APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

TARNOVSKIY, I.Ya.; KOTEL'NIKOV, V.P.

Depth of the zone of plastic deformation in high strip rolling. Izv.vys.ucheb.zav.; chern.met. 4 no.5:109-119 '61. (MIRA 14:6)

1. Ural'skiy politekhnicheskiy institut.
(Rolling (Metalwork)) (Deformations (Mechanics))

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pass. On the sides of each specimen a network of lines was drawn and the depth of plastic deformation was determined from the distortion of the vertical lines. The agreement between theoretical and experimental values for the depth of plastic deformation is fairly good, as shown in Fig.3. It is necessary to note that the analysis is valid only for rigidly plastic bodies whose length does not change appreciably during rolling operation. The analysis cannot be applied to lead or to hot working of steel. There are 3 figures, 1 table and 12 Soviet references.

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

SUBMITTED: September 20, 1960



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where: t - value of frictional forces per unit area; $v_{ck}$ - sliding velocity of metal particles along the arc of contact; S - contact area. These expressions are evaluated for $N_1$, $N_2$, $N_3$ and $N_4$, in terms of geometry and speed of the rolls, the dimensions of the sheet and the yield stress of the metals containing only one variable - $h_\eta$ the depth of plastic deformation (Fig.1). Using the principle of least energy, this variable can be found for any value of parameters by differentiating the expression for the sum of the powers and equating it to zero. Finally, the formula for determining the depth of plastic deformation is reduced to:

$$h_\eta = 1.5 \sqrt{B_0 \cdot l} \qquad (42)$$

where: $B_0$ - original width of sheet; $l$ - length of contact arc between roller and sheet. Experiments have been carried out to check the calculations using aluminium, copper and steel specimens of height 70 mm, length 150 mm, and width between 7 and 20 mm. The diameter of the rolls was 85 mm, their surface coarse and dry. The specimens were rolled in several passes until their height reached 65 mm. The reduction was between 0.1 and 0.5 mm in each



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assumed that in the direction of rolling (direction X, Fig.1) there is perfect contact between the metal and the rolls. Hence, the power required to deform the sheet consists of the power developed by: a) the internal forces in the zone of deformation $N_1$ (Region I), b) the internal forces in the rear outer zone $N_2$ (Region II), c) the internal forces in the front outer zone $N_3$ (Region III), and d) spread of the metal in direction Y, $N_4$ (Fig.1). The power developed by the internal forces can be expressed by means of the integral

$$N = \iiint_V T \cdot H \cdot dV \qquad (1)$$

where: T - intensity of tangential stresses; H - intensity of velocities of deformation by shear; V - volume of body. The power required to overcome the frictional forces is given by:

$$N_{тр} = \iint_S t \cdot v_{cк} \cdot dS \qquad (6)$$



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S/148/61/000/005/005/015
E113/E180

AUTHORS: Tarnovskiy, I.Ya., and Kotel'nikov, V.P.

TITLE: The depth of plastic deformation in rolling sheets along their edges

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya, 1961, No.5, pp. 109-119

TEXT: The work gives a method for determining the extent of plastic deformation in sheets during edge-rolling operations. The method is based on the application of the principle of least energy of deformation. The sheets are rolled along their width (height if rolled vertically) or largest dimension which is of such size that the zones of plastic deformation do not reach the middle part of the sheet which, therefore, remains rigid and non-deformed of height $2h_x$ (Fig.1). It is assumed that no extension of sheet length occurs and all of the metal taken off the height goes to increase the thickness of layers which are in contact with the rolls. This problem is best solved in terms of velocities and not those of displacements: hence, instead of the work done by the external and internal forces their power is considered. It is

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GORODOVSKIY, A.F.; KOTEL'NIKOV, V.P.

The P 316 d.c. bridge. Izm.tekh. no.5:28-31 My '61. (MIRA 14:5)
(Bridge circuits)

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A161/A133

Selection of suitable functions for the...

parameters; $f_1(x,y,z)$ – "suitable" functions reflecting qualitatively the displacements pattern and satisfying the boundary zone conditions. The problems discussed as examples are: upsetting of cylindrical billets between flat plates; a parallelepiped between flat plates, [illegible] where the purpose is to determine the propagation of plastic deformation, with a simple axisymmetrical forging used as an example. The mathematical analysis of the individual cases ends with recommendations: 1) If the Ritz method is used, the suitable functions must be selected so as to reflect more or less completely the boundary conditions corresponding the purpose of investigation. 2) The system of suitable functions describing the deformed state in technological problems can be selected with a series of rough assumptions (uniform deformation, the hypothesis of flat sections, etc.). 3) When the propagation of displacements and deformation within the body has to be determined in detail, the suitable functions will be more complex and contain two or three variable parameters, and at the same time satisfy the boundary conditions more completely. There are 8 figures and 13 references: 12 Soviet-bloc and 1 non-Soviet-bloc.

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

SUBMITTED: April 30, 1960

Card 2/2

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A161/A133

AUTHORS: Tarnovskiy, I. Ya.; Vayeburd, R. A.; Levanov, A. N.; Pozdeyev, A. A.; Ganago, O. A., and Kotel'nikov, V. P.

TITLE: Selection of suitable functions for the utilization of the Ritz method in the theory of working metal by pressure

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no. 1, 1961, 73 - 83

TEXT: The article deals with the application of the Ritz method (Ref. 1: W. Ritz. Ueber eine neue Methode zur Loesung gewisser Variationsprobleme der mathematischen Physik. Journ. f. d. reine und angewandte Mathematik, Bd. 135, H. 1, 1908) for the calculation of different practical problems of pressure working. Such problems consist in determining the functions of displacement components, and the searched for functions are written in a series:

$$U_k = a_1 \cdot f_1(x,y,z) + a_2 \cdot f_2(x,y,z) + \ldots + a_n f_n(x,y,z), \qquad (5)$$

where $U_k$ is any of the coordinate axes; $a_i$ - are indefinite (variable)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V. P., Cand Tech Sci -- (diss) "Investigation of energy-power factors of rolling as affecting blooming, by means of variational principles." Magnitogorsk, 1960. 20 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Magnitogorsk Mining-Metallurgical Inst im G. I. Nosov); 120 copies; price not given; (KL, 51-60, 118)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

A New Method of Experimental Investigation of the State of Stress in the Working of Metals by Pressure SOV/163-59-2-23/48

There are 3 figures and 1 Soviet reference.

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

SUBMITTED: August 8, 1958

Card 2/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

18(7) SOV/163-59-2-23/48

AUTHORS: Tarnovskiy, I. Ya., Pozdeyev, A. A., Kotel'nikov, V. P., Puchkov, S. G.

TITLE: A New Method of Experimental Investigation of the State of Stress in the Working of Metals by Pressure (Novyy metod opytnogo issledovaniya napryazhennogo sostoyaniya pri obrabotke metallov davleniyem)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1959, Nr 2, pp 131 - 135 (USSR)

ABSTRACT: The method suggested is based on the investigation of the changes of artificial hollow spaces in metals under the influence of pressure. The signs of the stress which has acted on the metal can be determined in this way. Figure 1 gives an example. Two lead strips, one of which received a cylindric cavity bored in, were soldered up with Wood's alloy, and exposed to pressures in different directions. An expansion of the hollow space occurs by tensile stress, a narrowing by compressive stress. Lead strips with hollows were also soldered together and rolled (Fig 2). Figure 3 shows the deformations of the hollows after hammering.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

91-58-8-18/34

AUTHORS: Kotel'nikov, V.P., Technician; Berezovskiy, V.I., Fitter

TITLE: A Device for Testing Tachometers (Ustanovka dlya proverki takhometrov)

PERIODICAL: Energetik, 1958, Nr 8, pp 24 (USSR)

ABSTRACT: The device described consists of a gearing system driven by an electric drill and by which any number of rpms may be selected from 70 to 2,000 rpm. The assembly is connected to the tachometer to be tested and also to a collector-pulsator. This transforms direct current into alternating current with a pulse equal to the number of revolutions of the assembly. In turn, the ac current is fed to an electric timer which acts as a revolution counter. If the number of revolutions indicated on the scale of the tachometer coincides with the actual number of revolutions registered by the counter, the tachometer is functioning correctly. There is 1 diagram.

