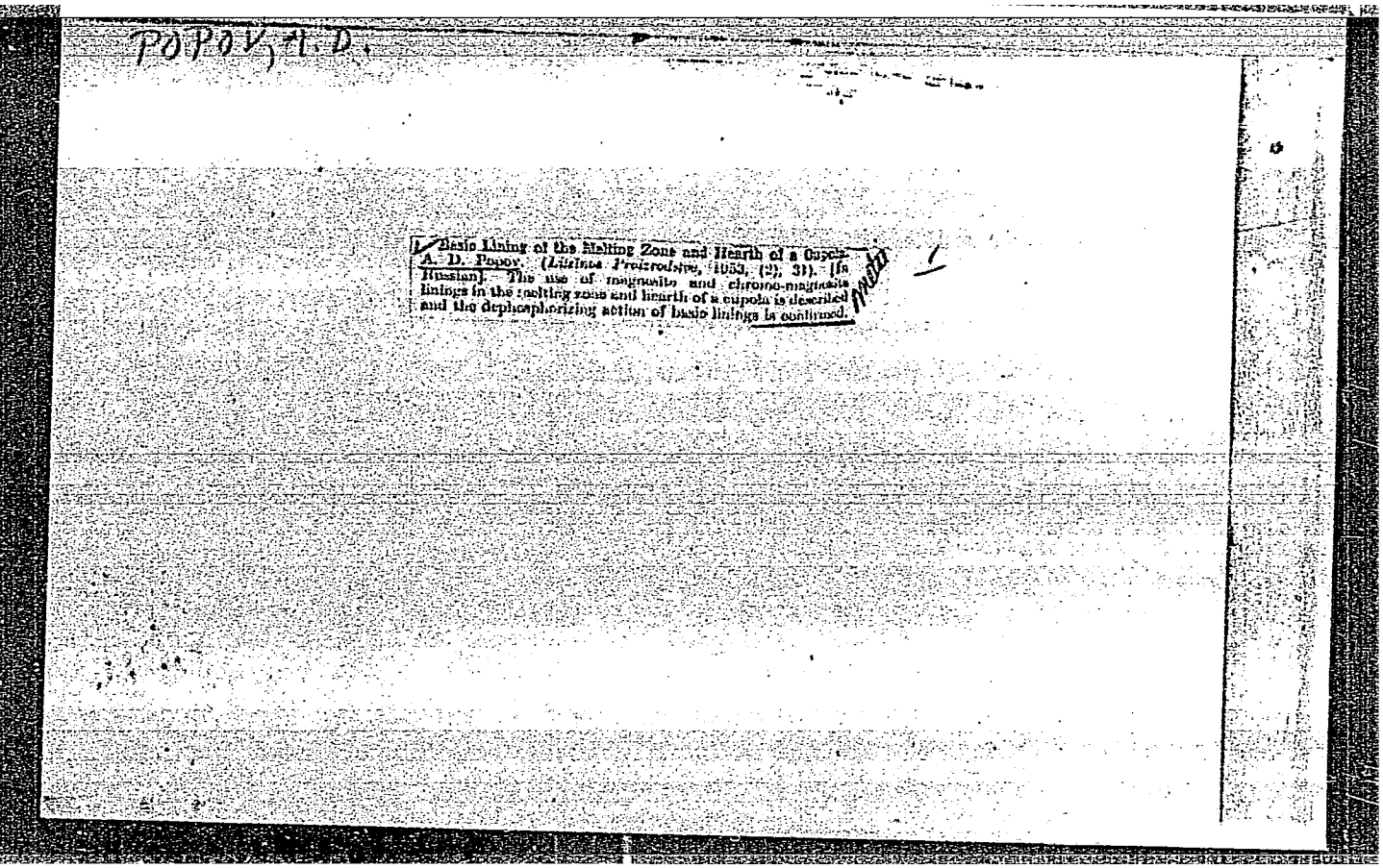
RYZHKIN, Grigoriy Trofimovich; POPOV, A.D., kandidat tekhnicheskiykh nauk, retsenzent; DUGINA, N.A., tekhnicheskiy redaktor.

