NOVOSELOV, S.I. (Moskva).

Importance and topics of elementary mathematics courses taught at pedagogical institutes. Mat.v shkole no.1:10-18 Ja-F '57.
(Teachers, Training of) (MLRA 10:2)
(Mathematics--Study and teaching)

NOVOSELOV, Sergey Iosifovich.; SIDOROVA, L.A., red.; FEDOTOVA, A.F., tekhn. red.

[Manual on teaching trigonometry] Rukovodstvo po prepodavaniiu trigonometrii; posobie dlia uchitelei. Moskva, Gos. uchebno-pedagog. izd-vo M-va prosv. RSFSR, 1958. 182 p. (MIRA 11:10)
(Trigonometry--Study and teaching)

NOVOSELOV, Sergey Iosifovich; MODENOV, P.S., red.

[Special course in elementary algebra] Spetsial'nyi kurs elementarnoi algebry. Izd. 5. Moskva, Gos. izd-vo "Sovetskaia nauka," 1958. 527 p. (MIRA 12:2)

(Algebra)

NOVOSELOV, S.I. (Moscow)

Powers with fractional exponents and radicals. Mat. v shkole no.3:15-22 My-Je '58. (MIRA 11:5)
(Algebra--Study and teaching)

NOVOSELOV, S.I.

Methodological consultation. Mat. v shkole no. 4:32 Jl-Ag '58.
(Trigonometry--Study and teaching)

NOVOSELOV, Sergey Iosifovich; PONOMAREV, S.A., red.; RYBIN, I.V., tekhn.red.

[Trigonometry; a textbook for grades 9-10 of secondary schools] Trigonometriia; uchebnik dlia 9-10 klassov srednei shkoly. Izd.4. Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv. RSFSR, 1959. 95 p. (Trigonometry) (MIRA 12:4)

NOVOSELOV, Sergey Iosifovich; MODENOV, P.S., red.; ANOSHINA, K.I., red.izd-va; VORONINA, R.K., tekhn.red.

[Special course in trigonometry] Spetsial'nyi kurs trigonometrii. Izd.4., perer. Moskva, Gos.izd-vo "Vysshaia shkola," 1959. 539 p. (Trigonometry) (MIRA 13:9)

NOVOSELOV, S.I. (Moskva)

Explaining the equation concept. Mat. v shkole no.1:71-74 Ja-F '59. (MIRA 12:1)
(Equations)

NOVOSELOV, S.I. (Moskva)

Reason for the even-number rule. Mat.v shkole no.4:43-44
Jl-Ag '59. (MIRA 12:11)
(Approximate computations)

BEKAREVICH, A.N. (Gomel');BERESLAVSKIY, M.D. (Uzhgorod);GROMOV, A.P. (Melekess); DUBINCHUK, Ye.S.;TESLENKO, I.F.(Kiyev);ZOLOTOVITSKIY, Ye.M. (Reutovo); KAZHDAN, B.I. (Leningrad);KLIMENCHENKO, D.V. (Berdyansk);MEL'NIKOV, K.S. (Sterlitamak);MIKHAYLOV, K.F. (Magnitogorsk);NASYROV, A.Z. (Sterlitamak);NEFEDOV, D.I. (Moskva);NOVOSELOV, S.I. (Moskva);PRAVILOV, B.R. (s.Kanino Ryazanskoy obl.);PRINTSEV, N.A.(Kursk);SEMENOVICH, A.F. (Sverdlovsk)

Discussion of the plans for the programs. Mat. v shkole no.6:5-28 N-D '59. (MIRA 13:3)
(Mathematics--Study and teaching)

NOVOSELOV, S. I.

PHASE I BOOK EXPLOITATION SOV/5673

Grebencha, Mikhail Kuz'mich, and Sergey Iosifovich Novoselov

Kurs matematicheskogo analiza (Course in Mathematical Analysis) v. 1. 5th ed. Moscow, Gosizdat "Vysshaya shkola," 1960. 543 p. 22,000 copies printed.

Ed. of Publishing House: D. A. Tal'skiy; Tech. Ed.: S. S. Gorokhova.

PURPOSE: This book has been approved by the Ministry of Higher and Secondary Specialized Education USSR as a textbook for university students of physics and mathematics and future teachers of mathematics.

COVERAGE: The book pays particular attention to the basic concepts of mathematical analysis (function, limit, continuity) and to certain ideas of modern mathematics (concepts of neighborhood, mapping, additive set function), and includes many examples. The second edition (1948), published eight years after the first, was radically shortened and all superfluous detail was

Card ~~1/14~~

eliminated. Only slight modifications were made in this, the fifth, edition. The authors thank Professor V. V. Stepanov, the editor S. V. Filichev, and the Moskovskiy gorodskoy pedagogicheskiy institut (Moscow City Pedagogical Institute). There are no references.

TABLE OF CONTENTS:

PART I. THEORY OF FUNCTIONS

NOVOSELOV, Sergey Iosifovich; PONOMAREV, S.A., red.; KOVALENKO, V.L., tekhn.red.

[Trigonometry; textbook for the 9th and 10th grades in a secondary school] Trigonometriia; uchebnik dlia 9-10 klassov srednei shkoly. Izd.6. Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv.RSFSR, 1961. 95 p. (MIRA 13:12)

(Trigonometry)

MODENOV, Petr Sergeyevich; NOVOSELOV, Sergey Iosifovich; KAPUSTINA, V.S., red.; YEMMAKOV, M.S., tekhn. red.

[Textbook on mathematics for students entering institutes of higher education] Posobie po matematike dlia postupaiushchikh v vuzy. Moskva, Izd-vo Mosk. univ., 1961. 406 p. (MIRA 14:6)
(Mathematics)

GREBENCHA, Mikhail Kuz'mich; NOVOSELOV, Sergey Iosifovich; TAL'SKIY, D.A., red.; GOROKHOVA, S.S., tekhn. red.

[Course in mathematical analysis] Kurs matematicheskogo analiza. Izd.3. Moskva, Gos. izd-vo "Vysshaia shkola." Pt.2. 1961. 560 p. (MIRA 15:3)
(Mathematical analysis)

NOVOSELOV, S.I. (Moskva)

New edition of A.N. Barsukov's textbook "Algebra." Mat. v shkole no. 3:5-9 My-Je '61. (MIRA 14:5)
(Algebra—Textbooks) (Barsukov, A.N.)

NOVOSELOV, Sergey Iosifovich; SELIVERSTOVA, A.I., red.; VORONINA, R.K., tekhn. red.

[Special course in elementary algebra] Spetsial'nyi kurs elementarnoi algebry. Izd.6. Moskva, Gos.izd-vo "Vysshaia shkola," 1962. 563 p. (MIRA 15:12)

(Algebra)

MODENOV, Petr Sergeyevich; NOVOSELOV, Sergey Iosifovich; KAPUSTINA, V.S., red.; YERMAKOV, M.S., tekhn. red.

[Textbook on mathematics for persons entering a school of higher education] Posobie po matematike dlia postupaiushchikh v vuzy. Izd.2., perer. Moskva, Izd-vo Mosk. univ., 1963. 425 p. (MIRA 16:7)

(Mathematics)

NOVOSELOV, S.I. (Moskva)

Comments on G.B. Gurevich's article. Mat. v shkole no.3:53-56 My-Je '63. (MIRA 16:7)

(Mathematics—Study and teaching)

NOVOSELOV, S.I. (Moskva)

Pavel Afanas'evich Larichev; obituary. Mat. v shkole no.3:87 My-Je '63. (MIRA 16:7)

(Larichev, Pavel Afanas'evich, 1892-1963)

NOVOSELOV, S.I.