1. Tachometers--Testing equipment

Card 1/1

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KOTEL'NIKOV, Viktor Nikolayevich, kand.tekhn.nauk; LIOKUMOVICH, Khatskel' Khaimovich, kand.tekhn.nauk; PETRUNINA, Mariya Matveyevna, inzh.; SHVETSOVA, Tamara Petrovna, inzh.; FINGER, A.M., prepodavatel' tekhnikuma, retsenzent; STESHOV, I.I., inzh., nauchnyy red.; GRACHEVA, A.V., red.; PLEMYANNIKOV, M.N., red.; MEDVEDEV, L.Ya., tekhn.red.

[Technology of shoe manufacturing] Tekhnologiia obuvi. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po legkoi promyshl., 1959. 602 p. (MIRA 13:3)

(Shoe manufacture)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V.N.; TROKHIMOVSKAYA, M.N.; SMRONYEVA, G.V.

Effectiveness of producing non-drawn-over footwear. Leg. prom. 17 no.5:15-17 My '57. (MLRA 10:6)

(Shoe industry)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V. N. Cand Tech Sci

Dissertation: "Clip Mechanisms of Stretching Machines."

16 June 49

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

DENISOV, G.G.; KOTEL'NIKOV, V.M.; MATROKHIN, N.S.

Effect of volley perforation on the intactness of casing strings. Nefteprom. delo no.3:22-24 '65. (MIRA 18:10)

1. Volgogradskiy nauchno-issledovatel'skiy institut neftyanoy i gazovoy promyshlennosti.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

GABRIELYAN, A.G.; KOTEL'NIKOV, V.M.; LAVRENT'YEVA, V.S.

Characteristics of carbonate reservoir rocks in Carboniferous sediments of Stalingrad Province. Geol. nefti i gaza 5 no. 3:29-34 Mr '61. (MIRA 14:4)

1. Upravleniye Stalingradneftegaz.
(Stalingrad Province--Rocks, Carbonate)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

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SOV/9-59-4-6/11

Outlook for Oil and Gas in Devonian Deposits in the Tersinskaya Depression and Conditions of Oil Pool Formation in the Klenovskoye Upheaval

There are: 1 cross-section diagram and 3 Soviet references.

ASSOCIATION: TSNIL Stalingradskogo sovnarkhoza (TSNIL of the Stalingrad Sovnarkhoz)

Card 2/2

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

11(2,4) SOV/9-59-4-6/11

AUTHOR: Kotel'nikov, V.M.

TITLE: Outlook for Oil and Gas in Devonian Deposits in the Tersinskaya Depression and Conditions of Oil Pool Formation in the Klenovskoye Upheaval (Perspektivy neftegazonosnosti devonskikh otlozheniy v Tersinskoy vpadine i usloviya formirovaniya neftyanykh zależhey na Klenovskom podnyatii)

PERIODICAL: Geologiya nefti i gaza, 1959, Nr 4, pp 41-46 (USSR)

ABSTRACT: With reference to data given by A.G. Gabrielyan and S.P. Maksimov [Ref 1] and S.F. Fedorov [Ref 3], paleostructural analyses proved that oil pool formation in the Klenovskoye deposit was connected with trap formations. In order to confirm this theory the author undertakes an analysis of the paleostructural section over the whole Tersinskaya depression. Conditions of oil and gas pool formation are investigated and oil and gas bearing properties of the Devonian deposits are studied. It is stated that these deposits are expected to be most productive and that their exploration is an urgent task.

Card 1/2

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KOTEL'NIKOV, V. M.

7802. KOTEL'NIKOV, V. M.---Organizatsiya zimovki skota. Syktyvkar, Komi kn. izd., 1954. 20 s. s ill. 22 sm. 2000 ekz. 30 k.--- (55---4299)
P (636.083":24" (47.22)

SO: Knizhnaya Letopis', Vol. 7, 1955

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

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L 00777-67 EWT(m)/EWP(w)/EWP(v)/T/EWP(t)/ETI/EWP(k) JD/HM

ACC NR: AR6000441 SOURCE CODE: UR/0137/65/000/009/E005/E005

AUTHORS: Kraychik, M. M.; Motel'nikov, V. L.; Maksimov, V. N.

TITLE: The influence of technological factors on the brittle strength of welded constructions of a mobile assembly

SOURCE: Ref. zh. Metallurgiya, Abs. 9E36

REF SOURCE: Sb. Proyektir. svarn. konstruktsiy. Kiyev, Nauk. dumka, 1965, 410-425

TOPIC TAGS: brittleness, welding technology, impact stress

ABSTRACT: An estimate of resistance to brittle failure (BF) in a construction member subjected to impact loads should be attempted only on the basis of impact tests and not on static ones. Actual influence of the resistance to BF is contributed by the scope and sequence of welding operations. Preliminary loading at room temperature even at such stresses as 0.5 $\delta_s$ increases the resistance to BF up to the level of $\delta_s$. The most probable location for the BF to occur in a welded constructions is at the sections acted upon by the smallest stresses produced by external loading. Special methods are developed for determining the tendency of steel to suffer BF along the length of zone of thermal influences, according to the degree of brittleness imparted to this zone and according to the sensitivity of steel to being burned by electrodes. M. Frolova [Translation of abstract]

SUB CODE: 13, 11, 20

Card 1/1 awm

UDC: 621.791.001:539.4

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V.I.

The building of communism and geography. Vest. Mosk. un. Ser.5: Geog. 19 no.5:84-86 S-O '64. (MIRA 18:1)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, Vasiliy Leont'yevich; TUGARINOV, D.N., red.; KONOVALYUK, I.K., mlad. red.

[Southern belt of the European U.S.S.R.; a study of its nature] IUzhnaia polosa Evropeiskoi chasti SSSR; ocherk pri - rody. Moskva, Geografgiz, 1963. 220 p. (MIRA 17:6)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KRAYCHIK, M.M., kand.tekhn.nauk; KOTEL'NIKOV, V.L., inzh.

Weldability of converter steel and the development of methods of investigation. Trudy TSNII MPS no.252:54-83 '63. (MIRA 16:8)
(Steel--Welding)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

SAUSHKIN, Yu.G.; SOLOV'YEV, A.I.; YEFREMOV, Yu.K.; KOTEL'NIKOV, V.L.; IOFA, L.Ye.; DANTSIG, B.M.; BARKOV, S.A.; GRUZINSKAYA, V.A.; BARKOVA, G.Ye.

V.A.Kondakov, 1886-1959; obituary. Vop. geog. no.54:174-176 '61. (MIRA 15:3)

(Kondakov, Vadim Aleksandrovich, 1886-1959)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

BARKOV, Aleksandr Sergeyevich [deceased]. Prinimali uchastiye: ARMAND, D.L.; YEFREMOV, Yu.K.; KOTEL'NIKOV, V.L.; TITOV, A.G.; YANIKOV, G.V.. SMIRNOVA, N.P., red.; TSVETKOVA, S.V., tekhn.red.; KREYS, I.G., tekhn.red.

[Glossary of physical geography; manual for teachers of geography] Slovar'-spravochnik po fizicheskoi geografii; posobie dlia uchitelei geografii. Izd.4., perer. i dop. Moskva, Gos.uchebno-pedagog. izd-vo M-va prosv. RSFSR, 1958. 329 p. (MIRA 12:4)
(Physical geography--Dictionaries)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V.L.

A.S. Barkov in the pedagogical school of higher learning. Vop. geog. no.40:44-48 '57. (MLRA 10:8)
(Barkov, Aleksandr Sergeevich, 1873)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, VA. L.

ZLATOVA, Yelena Viktorovna; KOTEL'NIKOV (Vl.Sebryakovskiy), Vasiliy Leont'yevich; MAMAYEVA, O., redaktor; PETROVA, E., tekhnicheskiy redaktor

[Journey through Moldavia] Puteshestvie po Moldavii. Moskva, Izd-vo TsK VLKSM "Molodaia gvardiia," 1957. 303 p. (MLRA 10:9)
(Moldavia--Description and travel)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V. L.

VASIL'YEVA, I.V., dots.; DAVYDOVA, M.I., dots.; KAMENSKIY, A.I., dots.; KOTEL'NIKOV, V.L., dots.; TUSHINSKIY, G.K., prof.; YATSENKO, A.A., dots.; KREYS, I.G., tekhn.red.; SHCHEPTEVA, T.A., tekhn.red.

[Programs of pedagogical institutes; physical geography of the U.S.S.R.] Programmy pedagogicheskikh institutov; fizicheskaia geografiia SSSR. [Moskva] Uchpedgiz, 1957. 22 p. (MIRA 11:3)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye vysshikh i srednikh pedagogicheskikh uchebnykh zavedenii.
(Physical geography--Study and teaching)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTELNIKOV, V.L.