[Improvements in modelmaking, the practices of Ural plants] Usovershenstvovaniia v model'nom proizvodstve; iz opyta ural'skikh zavodov. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1956. 40 p. (MLRA 10:4)

(Models and modelmaking)

POPOV, Andrey Dmitriyevich, kandidat tekhnicheskikh nauk; VASILEVSKIY, P.F., kandidat tekhnicheskikh nauk, retsenzent; MEZHOVA, V.A., inzhener, redaktor; TIKHANOV, A.Ya., tekhnicheskiy redaktor; SHIKIN, S.T., tekhnicheskiy redaktor

[Calculation of riser heads for casting] Raschet pribylei dlia otlivok. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1957. 53 p. (MLRA 10:5)
(Founding)



Popov, A. D.

Basic Lining of the Melting Zone and Hearth of a Cupola. A. D. Popov. (*Liteinoe Proizvodstvo*, 1953, (2), 31). [In Russian]. The use of magnesite and chromo-magnesite linings in the melting zone and hearth of a cupola is described and the dephosphorizing action of basic linings is confirmed.

POPOV, A. D.

"Compression of Casting Mixtures," Stal', No 4, 1948.

Cand. Tech. Sci., Ural Institute of Ferrous Metals.

137-58-6-11826

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 91 (USSR)

AUTHOR: Popov, A.D.

TITLE: Calculating Ingot Hot Tops (Raschet pribyley dlya slitkov)

PERIODICAL: Byul. nauchno-tekhn. inform. Ural'skiy n.i. in-t chernykh metallov, 1957, Nr 3, pp 93-101

ABSTRACT: A method is suggested for the calculation of hot tops for steel ingots. The volume of the shrinkage cavity (SC) in the casting is taken as 3%. The calculation starts with determination of the volume of metal hardening during the ingot teeming process. The volume of the SC in the hot top is calculated. The shape of the SC is taken to approximate a right circular cone having a base the diameter of which is 60% of the diameter of the hot top. For solid iron molds without provision for heating of the hot top, the depth of the SC may be determined by the equation $h=0.45(V-M\sqrt{Z})/d^2+4$ cm, where V is the starting volume of the metal cast into the mold, M is the internal surface of the mold, Z is the time required to pour the ingot, d is the diameter of the hot top base, equal to the diameter of the top end of the ingot. An equation due to B.B. Gulyayev for

Card 1/2

137-58-6-11826

Calculating Ingot Hot Tops

determining the time required for solidification of an ingot in an iron mold with clay and fireclay lining is used to determine the dimensions of a heated hot top. In this case, the depth of the SC is $h=0.2(V-M\sqrt{Z})/d^2+4$ cm. When a hot top narrows to an inverse cone, the consumption of metal is reduced. Experimental data derived for ingots of 50, 1200, 1600, 5500, and 7000 kg, confirming the satisfactory agreement between calculated and actual measurements, are presented. A graph of the relative amounts of metal going to the hot tops of ingots up to 10 t in weight, calculated in terms of ingot weight, is presented. The need to select optimum ratios for ingots having a maximum diameter of 1000 mm is noted.

V.P.

1. Steel--Production 2. Mathematics--Applications

Card 2/2

POPOV, A.D.