Some aspects of teaching elementary algebra. Uch. zap. MOPI 123:227-239 '63. (MIRA 17:4)

GUSEV, S.M.; NOVOSELOV, S.P.; NIKULINA, O.I.; GUBANOV, I.G.; KOZYRNOVA, L.I.

Lead oxide. Patent U.S.S.R. 77,936 , Dec. 31, 1949.
(CA 47 no.19:9828 '53)

NOVOSELOV, S. P.

2777. Zkonomicheskaya zkspanisya SSHA v zapadhoy Evrope Rosle vtoroy mirovoy voyny i obostrenie imperialisticheskikh protivorechiy. M., 1954. 16c. 22cm. (Akad. obshchestv. mauk pri tsk Kpss. kafeda polit. zkonomii) 220 zkz B.Ts. - (54-56662)

So. Knizhnaya Letopis , Vol. 2 ,1955

NOVOSELOV, Sergey Pavlovich; BIDINSKAYA, L., red.; MUKHIN, Yu., tekhn. red.

[The most effective force of the present time; the contemporary stage of the world communist movement]Samaia vliiatel'naia sila sovremennosti; mirovoe kommunisticheskoe dvizhenie na sovremennom etape. Moskva, Gospolitizdat, 1962. 78 p. (MIRA 15:10)

(Communism)

NOVOSELOV, S. S.

NOVOSELOV, S. S. --"Theory of Copper-Lead Mine Smelting." Sci. D. Jan 52, Moscow Inst of Nonferrous Metals and Gold imeni M. I. Kalinin. (Dissertation for the Degree of Candidate in Technical Sciences)

SO: Vecherniaya Moskva, January-December 1952

NOVOSELOV, S.S., kand.tekhn.nauk

Effect of zinc sulfide on properties of copper mattes. TSvet. met. 28 no.3:15-20 My-Je '55. (MIRA 10:11)

1. Gintsvetmet.
(Copper--Metallurgy) (Zinc sulfide)

137-58-4-6828

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 73 (USSR)

AUTHORS: Novoselov, S.S., Davydovskaya, Ye.A.

TITLE: Experimental Development of Caustic Refining of Lead and Hydrometallurgical Treatment of Liquid Smelts (Opyt osvoyeniya shchelochnogo rafinirovaniya svintsa i gidrometallurgicheskoy pererabotki zhidkikh plavov)

PERIODICAL: Sb. nauchn. tr. Gos. n.-i. in-t tsvetn. met., 1957, Nr 13, pp 177-191

ABSTRACT: A process of refining (R) crude Pb from Sb and As by caustic melts with added $NaNO_3$ has been developed and elaborated on a commercial scale. The R is conducted in an apparatus consisting of a reaction vessel containing the smelt, a pump to deliver the Pb into the upper portion of the reactor (onto the smelt), and a bin with feed for delivery of $NaNO_3$ into the reaction vessel, all atop the Pb pot. Agitation of the smelt proved unnecessary. The optimum composition of the smelt is 75% NaOH; 25% NaCl. Replacement of NaCl by 8-10% Na_2CO_3 is permissible. When regenerated NaOH containing up to 3% $NaNO_3$ is used, addition of NaCl is not required. It is recommended that the temperature of

Card 1/2

Experimental Development of Caustic (cont.)

the Pb be held at 400-420°C. In the R process, the smelt is saturated with up to 24-28% Sb+As. The $NaNO_3$ consumption is 0.6 kg/kg Sb and 1 kg/kg As. The R ends when the content of Sb and Pb is reduced to appx. 0.03%, whereupon the smelt containing 4-5% lead beads is subjected to granulation in a by-pass solution (BS). The precipitating beads of Pb are returned to the pot after washing by the BS. The BS is filtered to separate out the Sb-As pitch, steamed in 2 stages, and a regenerated caustic was obtained (% composition: 75-88.3 NaOH; 4.4-9.5 Na_2CO_3; 3.6-3.1 NaCl; 2.1-4.5 Sb; 0.4-1.1 As), with addition of by-pass salt (% composition: 55-63 NaCl; 11.16 NaOH; 11.18 Na_2CO_3) it was returned to the reactor. The Sb-As pitch was repulped in water at 80-90° to dissolve the As which, after filtration of the solution, was precipitated in the form of Ca arsenate, whereupon the solution was sent to granulation of the smelt. The Sb-pitch precipitate contained, after washing: 45-47% Sb; 0.2-0.3% As; 0.4-0.8% Pb.

Ye. Z.

1. Lead--Refining 2. Liquid melts--Processes

Card 2/2

KOPYLOV, N.I.; NOVOSELOV, S.S.

System Cu_2S - FeS - Na_2S. Zhur. neorg. khim. 9 no.8:1919-1929 Ag '64. (MIRA 17:11)

SOV/136-58-8-4/27

AUTHORS: Novoselov, S.S. and Yakushin, M.V.

TITLE: New Method of Decoppering Crude Lead (Novyy sposob obezmezhivaniya chernovogo svintsa).

PERIODICAL: TsvetnyyeMetally, 1958, Nr.8, pp.15-20 (USSR)

ABSTRACT: The work described was carried out with the participation of O.P. Shumilov, R.I. Yushchenko, N.I. Kashcheyev, A.K. Kukharev and A.S. Berezin. The authors discuss decoppering procedures at existing Soviet lead works, showing the transfer of elements from the raw materials to the dross (Table 1). The reverberatory method of treating dross gives better results than the shaft-smelting, but it is not used in the USSR. Since 1927 efforts have been made to find a method eliminating dross production (Refs. 1,2). In 1956 the authors proposed a method for continuous refining of lead with the extraction of copper into the matte and arsenic into the speiss in an electric furnace (Fig.1) in which the slag layer (15-30% FeO, 20-35% SiO_2, 10-25% CaO) acts as the heater and protects sulphides and metals from oxidation. Slag

Card 1/3

New Method of Decoppering Crude Lead.

temperature is 1200°C, the top and bottom of the lead layer then being at 950-1000 and 400-450°C, respectively: experiments suggest that for a full-scale unit the depth of the lead to give the required temperature gradient will be 1-1.5 m and that a specific daily productivity of 15-30 tons per m^2 will be obtainable. The lead is tapped from the bottom of the hearth by a syphon tube. The authors describe large-scale laboratory tests with a unit (Fig.2) dealing daily with 350-1200 kg of crude lead (91.8% Pb, 5.68% Cu, 1.26% As, 0.56% Sb, 2188 g/ton Ag, 26.8 g/ton Au and 0.5% S). 10-40 mm lumps of pyrites (44.5% S, 38.83% Fe and 7.46% SiO_2) was used for sulphiding. The effectiveness of the method is shown by the compositions of the purified lead, matte and speiss (Table 2) and the distribution of elements between the purified lead, matte and speiss; but an editorial note by F.M. Loskutov states there is not enough evidence for comparing the new method with the existing one. The method has been accepted for pilot-scale testing at the Ust'-Kamenogorsk Kombinat. There are 2 figures,

SOV/136-58-8-4/27

New Method of Decoppering Crude Lead.

4 tables and 6 Soviet references.

ASSOCIATION: VNIITsvetmet.

1. Lead--Purification 2. Copper--Separation 3. Furnaces --Performance 4. Lead--Test results

Card 3/3

S/137/63/000/002/001/034
A006/A101

AUTHORS: Novoselov, S. S., Kopylov, N. I.