Scientific-atheistic instruction of students in geography. Geog. v shkole 18 no.1:1-5 Ja-F '55. (MLRA 8:3)
(Religion) (Geography-Study and teaching)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V. L.

Geography - Study and Teaching

Geography department of the Moscow V. I. Lenin State Pedagogical Institute, Izv. AN SSSR. Ser. geog. No. 2, 1952

9. Monthly List of Russian Accessions, Library of Congress, July 1952. Unclassified.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V. L.

Kotel'nikov, V. L. "Transformation of the Sal'skiy steppe," Geografiya v shkole, 1949, No. 1, p. 57-61

SO: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 14, 1949).

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V. L.

USSR-MOLDAVIAN SSR/Geographic Studies Jan/Feb 1948
6201.0200

"The Moldavian SSR, "1 V. L. Kotel'nikov, 11 pp

"Geog v Shkole" No. 1

Describes physical characteristics of Moldavian SSR, established on 2 Aug 1940 from parts of Moldavian ASSR and Bessarabia. Gives detailed description of country's natural phenomena, resources, population, inherent importance from its geographical location. Includes brief outline of the country's historical and economic development, and maps showing distribution of industrial and agricultural enterprises.

ID 20G105

9. Monthly List of Russian Accessions, Library of Congress, _____1953. Unclassified.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KRAYCHIK, M.M., kand.tekhn.nauk; MAKSIMOV, V.N., inzh.; Prinimali uchastiye: KOTEL'NIKOV, V.L.; KUZNETSOV, V.S.; SKOMOROKHOV, S.T.

Effect of certain factors on the resistance of welded structures to brittle failure. Svar. proizv. no.4:6-9 Ap '63. (MIRA 16:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta Ministerstva putey soobshcheniya.
(Structural frames--Welding)
(Steel, Structural--Brittleness)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KRAYCHIK, M.M., kand.tekhn.nauk; KOTEL'NIKOV, V.L., inzh.

Effect of various factors on the reaction of steel when burned by an electrode. Trudy TSNII MPS no.252:155-183 '63. (MIRA 16:8)
(Steel--Welding)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

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L 10387-63
ACCESSION NR: AP3000081

a measured explosive charge. Strain is measured by a wire strain gauge, registered on the screen of an oscillograph, and recorded photographically. In high-temperature tests the specimens are heated by a furnace which is quickly removed just before the explosive charge is detonated. In subzero testing the specimens are cooled in liquid nitrogen or a mixture of liquid nitrogen and benzene. Orig. art. has: 8 figures.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 17Jun63 ENCL: 00

SUB CODE: 00 NO REF SOV: 004 OTHER: 002

Card 2/2 ph

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

L 10387-63 EWP(r)/EWT(m)/BDS--AFFTC

ACCESSION NR: AP3000081 S/0182/63/000/005/0027/0031

AUTHOR: Kononenko, V. G.; Kushnarenko, S. G.; Kotel'nikov, V. I.; Reyzman, D. A.; Checheta, I. A.

TITLE: New impact testing machines for high-rate mechanical testing of materials

SOURCE: Kuznechno-shtampovochnoye proizvodstvo, no. 5, 1963, 27-31

TOPIC TAGS: impact testing machines, explosion-actuated machines, high deformation rates, wide temperature range, subzero tests

ABSTRACT: The Khar'kovskiy aviatsionnyy institut (Khar'kov Aviation Institute) has built and tested two new explosion-actuated machines for high-rate tension tests of various materials over a wide temperature range. The first, a telescopic-type machine, is capable of testing at deformation rates of 15 to 300 m/sec and temperatures of -196 to +1200C. The second, a lever-type machine, was successfully tested in the same temperature range at deformation rates of 10 to 50 m/sec. At higher deformation rates the telescopic-type machine gives better results than the lever type. In both, loading is effected by detonating

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KOTEL'NIKOV, V.L.

Tectonic fracturing in the southern region of the Russian Platform and several deductions for the study of landforms. Uch. zap. MGPI 120:75-82 '58. (MIRA 16:8)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KRAYCHIK, M.M., kand.tekhn.nauk; KOTEL'NIKOV, V.L., inzh.

Investigating the weldability of converter steel. Svar.proizv. no.11:4-7 N '62. (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta Ministerstva putey soobshcheniya.
(Steel—Welding)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

SHCHAPOV, N.P., doktor tekhn.nauk, prof.; KRASOVSKIY, A.I., kand.tekhn. nauk; VOLOKHVYANSKAYA, E.S., kand.tekhn.nauk; KRAYCHIK, M.M., kand.tekhn.nauk; MAKSIMOV, V.N., inzh.; KOTEL'NIKOV, V.L., inzh.; KUZNETSOV, V.A., inzh.

Properties and the weldability of St. 3kp steel with a high arsenic content. Svar. proizv. no.2:1-7 F '62. (MIRA 15:2)
(Steel alloys--Welding)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V.L.

Practice in interpreting the influence of society on the geographical environment. Uch. zap. MGPI 120:57-74 '58. (MIRA 16:8)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

BABICHEV, A.P.; KOTEL'NIKOV, V.K., dots., inzh., retsenzent;
YELIZAVETIN, M.A., kand. tekhn. nauk, dots., red.

[Honing] Khoningovanie. Moskva, Mashinostroenie, 1965.
94 p. (MIRA 18:2)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V.K.; KHRISTOFOROV, D.G.; FREZEROV, G.V., prof., retsenzent; KRUGLYAK, L.A., inzh., red.; SEMENCHENKO, V.A., red.izd-va; MAKAROVA, L.A., tekhn. red.

[Attachments for the manufacture of metal-cutting tools] Prisposobleniia dlia proizvodstva rezhushchikh instrumentov. Moskva, Mashgiz, 1963. 189 p. (MIRA 17:3)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V.K.

KOTEL'NIKOV, V.K.; Fadyushin, I.L.

Machining cast iron casings by assembled reamers and boring tips equipped with hard alloys. Stan.i instr. 28 no.3:31-33 Mr '57. (MLRA 10:5)

(Machine-shop practice) (Reamers)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

AUTHORS: Kotel'nikov, V.K. and Fadyashin, I.L. 598

TITLE: Built-up Reamers and Boring Disc Cutters provided with Carbide Inserts for the machining of Cast Iron Housing Components. (Razvertki Sbornyye I Rastochnyye Plastiny, Osnashchennyye Tverdym Splavom, Dlya Korpusnykh Detaley Iz Chuguna).

PERIODICAL: "Stanki i Instrument" (Machine Tools and Cutting Tools, No.3, 1937, pp.31-33 (U.S.S.R.).

ABSTRACT: In the All Union Scientific Research Institute of the Tool Industry (VNII) designs of built-up adjustable reamers and floating disc shaped boring cutters with carbide cutting tips have been developed which permit repetition work to class 1 and class 2 precision and are claimed to reduce machining time by a factor of two or three. Designs for reamers between 40 and 300 mm diameter are illustrated in cross-section. The design of boring disc cutters between 70 and 400 mm diameter is also illustrated. In both tools regrinding is preceded by the shimming of the carbide tips to restore the original size. Detailed instructions for re-sharpening are given.

There are 4 illustrations.

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KONONENKO, V.G.; KUSHNARENKO, S.G.; KOTEL'NIKOV, V.I.; RAYZMAN, D.A.; CHECHETA, I.A.

New impact testing machines for rapid mechanical testing of materials. Kuz.-shtam.preizv. 5 no.5:27-31 My '63. (MIRA 16:9)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

PIKALOV, M.A., starshiy prepodavatel'; KOTEL'NIKOV, V.I., assistent

Schools are able to do it. Khim.v shkole 14 no.5:77-78 S-O '59. (MIRA 12:12)

1. Kafedra pochvovedeniya i agrokhimii Altayskogo sel'skokhozyaystvennogo instituta.
(Soil chemistry)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V.I.

Forms of organic matter and nitrogen in Chestnut and Chernozem soils of the Altai Territory. Izv.Sib.otd. AN SSSR no.9:119-125 '58. (MIRA 11:11)

1. Altayskiy sel'skokhozyaystvennyy institut.
(Altai Territory--Humus)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

BURLAKOVA, L.M.; KOTEL'NIKOV, V.I.; STRUGALEVA, Ye.V.; AZARINA, V.A.