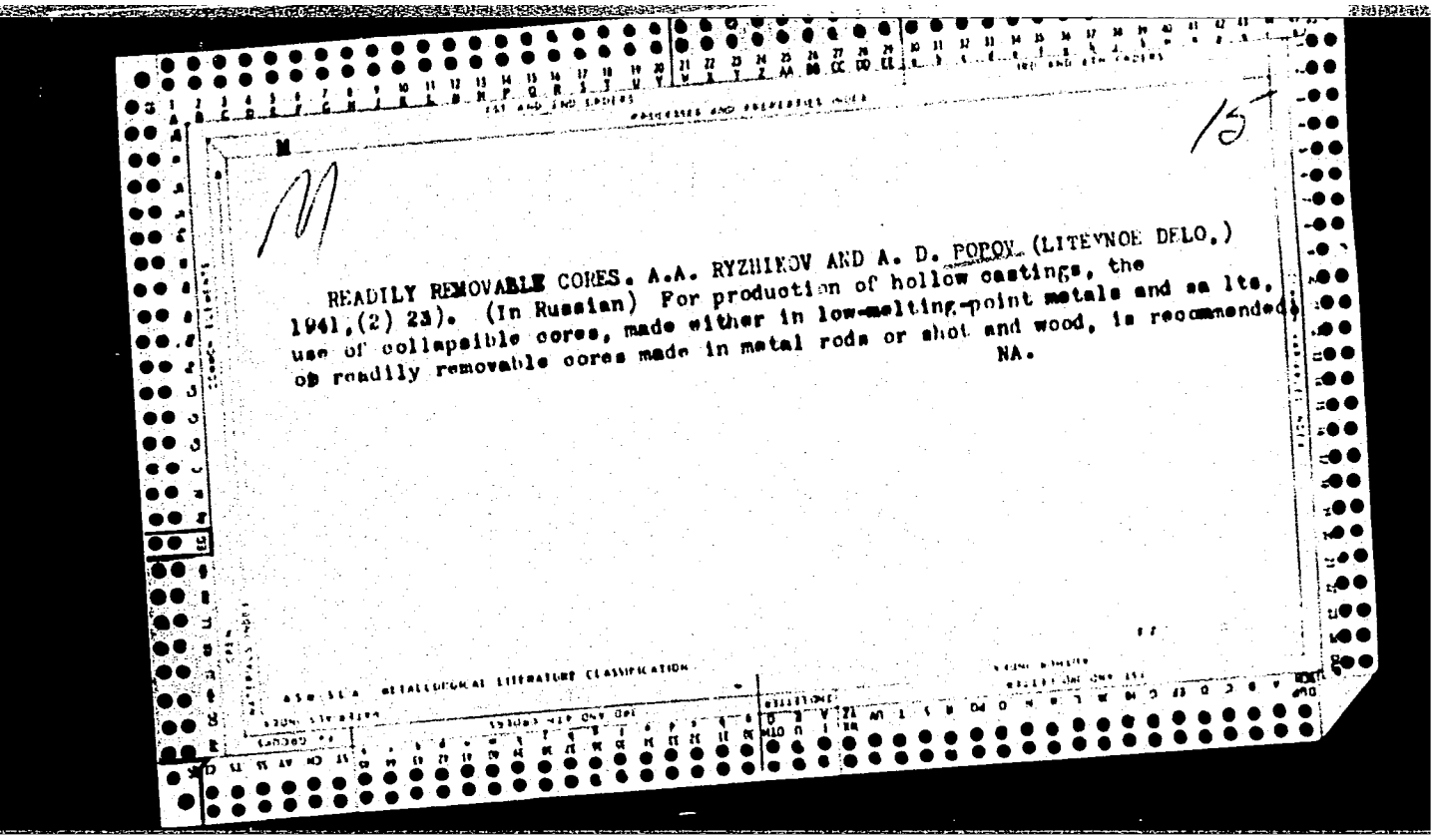
Semicontinuous casting of iron pipes. Lit. proizv. no.1:5-8 Ja '58.
(MIRA 12:1)

(Iron founding) (Pipe, Cast iron)

POPOV, A. D.

20064 POPOV, A. D. Novyy portativnyy pribor — anemograf. Svornik trudov Vracheb. san. sluzhby Kazansk zh. d. vyp. 2, 1948, s. 118-21.

SO: LETOPIS ZHURNAL STATEY, Vol. 27, Moskva, 1949.



M

15

READILY REMOVABLE CORES. A.A. RYZHIKOV AND A. D. POPOV. (LITEYNOE DELO.) 1941,(2) 23). (In Russian) For production of hollow castings, the use of collapsible cores, made either in low-melting-point metals and alloys, or readily removable cores made in metal rods or shot and wood, is recommended. NA.

POPOV, A. D.

PA 64T72

USSR/Minerals Apr 1948
Molds, Casting
Ammonium Picrate

"Dunite Casting Mixtures," A. D. Popov, Candidate Tech Sci, Ural Inst of Ferrous Metals, ½ p

"Stal'" No 4

Dunite was first tested in the Ural Mash Zavod foundries in 1940 and has been used as molding material in the Serovskiy Metallurgical Plant for the casting of steel rollers. Dunite shows stable composition and remains unchanged after burning.

64T72

POPOV, A. D.