TITLE: Investigating the fusibility diagram of the Cu_2S-Na_2S system

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1963, 19, abstract 2A81 ("Sb. tr. Vses. n.-i. gornometallurg. in-t tsevtn. met.", 1962, no. 7, 56 - 61)

TEXT: Thermographical and microscopical analyses were used to investigate the Cu_2S-Na_2S system. The composition of the initial sulfide mixture varied within a 2% range. A total number of 70 melts were produced. The phase diagram obtained differs considerably from the diagram plotted by Friedrich. In the Cu_2S-Na_2S system the formation of three compounds is possible, namely $4Cu_2S \cdot Na_2S$, $2Cu_2S \cdot Na_2S$ and $Cu_2S \cdot 2Na_2S$, fusing with dissociation at 635, 550 and 507°C, respectively. Compounds no. 2 and 3 yield eutectics containing 44% Na_2S, which crystallizes at 480°C. The initial crystallization of Cu_2S occupies a composition range from 100 to 85% Cu_2S, and initial Na_2S crystallization in a range

Card 1/2

Investigating the fusibility diagram of... S/137/63/000/002/001/034
A006/A101

from 100 to 47% Na_2S. Maximum hardness during the treatment of sections was shown by specimens approaching the eutectic composition. An investigation of the Cu_2S-Na_2S system has shown that the addition of Na_2S must sharply reduce the melting point of the mattes. At a 10 - 12% content of Na_2S, the mixture of Cu_2S with Na_2S melts at $\leq 700°C$, and at a 40 - 45% content of Na_2S the temperature drops to about 500°C.

G. Frents

[Abstracter's note: Complete translation]

Card 2/2

NOVOSELOV, S.S.; VARTANYAN, A.M.; KISHKAREV, V.A.; AVERCHENKOV, D.O.; SIDOROVSKIY, V.A.

Pilot plant testing methods of removing copper from crude lead with transfer of the copper into matte. TSvet. met. 35 no.5: 25-31 My '62. (MIRA 16:5)
(Lead--Metallurgy) (Copper--Metallurgy)

KOPYLOV, N.I.; NOVOSELOV, S.S. ; YUZVAK, L.A.; KASHAYEV, A.A.

Some properties of chemical compounds in the system Cu_2S–Na_2S.
Zhur. neorg. khim. 9 no.6:1403–1405 Je '63 (MIRA 17:8)

NOVOSELOV, S.V., aspirant; TRISVYATSKIY, L.A., prof., doktor tekhn. nauk, nauchnyy rukovoditel'

Drying pulse crop seeds by the method of mechanical ventilation with heated air. Izv. TSKHA no.5:68-73 '63. (MIRA 17:7)

NOVOSELOV, V.

Siberian oil is not a forecast but a reality. Nauka i zhizn' 29 no.2:3-9 F '62. (MIRA 15:3)
(Siberia, Western—Oil fields)

NOVOSELOV, V.

Calculating the index of the labor intensity of machinery manufacturing. Sots. trud 8 no.7:106-112 Jl '63. (MIRA 16:10)

PETROV, Ye.I.; NOVOSELOV, V.A.; Prinimali uchastiye: CHVANOV, P.A.; SHIROKOV, L.F.; KOROBKOV, V.P.; KULAYEV, P.A.; POPKOVA, L.F.; LEBEDEV, I.M.; BAKAYEV, A.M.

Flotation of Sibay deposit zinc ores. TSvet. met. 35 no.3: 15-18 Mr '62. (MIRA 15:4)
(Flotation) (Sibay region—Zinc ores)

NOVOSELOV, V. A.; LINNIK, Yu. V.

"Random Disturbances of the Regular Procession of a Gyroscope," Leningrad (Prikladnaya Matematika i Mekhanika (Applied Mathematics and Mechanics), Vol 17, No 3, 1953, Moscow, pp 361-368, Institute of Mechanics, Academy of Sciences, USSR.

B-84673, 22 Apr 55

NOVOSELOV, V.A.

Small, 30,000 ton hydraulic forging press. Kuz.-shtam. proizv. 5 no.9:31-33 S '63. (MIRA 16:11)

NOVOSELOV, V. A.

The Second All-Union Conference on the Preparation and Analysis of High-Purity Elements, held on 24-28 December 1963 at Gorky State University im. N. I. Lobachevskiy, was sponsored by the Institute of Chemistry of the Gorky State University, the Physicochemical and Technological Department for Inorganic Materials of the Academy of Sciences USSR, and the Gorky Section of the All-Union Chemical Society im. D. I. Mendeleyev. The opening address was made by Academician N. M. Zhavoronkov. Some 90 papers were presented, among them the following:

V. A. Novoselov and T. K. Aydarov. Spectrochemical analysis for S, Se, Te, Sb in InAs.

L. M. Ivantsov. Possibilities of increasing sensitivity of emission spectroscopy.

A. M. Bulgakova, N. P. Zalyubovskaya, and L. S. Manzheliy. A high-sensitivity amperometric method for determining I, Mo, and Tu in LiF, CdS, NaI, CsI, and other single crystals.

(Zhur. Anal. Khim, 19 No.6, 1964 p.777-79)

L 22199-65 EWO(j)/EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EPR/T/EWP(t)/EWP(b) Pr-4/Ps-4/
Pc-10 IJP(c)/ASD(m)-3/AFETR RWH/JD/WW/JG/WH
ACCESSION NR: AP5002950 S/0064/65/000/001/0057/0059

AUTHORS: Grachev, K. Ya.; Novoselov, V. A.

TITLE: The choice of electrolyte and the type of electrolytic cell for commercial production of metallic sodium

SOURCE: Khimicheskaya promyshlennost', no. 1, 1965, 57-59

TOPIC TAGS: electrolyte, electrolytic cell, sodium

ABSTRACT: The problems encountered in obtaining a proper electrolyte and in devising most efficient electrolytic cells for extracting metallic sodium are reviewed. Three multicelled and four circular models of electrolytic cells were tested between 1955-58. The electrolytes were 42% NaCl + 58% $CaCl_2$ and 32% NaCl + 42% CaCl + 26% $BaCl_2$. The multicelled models differed mainly in position of the

ment of anode caps. The circular cells gave much better results. One successful

Card 1/3

ACCESSION NR: AP5002950

model is illustrated in Fig. 1 on the Enclosure. Stability of production was maintained for 25-30 days, even for as many as 75 days in some tests. The principal cause of production decline was short-circuiting between the grating-diaphragm and the cathode. This resulted partly from poor centering of the grating-diaphragm, partly from deformation during operation (of either the grating-diaphragm or of the cathode). The design of the chlorine chamber allows chlorine concentrations of

90-99% to be obtained, and is such that it may be operated in a vacuum or at some pressure. The authors recommend the electrolytes used in the experiment, and further recommend the commercial application of circular electrolytic cells with anodes introduced from below. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 01

SUB CODE: GC, EE NO REF SOV: 008 OTHER: 004

Card 2/3

L 40309-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6017302 (A) SOURCE CODE: UR/0126/66/021/005/0674/0677

AUTHORS: Volkenshteyn, N. V.; Dyakina, V. P.; Novoselov, V. A.; Startsev, V. Ye.