Distribution of erosion in the Altai Territory. Izv. Alt. otd. Geog. ob-va SSSR no.5:89-90 '65. (MIRA 18:12)

1. Altayskiy sel'skokhozyaystvennyy institut.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

ORLOVSKIY, N.V.; KOTEL'NIKOV, V.I.; KUSKOVA, Ye.S.; OSTROVLYANCHIK, M.F.

Work of the PT-2-30 Three-level plow on Solonetz soils. Trudy Biol. inst. Sib. otd. AN SSSR no.9:200-212 '62 (MIRA 17:8)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOGAN, B.Ya., doktor tekhn. nauk, otv. red.; KOTEL'NIKOV, V.A., kand. tekhn. nauk, red.; FEL'DBAUM, A.A., doktor tekhn. nauk, red.; KHRAMOY, A.V., kand. tekhn. nauk [deceased]; TSYPKIN, Ya.Z., doktor tekhn. nauk, red.; SHILEYKO, A.V., kand. tekhn. nauk, red.

[Computer technology in control; collection of the transactions] Vychislitel'naia tekhnika v upravlenii; sbornik trudov. Moskva, Nauka, 1964. 221 p. (MIRA 17:12)

1. Vsesoyuznaya konferentsiya seminara po teorii i metodam matematicheskogo modelirovaniya. 3d, 1962.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOGAN, B.Ya., kand. tekhn. nauk, otv. red.; KOTEL'NIKOV, V.A., kand. tekhn. nauk, red.; KHRAMOY, A.V., kand. tekhn. nauk, red.; TSYPKIN, Ya.Z., doktor tekhn. nauk, red.; SHILEYKO, A.V., inzh., red.; SHILEYKO, T.I., red. izd-va; MAKUNI, Ya.V., tekhn. red.

[Combined (analog - digital) computers]Kombinirovannye vychislitel'nye mashiny; trudy. Moskva, Izd-vo Akad.nauk SSSR, 1962. 294 p. (MIRA 16:4)

1. Vsesoyuznaya konferentsiya-seminar po teorii i metodam matematicheskogo modelirovaniya. 2d, Moscow, 1961.
(Electronic computers)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

TSYPKIN, Ya.Z., doktor tekhn.nauk, otv.red.(Moskva); GAVRILOV, M.A., doktor tekhn.nauk, red.; DOLGOLENKO, Yu.V., doktor tekhn.nauk, red.(Leningrad); KOTEL'NIKOV, V.A., kand.tekhn.nauk, red.; LEHNER, A.Ya., doktor tekhn.nauk, red.; MOROSANOV, I.S., red. (Moskva); POSPELOV, G.S., doktor tekhn.nauk, red.; FEL'DBAUM, A.A., doktor tekhn.nauk, red.; KHRAMOY, A.V., kand.tekhn.nauk, red.; PODGOYETSKIY, M.L., red.izd-va; MARKOVICH, S.G., tekhn.red.

[Theory and application of discrete automatic control systems] Teoriia i primenenie diskretnykh avtomaticheskikh sistem; trudy konferentsii. Moskva, Izd-vo Akad.nauk SSSR, 1960. 572 p. (MIRA 13:7)

1. Konferentsiya po voprosam teorii i primeneniye diskretnykh avtomaticheskikh sistem. Moscow, 1958.
(Automatic control)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

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PA - 2832

The Improvement of Stabilization of Control Systems with Bounded Speed of the Servomotor by means of a Memory Device.

SAR with a regulator having delay and limited velocity of the acting impulse. By the use of the memory device the phase of the coordinate of the acting regulator impulse with limited velocity coincides with the phase of the control signal. Thus it is possible even with a delay in the regulator, 1) to increase the amplification coefficient of the system threefold, and 2) to increase the value of the amplitude practically infinitely without impairing the stability of the SAR.
(15 illustrations and 7 citations from Slav publications)

ASSOCIATION: Not given
PRESENTED BY:
SUBMITTED:
AVAILABLE: Library of Congress.

Card 2/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

AUTHOR: KOTEL'NIKOV, V.A. PA - 2832

TITLE: The Improvement of Stabilization of Control Systems with Bounded Speed of the Servomotor by means of a Memory Device. (Uluchsheniye stabiliuatsii sistem avtoregulirovaniya pri ogranichennoy skorosti servoprivoda pri pomoshchi zapominayushchego ustroystva, Russian)

PERIODICAL: Avtomatika i Telemekhanika, 1957, Vol 18, Nr 4, pp 289 - 303 (U.S.S.R.)
Received: 5 / 1957 Reviewed: 6 / 1957

ABSTRACT: The questions of securing stability and increasing stable precision of the automatic control system (SAR) are investigated. SAR consists of an object and a regulator with rigid feedback if unlimited initial fluctuations exist. It is assumed that the regulator has a limited maximum speed, efficiency, and sensitiveness of the acting impulse, and that the regulator has a coefficient of the feedback amplification limited by a delay in the elements of the regulator. Scheme and principle of the mode of operation of the memory- and switching device are described. Linearization of the non-linear speed dependence of velocity on the input signal is carried out, after which the equations and the characteristics of the system used for investigating the stability of SAR and for modelling are set up. There follow investigations of the periodic modes of operation in SAR with a regulator without delay, but with limited speed of the acting regulator impulse, modelling of SAR with a memory- and switching device, and investigations of the periodic modes of operation in

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KOTEL'NIKOV, V.A. (Moskva); KHOKHLOV, V.A. (Moskva)

Electro-hydraulic output unit for d.c. analog computers.
Avtom. i. telem. 17 no.7:601-610 Jl '56. (MLRA 9:10)

(Calculating machines)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

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KotEL'NIKOV, V.A.

AYZERMAN, M.A., dokt. tekhn. nauk, redaktor; VORONOV, A.A., kandidat tekhn. nauk, redaktor; KOGAN, B.Ya., kandidat tekhn. nauk, redaktor; KOTEL'NIKOV, V.A., kandidat tekhn. nauk, redaktor; LETOV, A.M., dokt. fiz.-mat. nauk, redaktor; LOSSIEVSKIY, V.L., dokt. tekhn. nauk, redaktor; KHRAMOY, A.V., kand. tekhn. nauk, redaktor; TRAPEZNIKOV, V.A., redaktor; MEYEROV, M.V., dokt. tekhn. nauk, redaktor; NAUMOV, B.N., redaktor; PETROV, B.N. redaktor; SOLODOVNIKOV, V.V., dokt. tekhn. nauk, redaktor; TSYPKIN, Ya.Z. dokt. tekhn. nauk, redaktor PEVZNER, R.S., tekhn. redaktor.

[Proceedings of the Second All-Union Conference on the Theory of Automatic Control.] Trudy Vtorogo Vsesoiuznogo soveshchaniia po teorii avtomaticheskogo regulirovaniia. Moskva, Izd-vo Akad. nauk SSSR. [Vol. 1 Problem of continuous and periodic operations in the theory of automatic control] Vol.1 Problema ustoichivosti i periodicheskikh rezhimov v teorii avtomaticheskogo regulirovaniia. 1955. 603 p. (MLRA 8:8)

1. Chlen korrespondent AN SSSR (for Trapeznikov, Petrov) 2. Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

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KOTEL'NIKOV, V.A.

AYZERMAN, M.A., doktor tekhnicheskikh nauk, redaktor; VORONOV, A.A., kandidat tekhnicheskikh nauk, redaktor; KOGAN, B.Ya., kandidat tekhnicheskikh nauk, redaktor; KOTEL'NIKOV, V.A., kandidat tekhnicheskikh nauk, redaktor; LETOV, A.M., doktor fiziko-matematicheskikh nauk, redaktor; LOSSIYEVSKIY, V.L., doktor tekhnicheskikh nauk, redaktor; MEYEROV, M.V., doktor tekhnicheskikh nauk, redaktor; NAUMOV, B.N., redaktor; PETROV, B.N., redaktor; SOLODNIKOV, V.V., doktor tekhnicheskikh nauk, redaktor; TRAPEZNIKOV, V.A., redaktor; KHRAMOY, A.V., kandidat tekhnicheskikh nauk, redaktor; TSYPKIN, Ya.Z., doktor tekhnicheskikh nauk, redaktor; PEVZNER, R.S., tekhnicheskiy redaktor.