USSR/Minerals Apr 1948
Molds, Casting
Sand

"Use of the Fine Molding Sands of the Frolovsk Deposit," A. D. Popov, Candidate Tech Sci, Ural Inst of Ferrous Metals, 1 p

"Stal'" No 4

Use of fine casting sands (grain concentrations of more than 70% on screens No 140-200) for pig iron and medium steel casting should prove possible, and even expeditious insofar as this cuts down on the use of sand supplied from distant sources. The Frolovsk sand is not good for the production of fine cores because it cakes and the casting is difficult to knock out.

64771

POPOV, A. D.

USSR/Metals Jul 48
Steel Ingots

"Pressure Deadheads," A. D. Popov, Cand Tech Sci; R. I. Goltsman, Engr; E. M. Blank, Engr; Ural Inst of Ferrous Metals, 4 pp

"Stal'" No 7

Use of deadheads with pressure in runner above atmospheric increases compactness of casting and decreases amount of waste metal. Discusses choice of gas-forming substances, artificial carburization of runner metal and heating runner by an exothermic mixture. Describes practical application, using mixture of chalk, slag, aluminum oxide, and graphite.

POPOV, A. D.

25581. POPOV, A.D.
Pribyli so sverkhatmosfernym davleniem. Stalb, 1948, No. 7, s. 632-35.

SO: Letopis' Zhurnal Statey, No. 30, Moscow, 1948

CA

Compactability of molding mixes. A. D. Popov. *Stal* 8, 358-62(1948).—The fluidity of molding sand, an important property in the prepn. of casting molds, was studied with relation to the moisture content, clay content, resistance to compression, grain size, permeability to gas, and coal content. The results are plotted. M. Hosch

CA

9

Use of fine molding sands of the Frolov deposits. A. D. Popov. *Stal* **8**, 374(1948).—The av. compn. of the Frolov (Serov region in the Sverdlovsk area) sand is SiO_2 92.40, Al_2O_3 2.82, Fe_2O_3 2.28, CaO 0.50, MgO 0.32, TiO_2 0.48, and ignition loss 1.00%. Of this sand 73.1% is between 140 and 200 mesh. Although very fine, this sand is suitable for use as molding sand for iron and steel castings. Because of its caking, this sand is not suitable for casting cores.

M. Hosch

CA

Dunite molding mixes. A. D. Popov. *Stal* **8**, 375 (1948).—Dunite is a solid volcanic product widely distributed in the Northern and Central Urals. The av. chem. compn. of a dunite is SiO_2 36.57, Al_2O_3 0.31, Fe_2O_3 4.88, FeO 5.89, Cr_2O_3 0.75, CaO 0.61, MgO 42.82, and ignition loss 8.5%. The av. vol. wt. is 2.6–2.8 and the av. fusion temp. 1750–1800°. The av. mineralogical compn. is olivine 47, serpentine 52, and chromite 1%. Ground in an edge mill, dunite has favorable screen analysis and gas permeability for use as *molding sand*. If a bonding agent is needed, it is recommended to use 1.5% of sulfite liquor with a sp. gr. of 1.3. M. Hosch

C A

Deadheads with superatmospheric pressure. A. D. Popov, R. I. Gol'tsman, and E. M. Blank. *Stal* **8**, 832–5(1948).—Chalk was successfully tested for creating superatm. pressure in deadheads. Various other substances (dextrin, charcoal, mill scale) were tested for the vol. of gas which they produce, their decompn. temp., and duration of gas evolution. Expts. were also carried out on carburizing the metal in the deadhead in order to delay its solidification. When this is practiced, care must be taken not to use too much C lest the difference in the C content between the metal in the deadhead and the casting is too great since it is likely to cause cracks during subsequent cutting of the deadhead. Diagrams of deadhead arrangements with gas-generating charges are given.

M. Hosch

POPOV, A. D.

Author: Popov, A. D.

Title: The Cleanlines of Surfaces of Castings.
100 pp., illus., bibliography

Date: 1950, Moscow

Subject: Founding.

Available: Library of Congress, Call No: TS233.P6

Source: Lib. of Cong. Subj. Cat., 1951

TOPOV, A. D.

Founding

Cast iron for chill casting. Lit. proizv. No. 1, 1953.

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