ORG: Institute of Metal Physics, AN SSSR (Institut fiziki metallov AN SSSR)

TITLE: Peculiarities of the temperature dependence of electric resistivity of dysprosium at low temperatures

SOURCE: Fizika metallov i metallovedeniye, v. 21, no. 5, 1966, 674-677

TOPIC TAGS: dysprosium, electric resistivity, resistivity

ABSTRACT: The electric resistivity of highly purified dysprosium ($R_{300K}/R_{42K} \cong 105$) was measured over the temperature interval 1.5--300K to determine the magnetic contribution to the electric resistivity as a function of temperature. The resistivity was measured on 10 x 1 x 0.5 mm strips made of distilled dysprosium using a cryostat (R. V. Colvin and S. Arajs. Phys. stat. sol., 1964, 4, 73). The results are shown in Fig. 1. These results were found to agree well with the theoretical predictions proposed by A. K. Mackintosh (Phys. Lett., 1963, 4, 140). This is demonstrated in Fig. 2 which shows a comparison.

UDC: 539.292:537

Card 1/2

L 40300-66

ACC NR: AP6017302

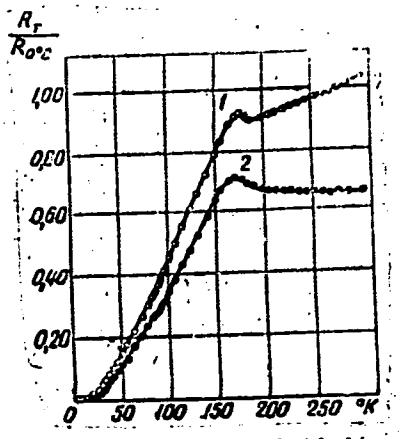

Fig. 1. Electric resistivity of dysprosium: 1 - total resistivity; 2 - magnetic resistivity.

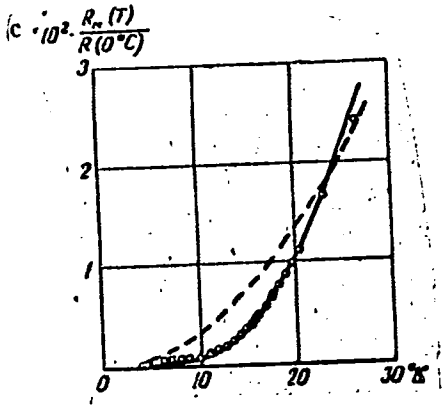

Fig. 2. Low temperature electric resistivity: 0 - experimental results; solid line - curve $\rho_M = aT^2 e^{-\frac{\Delta}{kT}}$, with $a/R_{0C} = 1.27 \times 10^{-4}$ degrees^{-2}, $\Delta/k = 30K$; dotted line - curve of T^2 function having common point with experimental results at T = 24K.

Orig. art. has: 2 formulas and 3 figures.

Card 2/2 mcl SUB CODE: 11/ SUBM DATE: 10Aug65/ ORIG REF: 005/ OTH REF: 004

S/121/61/000/009/006/006
D040/D113

AUTHOR: Novoselov, V. F.

TITLE: New measuring instruments of the "Krasnyy instrumental'shchik" Plant in Kirov

PERIODICAL: Stanki i instrument, no. 9, 1961, 41

TEXT: Information is given on instruments being produced at the new shop of mechanization and automation means organized in 1960 at "Krasnyy instrumental'shchik zavod (plant) in Kirov. It has already produced various measuring devices for industries in the Kirov economic rayon. The produced items include semiautomatic and automatic devices, such as an instrument measuring the internal diameter and sponginess of coiled springs, fitted with an electrical signal system; an instrument for checking the diameters on multistage shafts with diameters varying from 17 to 20 mm and maximum 160 mm length; it has electric contact pick-ups and emits electric signals ; an automatic device for bushings, checking the outer and inner diameter, wall thickness evenness, and length at a rate of 7,000 bushings per work shift. An automatic device will be produced for dimensions measurement on automobile engine pistons. It is designed for the use in automatic lines after

Card 1/3

New measuring instruments ...

the rinsing machine, as final inspection device for the geometric shape and weight of pistons. It will reject pistons not fitting the specification requirements by shape, dimensions, etc., and also divide pistons into groups with 0.002 mm difference in the diameter of the bore for the piston pin. The device may also work with manual loading and be used for pistons up to 105 mm in diameter. Lot production of the following three instruments is being started: (1) Pendulum angle meter for measuring angles on cutting tools, with a measuring scale and a dial. The maximum error of the meter is 1°; (2) 3KCT (3IChT) indicator for TKC (TKS) hardness meters designed for measuring the metal surface hardness after cyaniding, carburizing, or other hardening. The 3IChT indicator shows the difference of depth of imprints produced by TKS in preliminary and final test. The scale is graduated in 0.005 mm divisions. Indications inaccuracy does not exceed 0.002 mm. (3) Electric contact dial instruments called 2ЭКШ (2EKSh) and 3ЭКШ (3EKSh), for use in automatic process control systems, automatic and semiautomatic inspection devices. They are smaller in size than the existing two-limit

Card 2/3

New measuring instruments ...

electric contact pick-ups and work in the same way in couple with an electric signal system. The dial divisions of the 2EKSh and 3EKSh are 0.01 and 0.001 mm, and the measurement ranges 0.025 and 0.05 mm respectively. The error is 0.0008 and 0.0005 mm. The article includes two photographs showing the pendulum angle meter and the "EKSh". There are 2 figures.

Card 3/3

NOVOSELOV, V.F.

The 2EKSh and 3EKSh electric contact dial instrument.
Biul.tekh.-ekon.inform. no.12:37 '61. (MIRA 14:12)
(Electric instruments)

124-58-9-9932D

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 9, p 66 (USSR)

AUTHOR: Novoselov, V.F.

TITLE: The Motion of Viscous Oils and Oils Having Elevated Freezing Temperatures Through Pipe Lines (Dvizheniye vyazkikh i vysokozastyvayushchikh neftey po truboprovodam)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Technical Sciences, presented to the Mosk. neft. in-t (Moscow Petroleum Institute), Moscow, 1958

ASSOCIATION: Mosk. neft. in-t (Moscow Petroleum Institute), Moscow

1. Oils--Motion 2. Oils--Temperature factors 3. Fluid flow--Analysis
4. Fluid flow--Temperature factors

Card 1/1

NOVOSHLOV, V.F.; CHERNIKIN, V.I.

Movement (propulsion) of oil in pipelines. Izv. vys. ucheb. zav.; neft' i gaz no.1:141-147 '58. (MIRA 11:8)

1.Moskovskiy neftyanoy institut im. akad. I.M. Gubkina.
(Petroleum--Pipelines)

NOVOSELOV, V.F.; CHERNIKIN, V.P.

Cooling of hot petroleums in inactive pipelines under conditions of free convection before the temperature has reached or is above the thickening point of petroleums. Izv. vys. ucheb. zav.; neft' i gaz no.2:107-111 '58. (MIRA 11:8)

1. Moskovskiy neftyanoy institut im. akad. I.M. Gubkina.
(Petroleum--Pipelines)

NOVOSELOV, V.F.; CHERNIKIN, V.I.

Determining optimal parameters of "hot" pipelines. Trudy MNI no.23:116-129 '58. (MIRA 12:1)
(Petroleum--Pipelines)

NOVOSELOV, V.F.; CHERNIKIN, V.I.

Cooling of hot petroleum and petroleum products in shut-down pipelines. Trudy MNI no.23:130-140 '58. (MIRA 12:1)
(Petroleum--Pipelines) (Heat--Transmission)

NOVOSHILOV, V.F.; CHERNIKIN, V.I.