[Transactions of the Second All-Union Conference on the Theory of Automatic Control. Trudy vtorogo Vsesoiuznogo soveshchaniia po teorii avtomaticheskogo regulirovaniia. Moskva. Vol.2 [Problem of quality of dynamic precision in the theory of automatic control] Problema kachestva i dinamicheskoi tochnosti v teorii avtomaticheskogo regulirovaniia. 1955. 536 p. [Microfilm] (MLRA 9:1)

1. Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki. 2. Chlen-korrespondent AN SSSR (for Petrov and Trapeznikov) (Automatic control)

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AYZERMAN, M.A. doktor tekhnicheskikh nauk, redaktor (Cont'd) Card 2.

Vol.3 [Methods and means of experimental research on systems of automatic control. Bibliography on the theory of automatic control and related problems] Metody i sredstva eksperimental'nogo issledovaniia sistem avtomaticheskogo regulirovaniia. Bibliografiia po teorii avtomaticheskogo regulirovaniia i smezhnym voprosam. 1955. 351 p. (MLRA 9:1)

1. Chlen-korrespondent AN SSSR(for Petrov, Trapeznikov) 2. Vsesoyuznoye soveshchaniye po teorii avtomaticheskogo regulirovaniya 2d, Moscow, 1953.

(Automatic control) (Bibliography--Automatic control)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V.A.

AYZERMAN, M.A., doktor tekhnicheskikh nauk, redaktor; VORONOV, A.A., kandidat tekhnicheskikh nauk, redaktor; KOGAN, B.Ya., kandidat tekhnicheskikh nauk, redaktor; KOTEL'NIKOV, V.A., kandidat tekhnicheskikh nauk, redaktor; LETOV, A.M., doktor fiziko-meditsinskikh nauk, redaktor; LOSSIYEVSKIY, V.L., doktor tekhnicheskikh nauk, redaktor; MEYEROV, M.V., doktor tekhnicheskikh nauk, redaktor; NAUMOV, B.N. redaktor; PETROV, B.N., redaktor; SOLODNIKOV, V.U, doktor tekhnicheskikh nauk, redaktor; TRAPEZNIKOV, V.A., redaktor; KHRAMOY, A.V., kandidat tekhnicheskikh nauk, redaktor; TSYPKIN, Ya.Z., doktor tekhnicheskikh nauk, redaktor; VORONOV, A.A., redaktor; PEVZNER, R.S., tekhnicheskiy redaktor.

[Proceedings of the Second All-Union Conference on the theory of automatic control] Trudy vtorogo Vsesoyuznogo soveshchaniia po teorii avtomaticheskogo regulirovaniia.

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V. A. KOTEL'NIKOV,

"Prolonged Continuous Stability of an Airplane with Type AVP-12 Autopilot"
Trudy LII, No. 2, Institute of Flight Studies, W17764, 17 April 1951

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KOTEL'NIKOV, V.A.

Prodol'naia dinamicheskaia ustoichivost' samoleta s avtopilotom. (Tekhnika vozdushnogo flota, 1941, no.1, p.27-31)

Title tr.: Longitudinal dynamic stability of an aircraft with an automatic pilot.

TL504.T4 1941

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V. A., Docent Dr. Technical Sci.

"Theory of Potential Resistance to Fluctuating Interference." Sub 24 Jan 47, Moscow Order of Lenin Power Engineering Inst imeni V. M. Molotov

Dissertations presented for degrees in science and engineering in Moscow in 1947

SO: Sum No. 457, 18 Apr 55

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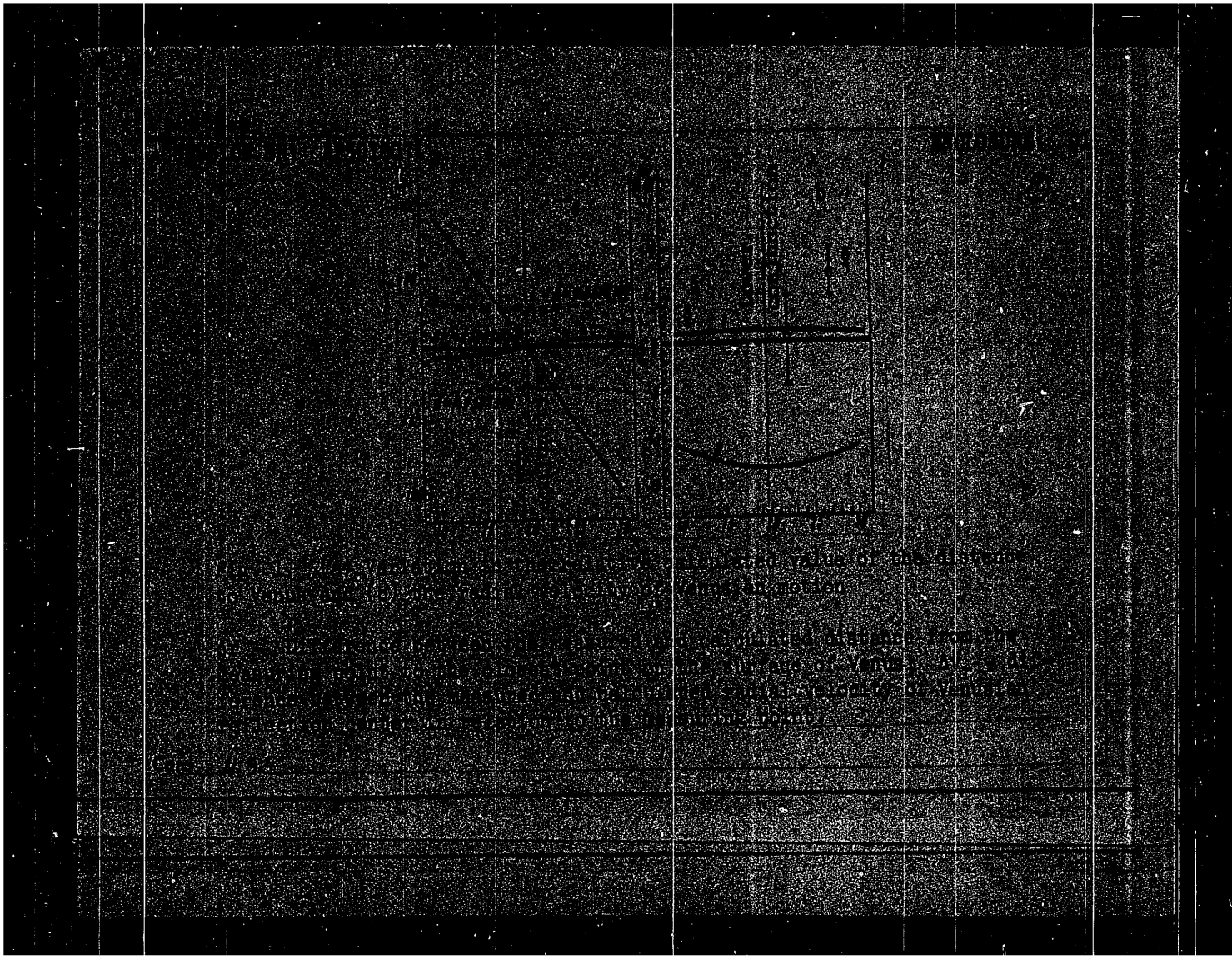

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[illegible]

[illegible] UR/0020/65/163/001/0050/0053

AUTHOR: [illegible]

TITLE: Radar observations of Venus in the Soviet Union in 1964

SOURCE: AN SSSR. Doklady, v. 163, no. 1, 1965, 50-53

TOPIC TAGS: radio wave reflection, Venus radar observation, radio emission measurement, radar observation, radio astronomy

ABSTRACT: Radar observations of Venus at 40 cm were conducted between 11 and 30 June 1964 by the Institute of Radio Engineering and Electronics of the Academy of Sciences USSR. Frequency modulation and periodic linear frequency modulation of radiated signals were employed. Paramagnetic and parametric amplifiers were used at the receiver output. Signal analysis was performed by means of a 20-channel analyzer with a filter bandwidth of [illegible] cps for each channel. The reflected signal spectrum and measurements of the radial velocity of the motion of Venus were determined on the basis of the Doppler shift of the signal spectrum of the central frequency in relation to the radiation frequency. Frequency manipulation

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

ACCESSION NR: AP4034534 S/0020/64/155/005/1037/1038

AUTHOR: Kotel'nikov, V. A. (Academician); Apraksin, L. V.; Dubrovin, V. M.; Kislik, M. D.; Kuznetsov, B. I.; Petrov, G. M.; Rzhiga, O. N.; Frantsesson, A. V.; Shakhovskoy, A. M.