Thermal conditions of petroleum reservoirs. Trudy MNI no.23: 141-149 '58. (MIRA 12:1)
(Petroleum--Storage) (Heat--Transmission)

TUGUNOV, P.I.; NOVOSELOV, V.F.

Temperature change of a petroleum product when a hot pipe is put into operation. Izv. vys. ucheb. zav.; neft' i gaz 7 no.3:99-102 '64. (MIRA 17:6)

1. Ufimskiy neftyanoy institut.

NOVOSELOV, V.F.; TUGUNOV, P.I.

Pressure changes at the beginning of a pipeline as it becomes filled. Izv. vys. ucheb. zav.; neft' i gaz 7 no.10:83-87 '64. (MIRA 18:2)

1. Ufimskiy neftyanoy institut.

NEKHVAL', M.V.; NOVOSELOV, V.F.

Determining the critical velocity in case of consecutive pumping. Izv.vys. ucheb. zav.; neft' i gaz 7 no.12:63-66 '64 (MIRA 18:2)

1. Ufimskiy neftyanoy institut.

YABLONSKIY Vsevolod Sergeyevich, prof.doktor tekhn.nauk[deceased]; NOVOSELOV, Viktor Fedorovich, dots., kand. tekhn. nauk; GALEYEV, Vil' Bareyevich, st. prepod., inzh.; ZAKIROV, Gaffan Zakirovich, st. prepod., inzh.; KULIKOV, A.A., retsenzent; ZUBAREVA, Ye.I., ved. red.

[Planning, operation and repair of petroleum products pipelines] Proektirovanie, ekspluatatsiia i remont nefteproduktov. [By] V.S.IAblonskii i dr. Moskva, Nedra, 1965. 410 p. (MIRA 18:5)

1. Zamestitel' nachal'nika Glavnogo upravleniya po snabzheniyu narodnogo khozyaystva nefteproduktami RSFSR (for Kulikov).

NECHVAL', M.V.; NOVOSELOV, V.F.

Determining the volume of a mixture in the successive pumping of gases. Izv. vys. ucheb. zav.; neft' i gaz 8 no.4:77-82 '65. (MIRA 18:5)

1. Ufimskiy neftyanoy institut.

ACCESSION NR: AR4039308 S/0044/64/000/003/V054/V054

SOURCE: Ref. sh. Matematika, Abs. 3V232

AUTHOR: Novoselov, V. G.

TITLE: Optimal coding for states of a sequential automaton by means of the UTsVM

CITED SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta, vy*p. 42, 1963, 85-92

TOPIC TAGS: optimal coding, sequential automaton, UTsVM, transfer matrix, internal reaction matrix, minimal disjunctive normal form, precoding, behavior matrix

TRANSLATION: An algorithm for the machine's work is given by means of two matrices: the matrix of transfers and the matrix of internal reactions. The different numberings of the automata's states reduce to a distinct number of components in the schemes of realization, which corresponds to the distinction in the number of symbols in the corresponding minimal disjunctive normal forms (m.d.f.). The coding, which reduces to the least number of symbols in the m.d.f., is called optimal.. The author cites a formula for the number of variants in the coding of states by

Card 1/2

ACCESSION NR: AR4039310 S/0044/64/000/003/V054/V054

SOURCE: Ref. sh. Matematika, Abs. 3V234

AUTHOR: Novoselov, V. G.

TITLE: Selection of the optimal variant in solving a series of problems on the synthesis of relay schemes

CITED SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta, vyp. 42, 1963, 75-84

TOPIC TAGS: optimal solution variant, relay scheme synthesis, minimal disjunctive form, approximate optimal value, variant evaluation function, UTsVM "Ural", logical L-machine

TRANSLATION: The author shows that the optimal value for one or the other variant of solving the synthesis problem for a scheme by constructing a corresponding minimal disjunctive form (m.d.f.) requires great expenditures of time. Therefore the author proposes deriving an approximate optimal value without constructing an m.d.f. He proposes functions which evaluate the variants for solving the problem

Card 1/2

Card 2/2

KANYUKOV, R.Z.; NOVOSELOV, V.I.

Completion of oil wells through the use of gas condensate. Neftepromysl. delo no.7:11-12 '63. (MIRA 17:2)

1. Neftepromyslovoye upravleniye "Ishimbayneft'".

L 11078-66
ACC NR: AR6000419 SOURCE CODE: UR/0271/65/000/009/B006/B006

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika, Abs. 9B48

AUTHOR: Novoselov, V. G.

TITLE: Evaluating the efficiency of algorithms for synthesizing relay circuits

CITED SOURCE: Dokl. 3-y Sibirsk. konferentsii po matem. i mekhan., 1964. Tomsk, Tomskiy un-t, 1964, 277-278

TOPIC TAGS: relay circuit, relay circuit synthesis

TRANSLATION: It is noted that, in principle, the problems of certain class can be solved by a given algorithm, but some problems of this class cannot be solved by the same algorithm because of too great volume of computations required. Hence, a particular system of algorithms is set up for a definite problem, each of them being used for solving some parts of the problem. As a theoretical evaluation of each algorithm is not always possible, it is suggested that each algorithm be programmed for a control computer. Such a method may yield an objective criterion for comparing algorithms. If the algorithms are programmed for different computers, a conversion procedure may be necessary.

SUB CODE: 09

Card 1/1 HW

UDC: 518.5:681.142.32.001

ACC NR: AR6026533 SOURCE CODE: UR/0372/66/000/004/G039/G039

AUTHOR: Novoselov, V. G.

TITLE: Coding the internal states of a sequential automaton

SOURCE: Ref. zh. Kibernetika, Abs. 4G269

REF SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te, vyp. 47, 1965, 60-64

TOPIC TAGS: finite automaton, switching circuit, Boolean function, mathematic matrix

ABSTRACT: The author discusses Mealy-type sequential automatons with $Z' = F_1(X, Z)$, $Y = F_2(X, Y)$, where the multi-valued variables X, Y, Z, Z' are the input and output variables and the current and next states, respectively, of the automaton. The representation of the multi-valued variables by means of combinations of binary variables is a coding problem which determines the complexity of realization of the networks. Inasmuch as the coding of X and Y is a priori specified, an arbitrary selection of coding is possible only for Z. The coding is considered optimal if we have the least number of symbols in the system of Boolean functions determining the states of the automaton and presented in min. disjunctive form. The Humphrey theory ("Switching Circuits with Computer Applications," 1958, 10, McGraw-Hill Book Co.,

UDC: 62-506:621.391.152

Card 1/2

ACC NR: AR6026533

New York, N.Y.) is analyzed.The matrix of states is used to construct the matrix of the desired symmetry of states. Its optimal form is determined by coding the most desirable states and sequentially correcting this coding. The method presupposes the scanning of possibilities and provides the best results for the examples published in the literature. 5 illustrations, bibliography of 4 titles, R. M. [Translation of abstract]

SUB CODE: 09, 12

Card 2/2

NOVOSELOV, V.P.

NOVOSELOV, V.P., inzh.

Hidden potentialities for the growth of labor productivity at machinery manufacturing. Sbor.st.CHPI no.12:39-45 '57.
(MIRA 10:12)
(Machinery industry)

NOVOSELOV, V.P., inzh.

Analyzing resources for raising labor productivity in a machinery plant. Sber. st. CHPI no.15:3-18 '58. (MIRA 12:3)
(Machinery industry) (Factory management)

NOVOSELOV, V.P., inzh.

Evaluation of current labor productivity indices. Sber. st. CHPI no.15:48-54 '58. (MIRA 12:3)
(Factory management) (Labor productivity)

GOLIKOV, Aleksandr Arsent'yevich; NOVOSELOV, Vladimir Pavlovich; SVET, Ye.B., red.