TITLE: Radar ranging of the Planet Jupiter

SOURCE: AN SSSR. Doklady*, v. 155, no. 5, 1964, 1037-1038

TOPIC TAGS: Jupiter radar ranging, Jupiter reflection coefficient, radio astronomy, Jupiter, Doppler effect

ABSTRACT: The radar ranging of Jupiter was undertaken in order to investigate the propagation of radiowaves over long distances and for the determination of reflecting properties of Jupiter's surface. The power received by the planet's surface was 13 w. The time for double passage of the signal was 1 hr, 6 sec, and the frequency was about 700 mc. Two consecutive signals differed by 62.5 cycles. The duration of the signals and the pauses was about 4 sec. The Doppler effect caused by the relative motion and rotation of Earth was compensated by an arrangement which linearly changed the heterodyne of the sender. The noise was



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ARTSIMOVICH, L.A., akademik; KELDYSH, M.V., akademik; KAPITSA, P.L., akademik; VUL, B.M.; VERESHCHAGIN, L.F.; PISTOL'KORS, A.A.; SHCHUKIN, A.N., akademik; SKOBEL'TSYN, D.V., akademik; ALEKSANDROV, A.P., akademik; AMBARTSUMYAN, V.A., akademik; ZEL'DOVICH, Ya.B.; SEMENOV, N.N., akademik; KOTEL'NIKOV, V.A., akademik; LIFSHITS, I.M.; VEKSLER, V.I., akademik; GINZBURG, V.L.; MILLIONSHCHIKOV, M.D., akademik

Some problems in the development of modern physics; discussion of the work of the Department of General and Applied Physics. Vest. AN SSSR 35 no.2:3-46 F '65. (MIRA 18:3)

1. Chleny-korrespondenty AN SSSR (for Vul, Vereshchagin, Pistol'kors, Lifshits, Ginzburg).

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V., akad.; SHAKHOVSKA, A.; [illegible], [illegible], [illegible]

Radio beams investigate the planets. Priroda [illegible] no.6: 78-79 N-D '64.

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L 6975-65
ACCESSION NR: AP4045505

between the values obtained for the astronomical unit and the radar frequency employed indicates that any effect of the interplanetary medium on the measurements is within the limits of experimental error. The more accurate determination of the orbit and size of Venus by prolonged radar probing (October-December, 1962) is discussed and the distances to this planet obtained by the authors are presented. The variation of the distance then observed was 40 x 10^6 km. The investigation of the surface of planets by measuring the reflection coefficient of the surface (albedo) is discussed and the results obtained for Venus in the SSSR ($\lambda$=40 cm) and in the USA ($\lambda$=68 and 12.6 cm) are discussed and compared. The effect of the distance, radar frequency, and the angle of incidence on the intensity of the reflected radar wave is discussed. Comparison of the data obtained has shown that for $\lambda$=40 cm the surfaces of Venus and of the Moon have inhomogeneities of about the same structure. The radar study of Mars in the USA and the SSSR in 1963 is also discussed. The mean reflection coefficient of Mars as found by the authors is 7% (the same as in the case of the Moon), while from the data obtained in the USA this coefficient is half the above value. This may be due to a change in the reflection coefficient of the planet's surface with frequency. The character of the spectrum of the reflected wave indicates the presence on Mars of large plain regions. Radar measurements on the period of rotation of Venus, made in the SSSR and USA in 1962, are then discussed; the good agreement in the periods of rotation (200-300 earth days) computed from the data obtained at different frequencies

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

ACCESSION NR: AP4025905

S/0030/64/000/002/0039/0043

AUTHOR: Kotel'nikov, V. A. (Academician)

TITLE: Radio location of planets

SOURCE: AN SSSR. Vestnik, no. 2, 1964, 39-43

TOPIC TAGS: radio location, astronomical unit, albedo, Venus, Mercury, Mars

ABSTRACT: A general survey is made of values of the astronomical unit obtained both by radio location and by astronomical methods through 1961. The radio location of Venus at inferior conjunction in 1962 is discussed. The data indicated a value for the astronomical unit of 149 597 900 km and 6020 km for the radius of Venus. Doppler shift measurements indicated the period of Venus's rotation is between -200 and -300 days (i.e., retrograde). Radio location of Mercury and Mars in 1962 and 1963 respectively gave values of the astronomical unit which were less accurate than (but did not disagree with) the value obtained from the Venus measurement. The albedos of the observed planets were found to be: for Mercury- about the same as the moon, for Venus - 12-15% and for Mars - up to 15%. Orig. art. has: 4 diagrams and 1 table.

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L 31255-63

ACCESSION NR: AP3004417

10

differing by 62.5 cps. The signals were recorded on a magnetic tape together with a 2000-cps oscillation, which served as a scale. Receiver sensitivity was calibrated before and after operation on the basis of Cassiopeia-A discrete-source radiation. The correction for frequency shift due to the Doppler effect was regulated by an electronic digital frequency meter. In all, 99 observations were made, and the signal reflected from Mars was reliably detected on the nights of February 7—8 (28 observations) and February 8—9 (20 observations). The results of spectral analysis of these 48 observations, carried out with 4-cps filters and a storage time of 8.5 hr, are shown in Fig. 1 of the Enclosure. In the reflected signal spectrum, there is a narrowband component whose energy exceeded by 4 times the RMS measurement error caused by noise. The average reflection coefficient, determined as the ratio of the reflected-signal energy to received-signal energy under the assumption that Mars was an even, ideally conductive sphere, was found to be 7%. "The authors thank L. V. Apraksin, V. O. Voytov, M. M. Dedlovskiy, G. A. Zhurkina, A. M. Lukin, M. M. Sinodkin, B. A. Stepanov, A. V. Trantsesson, D. M. Tsvetkov, and I. A. Sharabarin for their assistance." Orig. art. has: 3 figures, 1 table, and 1 formula.

Association: Inst. of Radio Engineering and Electronics

Card 2/12

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

L 14255-63 EWT(1)/FBD/FCC(w)/BDS/ESC-2/EED-2/ES(v) AFFTC/APGC/ASD/
ESD-3 Pe-4/Pi-4/Pj-4/Pk-4/Pl-4/Pm-4 PT-2/WR

ACCESSION NR: AP3004417 S/0020/63/151/004/0811/0814 109 98

AUTHOR: Kotel'nikov, V. A.; Dubrovin, V. M.; Dubinskiy, B. A.; Kislik, M. D.; Kuznetsov, B. I.; Petrov, G. M.; Rabotyagov, A. P.; Rzhiga, O. N.; Shakhovskoy, A. M.

TITLE: Radar observations of the planet Mars 24 in the Soviet Union

SOURCE: AN SSSR, Doklady*, v. 151, no. 4, 1963, 811-814

TOPIC TAGS: Mars radar observations, Mars reflected-signal spectrum, Mars Doppler-frequency shift, Mars rotation time, Mars reflection coefficient

ABSTRACT: Radar observations of Mars' northern hemisphere from 14°30' to 14° latitude and from 310 to 360° and from 0 to 140° longitude were carried out in the Soviet Union on 6—10 February 1963 at a frequency of approximately 700 Mc. The polarization of radiated waves was circular, with antenna polarization changing to linear during reception. The energy of the signal incident on the visible surface of Mars was 1.2 w. Both transmission and reception lasted approximately 11 minutes. The signal had the shape of alternate rectangular transmissions and intervals of a duration of 4.096 sec each, at two frequencies

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L 12931-63
ACCESSION NR: AP3003645

spectrum of reflected signals plotted on the basis of the sum of measurements at both frequencies radiated by the transmitter is shown in Fig. 1a of Enclosure. The spectrum was analyzed by filters with a passband of 1 cps. The frequency values of analyzer filter tunings f in relation to the frequency of central filter $f_0$ are plotted along the abscissa, while value p, representing the ratio of reflected signal power in each filter band to the signal power in the central filter band, is plotted along the ordinate. Dotted lines show the RMS value of measurement errors caused by noise. Except for the central filter, which yields a higher signal level, the reflected signal spectrum may be approximated by the exponential function

$$p = 0.37 \exp(-0.42|f-f_0|).$$

The reflection coefficient of Venus measured on the basis of reflected signal energy within 20 cps varied during the two-month period between 12 and 18%. In the 1-cps band reflected energy was lower than total energy by a factor of 2.5 to 3. The spectrum of the broadband component of the reflected signal observed previously was also observed. Here the transmitted signal consisted of constant periodic transmissions whose frequencies differed from each other by 2000 cps and whose duration was 4.096 sec. The analyzer filter passband was 100 cps. The measurements showed a strong probability of the presence of the broadband component

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Inst of Radio Engineering & Electronics

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L 12933-63 EWT(1)/FBD/FCC(w)/BDS/EEC-2/EED-2/ES(v) AFFTC/AFMDC/APGC/ASD/
ESD-3 Pe-4/Pi-4/Pj-4/Pk-4/Pl-4/Pm-4 PT-2/GW/WR

ACCESSION NR: AP3003845 S/0020/63/151/003/0532/0535 117 102

AUTHOR: Kotel'nikov, V. A. (Academician); Dubrovin, V. M.; Dubinskiy, B. A.; Kislik, M. D.; Kuznetsov, B. I.; Lishin, I. V.; Morozov, V. A.; Petrov, G. M.; Rzhiga, O. N.; Sy*tsko, G. A.; Shakhovskoy, A. M.