[Potentials for reducing labor and metal consumption in the manufacture of machinery] Rezervy snizheniia trudoemkosti i metalloemkosti mashin. Cheliabinsk, Cheliabinskoe knizhnoe izd-vo, 1962. 141 p. (MIRA 17:9)

NOVOSELOV, V.S.

A closing water volumenometer for measuring the root systems of plants.
Fiziol. rast 7 no.2:243-244 '60. (MIRA 14:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut l'na, Torzhok.
(Roots (Botany))
(Botanical apparatus)

NOVOSELOV, V. S.

2

(b) Trans

Mathematical Reviews
Vol. 15 No. 3
March 1954
Mechanics

Novoselov, V. S. Application of the methods of analytic mechanics to the computation of statically indeterminate systems. Vestnik Leningrad. Univ. 1952, no. 2, 24–41 (1952). (Russian)

After an extended review of the method of Frank [Monatsh. Math. Phys. 23, 225–239 (1912)] and Krutkow's modification [Doklady Akad. Nauk SSSR (N.S.) 11, 213–215 (1936)], the author points out vagueness in the hypothesis relating to the potential of the reaction forces, and in the physical meaning of rigidity, among other difficulties, and discusses these points at some length. Much of the paper is concerned with detailed study of several illustrative examples. *R. E. Gaskell* (Seattle, Wash.).

NOVOSELOV, V.S.

Mathematical Reviews
Vol. 15 No. 2
Feb. 1954
Mechanics

Linnik, Yu. V., and Novoselov, V. S. Random disturbances of the regular precession of a gyroscope. Akad. Nauk SSSR. Prikl. Mat. Meh. 17, 361–368 (1953). (Russian)

Consider a system

$$(1)\quad \frac{dx_i}{dt}=\lambda_i[x_j, A_k(t), t]+S_i[x_j, A_k(t), t] \quad (i, j=1, \cdots, n)$$

where the functions $A_k(t)$ $(k=1, \cdots, l)$ characterize an l-dimensional random process. Let $a_k(t)$ denote the mathematical expectation of $A_k(t)$ and let $A_k(t)=a_k(t)+b_k(t)$, so that the mathematical expectation of the random functions $b_k(t)$ is zero. Further, let $S=\{S_i[x_j, A_k(t), t]\}$ denote an n-dimensional random vector-function which for the given values of the arguments characterizes an n-dimensional random process. The initial data of the system (1) are assumed to be random and given by a distribution with probability density

$$P\{\xi_i^0 \leq x_i^0 - y_i^0 < \xi_i^0 + d\xi_i^0\} = f(\xi_1^0, \cdots, \xi_n^0)d\xi_1^0 \cdots d\xi_n^0,$$

where y_i^0 denotes the mathematical expectation of x_i^0. The solution of (1) is some n-dimensional random process $x(t)=\{x_i(t)\}$.

The first part of this paper investigates the distribution of the deviations of the solutions of (1) from $y_i(t)$, where $y_i(t)$ denotes that solution of (1) for which

$$x_i^0 = y_i^0, \quad A_k(t) = a_k(t), \quad S[S_i[x_j, A_k(t), t]] = 0$$

holds. Consider a finite time interval and assume that the probable values of $\max|b_k(t)/a_k(t)|$ and $\max|(x_i - y_i)/y_i|$ are small in this interval. The random process characterized by the functions $S_i[x_j, A_k(t), t]$ may be considered as a collection of random surfaces having the property that the probability is unity that these surfaces have bounded partial derivatives $\partial S_i/\partial x_j$ and $\partial S_i/\partial A_k$. Under these assumptions the system (1) can be linearized and reduced to the form

$$\frac{dz_i}{dt} = \sum_{j=1}^{n} X_{ij}(t) z_j + F_i(t) \quad (i = 1, \cdots, n), \tag{2}$$

where

$$z_i = x_i - y_i, \quad F_i(t) = \varphi_i(t) + S_i(t), \quad S_i(t) = S_i[y_j(t), a_k(t), t].$$

The functions $\varphi_i(t)$ and $X_{ij}(t)$ can be easily evaluated and the system (2) solved with given initial values z_i^0.

Introduce one column matrices $B(t)$, $S(t)$ and z^0 with the elements $b_k(t)$, $S_i(t)$ and z_i^0 respectively, and assume that they represent statistically independent processes, $B(t)$ and $S(t)$ being, in addition, stationary. In order to secure continuity of the processes their correlation matrices are assumed to be continuous. Further, the processes $B(t)$, $S(t)$ and z^0 are assumed to have Gaussian distributions. Then $z = \{z_i(t)\}$ is also a Gaussian process with correlation matrix R, and probability density

$$f(\xi_1, \cdots, \xi_n) = [2^n \pi^n D(R)]^{-1/2} \times \exp\left[(-1/2D(R)) \sum_{i,j=1}^{n} D_{ij} \xi_i \xi_j\right], \tag{3}$$

where $D(R)$ is the determinant of the matrix R and D_{ij} are the algebraic complements of its elements.

The second part of the paper is concerned with application of the results obtained to the motion of a gyroscope. Let θ, ψ, φ be the angles of nutation, precession and proper rotation of a gyroscope, respectively. Furthermore, let A and C be the moments of inertia of a gyroscope, m its mass and l the distance of its center of gravity from the fixed point. Then the Lagrangian equations of motion can be put in the form

$$\ddot{\theta} = \dot{\psi}^2 \sin\theta \cos\theta - (C/A)(\dot{\varphi} + \dot{\psi}\cos\theta)\dot{\psi}\sin\theta + (mgl/A)\sin\theta + M_\theta/A,$$

$$\ddot{\psi} = [C(\dot{\varphi} + \dot{\psi}\cos\theta)\cos\theta - 2A\dot{\psi}\dot{\theta}\cos\theta]/A\sin\theta + M_\psi/A\sin^2\theta,$$

$$d/dt(\dot{\varphi}+\dot{\psi}\cos\theta)=M_\varphi/C,$$

where the moments M_θ, M_ψ and M_φ are assumed to be random functions of the variables $\theta, \dot{\theta}, \psi, \dot{\psi}, t$. For the given initial conditions θ_0, $\dot{\theta}_0=0$, ψ_0, $\dot{\psi}_0$, satisfying the condition,

$$(A-C)\dot{\psi}_0^2\cos\theta_0-C\dot{\varphi}_0\dot{\psi}_0+mlg=0, \tag{4}$$

and for $M_\theta=M_\psi=M_\varphi=0$, this system has the unique solution $\theta=\theta_0$, $\psi=\psi_0$, $\dot{\varphi}=\dot{\varphi}_0$, known as the regular precession of a gyroscope. The case $\sin\theta_0=0$ has been excluded from consideration.

Assume that the characteristics of a gyroscope and the initial data of its motion are $A=\bar{A}+b_1$, $C=\bar{C}+b_2$, $ml=\overline{ml}+b_3$, and $\theta_0+z_1^0$, $\dot{\theta}_0+z_2^0$ ($\dot{\theta}_0=0$), $\psi_0+z_3^0$, $\dot{\varphi}_0+z_4^0$, respectively, where the bar denotes a mean value, and b_s and z_s^0 are independent random variables with given Gaussian distributions. Furthermore, assume that the mean values satisfy the condition of regular precession (4), and that $M_\varphi=0$. Put $\theta=x_1$, $\dot{\theta}=x_2$, $\psi=x_3$ and $z_4^0=b_4$, write down the linearized system corresponding to (2), and the correlation matrices of the processes $B(t)$, $S(t)$ and z_0. Then the correlation matrix R of the process $z=\{z_i(t)\}$ can be exhibited. Finally the density of the distribution of the deviations of the motions of a gyroscope from the regular precession can be evaluated by formula (3).