TITLE: Radar observations of Venus in the Soviet Union in 1962

SOURCE: AN SSSR. Doklady*, v. 151, no. 3, 1963, 532-535

TOPIC TAGS: radar observation, Venus observation, average reflected signal spectrum, reflection coefficient, broadband component, frequency-modulated reflected signal, reflected signal envelope, noise envelope

ABSTRACT: From 20 October to 21 December 1962, radar observations of Venus were made, each of a duration of 4.5 to 7 min. The radar employed was the same used in 1961 observations but with its sensitivity improved by a factor of 6 by means of a paramagnetic ruby amplifier placed at the receiver input and through an increase in transmitter power. In order to eliminate the average noise level in the received signal, the frequency of the transmitted signal was shifted 62.5 cps every 4.096 sec. The frequency spectrum of the reflected signals was recorded on magnetic tape and investigated by means of a 20-channel analyzer. The average

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L 15707-63 EWT(1)/FSD/FCS(w)/BDS/ES(w)/FWC-2 AFFTC/ESD-3 Pi-4/Pe-4
ACCESSION NR: AT3007034 S/2560/63/000/017/0101/0106 GW/PT-2

AUTHOR: Kotel'nikov, V. A.; Dubinskiy, B. A.; Kislik, M. D.; Tsvetkov, D. M.

TITLE: Precise determination of the astronomical unit based on radar returns from Venus in 1961

SOURCE: AN SSSR. Iskusst. sputniki zemli, no. 17, 1963, 101-106

TOPIC TAGS: astronomical unit, Venus, Venus probe, Venus radar echo, Venus radar signal, Venus radar return

ABSTRACT: A revised value for the astronomical unit (A) is arrived at from calculations on the basis of radar returns from Venus in April 1961. The radar measurements were conducted by the Institut radiotekhniki i elektroniki, AN SSSR (Institute of Radio Engineering and Electronics, Academy of Sciences SSSR) and yielded a more accurate value of A than previously obtained from Venus radar echoes in 1958 and 1959 because of the higher transmitting power [not specified] that was used. The measurement method is also superior to that using orbital data from an artificial satellite such as Pioneer V, since the ephemeris of the satellite is not known as accurately as that of Venus. Values of A calculated on the basis of signal round-trip time were found to be more accurate than those

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L 10185-63

ACCESSION NR: AT3007033

passed from dark to sunlight, when the period of signal polarity reversal decreased from 40 sec to 10 sec over a 35-min interval. The report includes sample recordings and photographs of the 20- and 40-Mc antennas. Orig. art. has 8 figures.

ASSOCIATION: none

SUBMITTED: 16Jun62 DATE ACQ: 11Oct63 ENCL: 01

SUB CODE: AS, GE NO REF SOV: 001 OTHER: 000

Card 4/4

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L 18186-63

ACCESSION NR: AT3007033

before it was stabilized to enable it to take photographs of the moon, after which it resumed rotation at a 180-sec period. 2) The 20-Mc signals were generally good except when swamped in ionospheric noise between sunrise and sunset and when the vehicle was not in the line of sight. An exception appeared to be an abrupt loss of the 20-Mc signal from Lunik 1 for 25 minutes in line of sight and passing closest to the moon; this occurred more than two hours before sunrise and hence was not the result of the usual solar-induced ionospheric noise. The simultaneous transmission at 183.6 Mc showed no such interruption. 3) The 40-Mc signals did not show as great a sensitivity to solar ionospheric effects and could be detected when the rocket was some 15 minutes below the earth's horizon. 4) Prior to impacting on the moon Lunik 2 transmission at 20 Mc showed a net Doppler shift of (-)50 cps in the final half hour of flight, indicating an increase in approach radial velocity of 750 m/sec. Lunar impact was confirmed by both 20-Mc and 183.6-Mc signals to have occurred at 0002 hr, 22.25 ± .25 sec, Moscow time. 5) Faraday rotation caused by the ionosphere was clearly seen in 20-Mc reception from Lunik 2 as it

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ACCESSION NR: AT3007033

channel was always active. The mixing and multiplying shown gave IF signals, modulated at 1 kc and 2 kc, whose tuning could be monitored on two Lissajous patterns using a 1-kc crystal. The detector time constant was variable from 0.5 to 5 sec, and filter 13 had stepped bandpass settings of 50, 100, or 250 cps; the settings for filter 14 were double these values. The antenna preamplifiers had noise figures of 3—5 (20 Mc) and about 2 (40 Mc). The 20-Mc antenna had upper and lower stages of three elements each, with a gain of 8—10 and a 200-m² aperture; it was located on a steep coastal cliff [not identified]. The second stage took advantage of signal reflection from the sea surface to augment total reception; the receiver could be switched to either or both stages as desired. The 40-Mc antenna used a ten-element array having two independent channels to permit reception of signals with non-mutually perpendicular polarization; antenna gain was 20 with an aperture of 100 m². Analysis of received signals included the following findings: 1) Signal amplitude modulation revealed rotational periods of the instrument packages of 108 sec for Lunik 1 and 86 sec for Lunik 2. Lunik 3 showed a 165-sec rotational period

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L 18186-63 EWT(d)/EWT(1)/FS(s)/BDS AMDC/AFFTC/AFMDC/AFMTC/APGC/ASD/
ESD-3/RADC/SSD Pg-4/Pi-4/Pl-4/Po-4/Pq-4 TT/GW

ACCESSION NR: AT3007033 S/2560/63/000/017/0091/0100

AUTHOR: Kotel'nikov, V. A.; Dubrovin, V. M.; Rzhiga, O. N.; Shakhovskoy, A. M.

TITLE: Reception and study of characteristics of radio signals from Soviet space rockets

SOURCE: AN SSSR. Iskusst. sputniki Zemli, no. 17, 1963, 91-100

TOPIC TAGS: rocket, space rocket, moon rocket, lunar rocket, Lunik, Lunik 1, Lunik 2, Lunik 3, Lunik radio transmission, Lunik radio reception, ionospheric interference, Faraday rotation

ABSTRACT: The receivers used for recording 20-Mc and 40-Mc signals from the three 1959 Lunik rockets are described, and features of the data received are discussed. The same general type of receiver served for all three rockets, (see Fig. 1 of the Enclosure). The 20- and 40-Mc signals (19.993 and 39.986 Mc, precisely) were keyed alternately in transmission, so that one or the other receiver

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KOTEL'NIKOV, V. A., akademik; GUS'KOV, G. Ya.; DUBROVIN, V. M.; DUBINSKIY, B. A.; KISLIK, M. D.; KORENBERG, Ye. B.; MINASHIN, V. P.; MOROZOV, V. A.; NIKITSKIY, N. I.; PETROV, G. M.; PODOPRIGORA, G. A.; RZHIGA, O. N.; FRANTSESSON, A. V.; SHAKHOVSKOY, A. M.

Radar tracking of the planet Mercury. Dokl. AN SSSR 147 no.6: 1320-1323 D '62. (MIRA 16:1)

1. Institut radiotekhniki i elektroniki AN SSSR.

(Mercury(Planet)) (Radar in astronomy)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V.A., akademik; DUBROVIN, V.M.; KISLIK, M.D.; KORENBERG, Ye.B.; MINASHIN, V.P.; MOROZOV, V.A.; NIKITSKIY, N.I.; PETROV, G.M.; RZHIGA, O.N.; SHAKHOVSKOY, A.M.

Radar observation of Venus. Dokl.AN SSSR 145 no.5:1035-1038 '62. (MIRA 15:8)

1. Institut radiotekhniki i elektroniki AN SSSR.
(Radio astronomy) (Venus (Planet))

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V.A.; DUBROVIN, V.M.; MOROZOV, V.A.; PETROV, G.M.; RZHIGA, O.N.; TRUNOVA, Z.G.; SHAKHOVSKOY, A.M.