E. Leimanis.

NOVOSELOV, V.S.

Mathematical Reviews
Vol. 15 No. 3
March 1954
Analysis

7-9-54
LL

0 math
2

Novoselov, V. S. Necessary and sufficient conditions that the roots of a polynomial not have positive real parts and that the multiplicity of the zero and imaginary roots not exceed a given number. Mat. Sbornik N.S. 33(75), 215–218 (1953). (Russian)

The classic necessary and sufficient conditions of Hurwitz that a polynomial have all roots in the open left half-plane, are now sharpened to include the case where some of the roots may lie on the imaginary axis. *A. W. Goodman.*

NOVOSELOV, V.S.

Some topics on mechanics of variable mass with consideration of inner motion of the particles. Part 1. Vest.Len.un. 11 no.19:108-113 '56.
(MLRA 10:1)

(Dynamics)

SOV/124-58-3-2572

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 3, p 5 (USSR)

AUTHOR: Novoselov, V. S.

TITLE: Certain Questions of the Mechanics of Variable Masses With Internal Movement of Particles. II (Nekotoryye voprosy mekhaniki peremennykh mass s uchetom vnutrennego dvizheniya chastits. II)

PERIODICAL: Vestn. Leningr. un-ta, 1957, Nr 1, pp 130-140, 210. For Part I ref. Vestn. Leningr. un-ta, 1956, Nr 19, pp 100-113 -- RZhMekh, 1957, Nr 10, abstract 11216

ABSTRACT: The paper establishes the law of change of kinetic energy for a system and body of variable mass. For such systems with ideal holonomous and non-holonomous connections a general mechanical equation is written. Lagrange's second-rank equations are derived for holonomous systems with ideal connections. "Additional forces" are determined, which must be added to the generalized active forces when writing these equations. Lagrange's generalized function is introduced and a generalization of Hamilton - Ostrogradskiy's principle is noted. Examples of the application of the calculated equations are examined.

I. V. Livartovskiy

Card 1/1

NOVOSELOV, V.S.

The problem about the movement of two bodies with variable masses [with summary in English]. Vest. LGU 12 no.13:129-131 '57.
(MIRA 10:11)
(Problem of two bodies)

NOVOSELOV, V.S.

NOVOSELOV, V.S.

Example of nonlinear nonholonomy connection which does not belong to N.G. Chetaev's class [with summary in English]. Vest. LGU no.19: 106-111 '57. (MIRA 11:1)

(Mathematical physics)

NOVOSELOV, V. S.: Doc Phys-Math Sci (diss) -- "Some problems in nonholonomic mechanics". Moscow, 1958. 7 pp (Moscow Order of Lenin and Order of Labor Red Banner State U im M. V. Lomonosov), 150 copies (KL, No 7, 1959, 121)

AUTHOR: NOVOSELOV, V.S. 43-1-6/10

TITLE: The Application of the Helmholtz Method for the Investigation of the Motion of Nonholonomic Systems (Primeneniye metoda Gel'mgol'tsa k issledovaniyu dvizheniya negolonomnykh sistem)

PERIODICAL: Vestnik Leningradskogo Universiteta, Seriya Matematiki, Mekhaniki i Astronomii, 1958, Nr 1(1), pp.80-87 (USSR)

ABSTRACT: Starting from the well-known papers of Helmholtz [Ref. 1] and Meyer [Ref. 2] of 1896 the author considers in the case of a non-linear non-holonomeous mechanic system the equations with the undetermined multipliers. He shows that, if the determinant of a certain matrix is different from zero the multipliers from a linear system can be determined as functions of the Lagrange velocities and coordinates and of the time. Furthermore a method for determining the kinetic potential is proposed for this case. The author considers in greater detail linear non-holonomeous systems, the motion of which is described by Lagrange's normal coordinates. Two examples illustrate the text. There are 5 references, 3 of which are Soviet.

Card 1/1

SUBMITTED: 16 December 1956

1. Matrix algebra 2. Functions

NOVOSELOV, V. S. (Docent) (Leningrad State University)

(Oscillations of Nonstationary Stabilized Gyroscopic Systems on a Fixed Base"

paper presented at the Second Scientific and Technical Intervuz Conference on Problems of Contemporary Gyroscopy, YE. F. Otvagin, Secretary of the Organization Committee; Leningrad, Izvestiya Uchebnykh Zavedenity, Priborostroyeniye, No. 5, Sep/Oct 1958, pp 161-163

The Second Intervuz Conference on Problems of Contemporary Gyroscopy Technique, convoked by decision of the Ministry of Education USSR, took place in the Leningrad Institute of Precision Mechanics and Optics from 24 to 27 November 1958.

SOV/24-58-11-23/42

AUTHOR: Novoselov, V. S. (Leningrad)

TITLE: Regular Precession of a Gyroscope of Variable Mass (Regulyarnaya pretsessiya giroskopa peremennoy massy)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 11, pp 98-99 (USSR)

ABSTRACT: This problem relates to self-generated oscillations of a shaft and for some conditions pertaining to a rocket propelled missile. By a gyroscope of variable mass the author understands a body of variable mass which has a static point possessing kinetic symmetry and conserving the main directions. It is assumed that the masses of the individual points of the body are time functions. The process of change of the mass is of the type dealt with by I. V. Meschersky (Ref 1), i.e. taking away or adding mass solely on the surface. It is also assumed that the main vector of the reaction forces equals zero and the main moment of these forces, calculated relative to the static point of the gyroscope, is in the direction of the symmetry axis of the latter and can be expressed by some function of time. According to earlier work of the author (Ref 2) the Type II Lagrange equations for the

Card1/2

SOV/24-58-11-23/42

Regular Precession of a Gyroscope of Variable Mass

movement of a body of variable mass are of the form of the equations corresponding to the problem with a constant mass, provided mass is taken off and reaction forces added. Denoting the nutation angle Θ, the precession angle ψ and the angle of rotation φ the Type II Lagrange equation for the given problem can be written in the form of Eqs.(1-3) of this paper. This system of differential equations has the unequivocal solution expressed by Eqs.(7) and (8). It is shown that for a gyroscope with a variable mass, the regular precession represents a stable movement.
There are 2 Soviet references.

SUBMITTED: December 20, 1957

Card 2/2

AUTHOR: Novoselov, V.S. 43-58-13-9/13

TITLE: Application of the Method of Helmholtz for the Investigation of Motions of the Systems of Chaplygin (Primeneniye metoda Gel'mgol'tsa k izucheniyu dvizheniya sistem Chaplygina)

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki, mekhaniki i astronomii, 1958, Nr 13(3), pp 102-111 (USSR)

ABSTRACT: Let a mechanic system be described by the Lagrange coordinates $q_1, q_2, \ldots, q_s$, where the motion is assumed to satisfy the non-linear non-holonomous relations

(1) $F_k(\dot{q}_i, q_i, t) = 0 \qquad (k=1,2,\ldots,r).$

Let further $\sum_{i=1}^{s} \frac{\partial F_k}{\partial \dot{q}_i} \cdot \delta q_i = 0$. If the system (1) is solved with respect to certain velocities:

(2) $\dot{q}_{l+k} = \dot{q}_{l+k}(\dot{q}_\nu, q_i, t),$

$k=1,2,\ldots,r$; $\nu=1,2,\ldots,l$; $l=s-r$, $i=1,2,\ldots,s$, and if the "dependent" coordinates q_{l+k} appear neither in (2) nor in the

Card 1/2

Application of the Method of Helmholtz for the Investigation of Motions of the Systems of Chaplygin 43-58-13-9/13

expressions for kinetic and potential energy, then the system is called a Chaplygin system.
In the same way as in his earlier paper [Ref 5] the author uses the Helmholtz conditions for the existence of a generalized kinetic potential. The representation is similar to the classical investigation of A.Meyer [Ref 2] (1896).
There are 5 references, 3 of which are Soviet and 2 German.