Results of Venus radar probes conducted in 1961. Radiotekh. i elektron. 7 no.11:1860-1872 N '62. (MIRA 15:11)

1. Institut radiotekhniki i elektroniki AN SSSR.
(Venus probes)
(Radar)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V.A.; APRAKSIN, L.V.; VOYTOV, V.O.; GOLUBTSOV, M.G.; DUBROVIN, V.M.; ZAYTSEV, N.M.; KORENBERG, Ye.B.; MINASHIN, V.P.; MOROZOV, V.A.; NIKITSKIY, N.I.; PETROV, G.M.; RZHIGA, O.N.; SHAKHOVSKOY, A.M.

Radar system used in the Venus probe of 1961. Radiotekh. i elektron. 7 no.11:1851-1859 N '62. (MIRA 15:11)

1. Institut radiotekhniki i elektroniki AN SSSR.
(Radar)
(Venus probes)

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KOTEL'NIKOV, V.A., akademik.

Radio communications between "Vostol-2" and the Earth. Vest. sviazi 21 no.9:10 S '61. (MIRA 14:9)
(Spaceships--Communication systems)

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KOTEL'NIKOV, V.A., akademik

Radio communication between the spaceship "Vostok-2" and the Earth. Radiotekhnika 16 no.9:3-4 S '61. (MIRA 14:9)
(Spaceships) (Radio)

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

KOTEL'NIKOV, V.A., akademik

Radio communication between the earth and "Vostok-2." Vest. Vozd. Fl. no.9:57-58 S '61. (MIRA 14:11)
(Astronautics--Communication systems)

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KOTELNIKOV, V.A.

a. Radar Contact with Venus - V. A. Kotelnikov

b. Some Results of the Constant Cosmogenetic Field Measurements Carried Out from Sputnik III over the Territory of the USSR - S. Sh. Dolginov, L. N. Zhuzgov, N. V. Pushkov, Tyurmina, L. O., I. V. Fryazinov

c. Some Results of Physiological Reactions to Space Flight Conditions - O. G. Gazenko, V. T. Yaroslavsky

d. On the Motion of the Body of the Variable Mass With the Constant Power Consumption in the Gravitational Field - G. L. GROZDOVSKIY, Y. N. Ivanov, V. V. [illegible]

e. On The Hardest Solar Corpuscles - V. I. Krassovsky

f. Optimum Contour Heat Rejection Fins Cooled by Radiation - G. L. Grodzovsky

g. Investigation of Interplanetary Plasma and Planetary Ionospheres by Means of Charged Particle Traps on Space Rockets - K. I. Gringauz

h. Rocket and Satellite Meteoric Dust Investigations - T. N. Nazarova

i. On Investigation of Cosmic Radiation on Spaceships-Satellites. - S. N. Vernov, Y. E. Nesterov, N. F. Pisarenko, I. A. Savenko, P. I. Shavrin.- UNCLASSIFIED

reports to be presented at the XIIth International Astronautical Congress, Washington D. C. 1-7 October 1961

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KOTELNIKOV, Vladimir A (Prof.)

"Radiolocation of Venus in the USSR."

report to be submitted for the Symposium on Space Age Astronomy, Pasadena, 7-9 Aug 1961

Director, Inst. of Radio and Electronics, Acad. Sci. USSR Moscow

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probabilities, can be determined from Eqs (3) and (4) where $V$ and $\Gamma$ are defined by Eq (5) (see Ref. 1); $\sigma^2$ is the noise power per unit bandwidth, while $\beta$ is a certain parameter. In the signals with minimum detection probability $F$ is given by Eq (6), while $D_0$ is expressed by Eq (7). In these equations $n = 2\Delta fT$, where $\Delta f$ is the frequency bandwidth occupied by the signal; $R$ denotes the radius of the signal sphere. The paper contains three references, one of which is English and 2 Soviet.



SUBMITTED: October 24, 1958

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forms represented by Eq (1), the receiver will register correctly its presence, or the probability that the point corresponding to a waveform $X = S_k + N$ lies in the region S; N is the noise waveform. The signal having a maximum probability of detection is defined as a signal which, for a given F, gives a maximum $D_0$ provided the energy of the signal does not exceed a certain quantity, A. It is shown that the signal which has only one form has a maximum probability of correct detection; if the interference is in the form of the white noise, the form of the signal is immaterial provided it has the maximum permissible energy A. The signal having a minimum probability of correct detection is defined as a signal for which, at a given F, the quantity $D_0$ is a minimum provided the energy of the signal is not less than A. It is shown that the spherical signal has the minimum probability of a correct detection. The spherical signals can be obtained from random white noise, provided these are normalised in such a way that the energy of the signal is always equal to the same quantity. The quantities F and $D_0$ in the signals with maximum detection



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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

AUTHOR: V.A. Kotel'nikov SOV/109 4-3-2/38

TITLE: The Signals with Maximum and Minimum Detection Probabilities (Signaly s maksimal'noy i minimal'noy veroyatnostyami obnaruzheniya)

PERIODICAL: Radiotekhnika i Elektronika, Vol 4, Nr 3, 1959, pp 354 - 358 (USSR)

ABSTRACT: The aim of this work is to determine the forms of signals which would yield the maximum and minimum probabilities of a correct detection, provided an optimum receiver is employed. The signal received can have one of the following forms:

$$S_1(t), \quad S_2(t), \ldots\ldots, S_m(t) \qquad (1)$$

where $p_1, p_2 \ldots, p_m$ are the a priori probabilities of these forms. It is also assumed that all the forms of the signal can be represented by Eq (2), where $B_i(t)$ are certain mutually orthogonal functions in the interval $-T/2$ to $+T/2$. The quality of reception can be characterised by the probability of a correct detection D of the signal, and the probability of a false detection, F. D is the probability that if the signal is in one of the

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

SOV/107-59-1-3/51

AUTHORS: Nesmeyanov, A.N., and Kotel'nikov, V.A., Academicians

TITLE: Soviet Scientists Speak (Govoryat sovetskiye uchenyye)

PERIODICAL: Radio, 1959, Nr 1, p 6 (USSR)

ABSTRACT: The authors state that the flight of an interplanetary rocket towards the moon is proceeding according to a program calculated with the aid of electronic computers. The rocket concerned has a useful pay load of more than 360 kg.

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APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000825300014-6

SOV/109-3-7-2/23

Application of the Doppler Effect for the Determination of the Orbital Parameters of the Artificial Earth Satellites

with an error of 3 to 5%. There are 12 figures.

ASSOCIATION: Institut radiotekhniki i elektroniki AN SSSR (Institute of Radio Engineering and Electronics of the Soviet Academy of Sciences)

SUBMITTED: April 11, 1958.

1. Satellite vehicles trajectories--Mathematical analysis 2. Doppler navigation systems--Applications

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Application of the Doppler Effect for the Determination of the Orbital Parameters of the Artificial Earth Satellites

by Eq.(21) so that the frequency shift is given by Eq.(22). If $\theta$ is comparatively small the frequency shift is given approximately by Eq.(23). Experimentally, the task of determining the orbital parameters of the satellites by the Doppler effect was carried out by the Institute of Radio Engineering and Electronics of the Soviet Academy of Sciences at a frequency of 40 Mc/s. The actual time-frequency curve taken on October 10, 1957, is shown in Fig.10. The graphical method was used for determining $t_o$, $r_o$ and $v_o$ and the results are shown in the table on p 880 and in Fig.11. It was found that the errors in determining $t_o$ were 0.2 to 1 sec, while $v_o$ and $r_o$ could be determined



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comparatively small (as was the case with the two Soviet satellites) the frequency shift is expressed approximately by Eq.(18). The presence of acceleration destroys the symmetry of the frequency-time curve (see Fig.7) so that the time of maximum approach, when determined from such a curve, is subject to an error. The magnitude of the error $\delta t$ for various distances is plotted in Fig.8. The parameters of a satellite can be determined more accurately if its trajectory is assumed to be curvilinear (see Fig.9); here the true trajectory is represented by curve 1, the approximate curvilinear trajectory by curve 2 and the tangent to the orbit by straight line 3; the centre of the approximate trajectory is situated at point C and its radius vector is equal to $R_o$. The distance between the satellite and the receiver can then be expressed by Eq.(19). If the motion of the satellite is uniform, the angle $\theta$ is expressed



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