SUBMITTED: December 16, 1956

1. Mechanics--Theory 2. Mathematics

Card 2/2

AUTHOR: Novoselov, V. S. (Leningrad) SOV/179-59-3-6/45

TITLE: The Effect of Variations in Cop Mass and the Pull of the Thread on the Spinning of the Bobbin (Vliyaniye peremennosti massy pochatka i natyazheniya niti na vibratsii veretena)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1959, Nr 3, pp 42-48 (USSR)

ABSTRACT: Modern fast bobbins are of gyroscopic and non-elastic character, therefore, in investigations division should be made between the rigid and elastic spindles. The relationship of time and the basic dynamic characteristics of the cylindrical cop can be defined by the formula (1.1) which is derived from the opening formulae, where
γ - density of the thread,
d - its diameter,
σ - mass of thread unit,
ω - angular velocity of spindle,
ω_1 - angular velocity of the slot,
ω' - angular velocity of winding,

The Effect of Variations in Cop Mass and the Pull of the Thread on the Spinning of the Bobbin

ρ - radius of cop,
T - time of winding of one layer,
m - mass of the bobbin,
t - initial instant.

The formula (1.2) expresses the time component from the instant of bobbin inertia in respect of the longitudinal axis, whilst that in respect of the cross axis can be defined as

$$B = (\xi^2 + \eta^2)\, \sigma\omega'\rho$$

or as Eq (1.4) in the case of a conic cop. If the thread pull and the reactive force due to joints are neglected, then the vibrations of the rigid spindle will be the same as those of the spindle with a full or empty cop (Eq 2.1). The force of pull will be a periodic function of the period 2T and its action will be directed round the axis x with velocity ω'. Thus, the moments, Eqs(2.2), can be derived, where F and F' - periodic functions of the angular frequency π/T, t" - instant of time, ε - phase. The moment in respect to the axis y,z

The Effect of Variations in Cop Mass and the Pull of the Thread on the Spinning of the Bobbin

can be found in a similar way (Eqs 2.3 and 2.4). These should be added to the right terms of Eq (2.1) which now will take the form of Eq (2.5), where $\xi = y + iz$. The motion of the spindle can be defined as Eq (2.6), the separate terms of which are determined from Eq (2.7) and its solution is given by Eq (2.8). The above formulae can be solved by an approximate method if the variables y and z are defined as Eq (2.9). The vibrations due to the effect of pulling and of the reactive force can be determined if the formulae (2.7) to (2.10) are solved by the zero approximation method. It should be noted that the amplitudes of the vibrations, caused by the variations of the mass, increase faster than the specific amplitudes a_1 or a_{1j}. Therefore, the variables y and z in the case of resonance will take the form of Eq (2.11). At certain values of the angular velocity ω, the spindle of the bobbin ceases to be rigid, i.e. it becomes flexible. The vibration of a flexible spindle can be investigated when it bends in the directions y and z, which are

The Effect of Variations in Cop Mass and the Pull of the Thread on the Spinning of the Bobbin

defined as $u_r(x,t)$ and $v_r(x,t)$ respectively. Then for a complex bend at the r^{th} sector of the spindle, the formulae (3.1), for the conditions (3.2) can be derived, where $k_r = m_r/EJ_r$, m_r and EI_r - mass of a unit length and the rigidity on bending respectively. The additional vibrations due to the loss of equilibrium can be defined as Eq (3.3) which can be solved as shown by Eqs (3.4) to (3.8).

There are 3 Soviet references.

SUBMITTED: September 8, 1958

Card 4/4

24(6),16(1) SOV/43-59-7-11/17

AUTHOR: Novoselov,V.S.

TITLE: Motion Equations of Non-Linear Non-Holonomic Systems With Variable Masses (Uravneniya dvizheniya nelineynykh negolonomnykh sistem s peremennymi massami)

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki, mekhaniki i astronomii, 1959, Nr 7(2), pp 112-117 (USSR)

ABSTRACT: Starting from the motion equations of a mechanic system with variable masses and non-linear Chetayev bindings being independent of the mass changes, the author reduces non-holonomic problems to holonomic problems with the aid of undetermined factors. The equations of S.A.Chaplygin, P.V.Voronets, Hamel, and Appell are considered in detail.
There are 4 references, 3 of which are Soviet, and 1 American.

SUBMITTED: December 9, 1957

Card 1/1

24(6)

AUTHOR: Novoselov, V.S.

SOV/43-59-13-11/16

TITLE: On the Motion of a Sledge of Variable Mass on a Horizontal Plane

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki, mekhaniki i astronomii, 1959, Nr 13(3), pp 111-120 (USSR)

ABSTRACT: The author investigates the motion of a sledge of variable mass in a horizontal plane. The consideration of the frame vibrations at an elastic pendant is neglected. The motion is carried out under the influence of air resistance and friction. In the determination of the generalized forces of reaction the inner motion of the sledge particles is considered. The author obtains expressions for side reactions and conditions for side stability. If the change of the helm angle is known the problem consists in the integration of an equation of second order for the back skis turn. Special cases are treated. Especially it is shown: When the helm is fastened the sledge makes circular movement, when the helm is loose the sledge begins rectilinear motion. The results can be applied to the rolling of a car. The author mentions N.Ye. Zhukovskiy, Ye.A.Chudakov, P.S.Lineykin, and I.V.Meshcherskiy. There is 1 figure, and 7 Soviet references.

SUBMITTED: December 7, 1957

Card 1/1

NOVOSELOV, V.S.

Motion equations of nonlinear nonholonomic systems with variable masses. Vest.LGU 14 no.7:112-117 '59. (MIRA 12:5)
(Mechanics, Analytic)

NOVOSELOV, V.S.

Motion of variable-mass sledges on a horizontal plane. Vest. LGU 14 no.13:111-120 '59. (MIRA 12:6)
(Sleighs and sledges)

24(6) SOV/43-59-19-11/14

AUTHOR: Novoselov, V.S.

TITLE: Investigation of Stability of the Vertical Position of a Variable Mass Gyroscope

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki, mekhaniki i astronomii, 1959, Nr 19(4), pp 121-129 (USSR)

ABSTRACT: Purely on principle, without consideration of technical details the author considers the stability of the vertical position of a gyroscope of variable mass, where an inner motion of the particles is admitted. The results of the paper are already published in [Ref 1]. The author mentions Yu.A.Krutkov, A.M. Lyapunov, B.V.Bulgakov, and K.P.Persidskiy.
There are 6 Soviet references.

SUBMITTED: February 6, 1958

Card 1/1

NOVOSELOV, V.S. (Leningrad)

Motion of gyroscopic systems. Prikl. mat. i mekh. 23 no.1:176-178 Ja-F '59. (MIRA 12:2)
(Gyroscope)