

SCV 154
Effect of the Bending of Measuring Rods on the Results of Leveling

references

ASSOCIATION: Moskovskiy institut inzhenerov geodesii, aerofotosyuzha i kartografii
(Moscow Institute of Survey, Aerial Survey and Cartographic Engineers)

SUBMITTED: G. V. Popov

Card 2/2

PISKUNOV, N.I.

Effect of silage on the organism of young cattle. Zhivotnovodstvo
20 no.4:50-51 Ap '58.
(MIRA 11:3)

1. Nauchnyy sotrudnik Kalininskoy Gosudarstvennoy sel'skokhozyaystven-
noy optytnoy stantsii.
(Silage) (Cattle--Physiology)

LITVINOV, N. S.

Solution du Premier Problème du Calcul des Probabilités à la suite d'un ouvrage de A. N. Matem., B. I. V. et al., 1940.

2: Mathematics in the USSR, 1940-1941
edited by Fursh, A.V.,
Markushevich, A.I.,
Rashevskiy, E.K.
Moscow-Leningrad, 1943

PISKUNOV, N. S.

Piskunov, N. S. Solution of a boundary problem for a parabolic equation of motion of liquids and gases in a porous medium. Doklady Akad. Nauk SSSR (N. S.) 76, 505-508 (1951). (Russian)

The nonlinear equation

$$2\frac{\partial p}{\partial r} + 2\left(\frac{\partial p}{\partial r}\right)^2 + 2r\frac{\partial p}{\partial r} - \alpha\frac{\partial p}{\partial t} = 0 \quad (r > r_0)$$

with conditions $p(r, 0) = p_0$, $\frac{dp}{dr}|_{r=r_0} = 0$, describes a problem of flow in a porous medium. The substitution $\xi = r/\sqrt{t}$ enables the author to write the equation in the form $\frac{dp}{d\xi} + p'/\xi + \alpha^2/4p = 0$ which can be integrated:

$$pp' = \xi^{-1} \exp \left[-\frac{\alpha^2}{4} \int_{t_0}^t p'^2 d\xi \right].$$

The new conditions $\lim_{\xi \rightarrow \infty} p(\xi) = P_0$

$$[dp'/d\xi]_{\xi=0} = 0 \Rightarrow p' = Q^* \sqrt{T}$$

lead finally to

$$p^2 = Q^{*2} \cdot \int_{t_0}^t \xi^{-1} \exp \left[-\frac{\alpha^2}{4} \int_{t_0}^t p'^2 d\xi \right] dt + P_0^2.$$

An existence proof follows, in the course of successive approximations for finding p which a method the constant Q^* is evaluated, $Q^* T = Q$. R. E. Gaskell.

USSR/Geophysics - Petroleum Deposits

11 Jun 52

"Movement of the Oil-Bearing Contour and Pressure Drop in the Strata During Operations on Large-Scale Petroleum Deposits," N. S. Piskunov

"Dok Ak Nauk SSSR" Vol LXXXIV, No 5, pp 907, 908

Proposes a method for detg the pressure in unbounded stratum and the movement of the oil-bearing contour in the case of plans for working large-scale oil deposits with a large number of exploitational and forcing wells. Sets up math expressions for subject quantities. Submitted by Acad A. I. Nekrasov
19 Apr 52.

223T60

USSR/Geophysics - Petroleum, Surfaces of Separation 1 Jul 52

"The Form of the Surface of Separation Between Water and Petroleum During Separating of Petroleum From the Stratum and During the Injecting of Water Into the Stratum. The Process Governing the Formation of Aqueous Cones," N. S. Piskunov

"Dok Ak Nauk SSSR" Vol LXXXV, No 1, pp 49-52

Considers an unbounded horizontal oil-bearing stratum under which is located an aquiferous stratum, with known thickness of the water and petroleum strata; the upper boundary of the oil stratum and the lower boundary of the water are regarded as impermeable.

224TB5

Proceeds from the eqs of nonstationary (unsteady) motion of a fluid as obtained by S. A. Khristiano-vich and V. V. Devison (1938). Uses also the results of P. Ya. Polubarnova-Kochina. Submitted by Acad A. I. Nekrasov 3 May 52.

224TB6

PISKUNOV, N.S.

PISKUNOV, N. S.

Subject : USSR/Mining AID P - 1095
Card 1/1 Pub. 78 - 6/21
Authors : Trebin, F. A. and Piskunov, N. S.
Title : Problem of utilization of large oil deposits of platform type. (Continued from Neft. khoz., v. 32, #9, p25, S 1954, AID P - 822)
Periodical : Neft. khoz., v. 32, #10, 20-30, 0 1954
Abstract : A general review of the hydrodynamic study of the contour of large oil deposits is presented. Drillings of operating and pressurized wells by various systems are discussed. The significance of double and triple systems of exploratory drillings or one and two side action systems is analysed from the viewpoint of increasing oil well production. 11 maps and 6 tables.
Institution : None
Submitted : No date

PISKUNOV, N. S.; GOVOROVA, G.L.

Approximation method for determining the movement of the water-oil
boundary. Trudy VNII no.6:3-12 '54. (MLRA 9:1)
(Petroleum engineering) (Oil field flooding)

PISKUNOV, N.S.

Determining the movement of the water-oil boundary and pressure
decline in large oil field exploitation. Trudy VNII no.6:13-26
'54. (MLRA 9:1)
(Petroleum engineering) (Hydrodynamics)

1976. Tashevich, K. A., Pichkov, M. S., Gerasova, G. I., and Glebova, T. A. A method of calculating mixed extraction systems (dissolved gas systems with natural feeding or pumping contour) (in Russian), Trudi Vses. nauch.-tekhn. in-ta no. 6, 190-204, 1954; Rev. no. 960, Ref. Zh. Nauk. 1956.

Any oil field, with a specific configuration and arrangement of extraction boreholes, can be divided into elementary sections bounded by equivalent impermeable walls, at which the normal derivative of the potential (pressure) is zero. These sections can be represented by rectangles or sectors containing one or more boreholes.

The motive force of the flow of oil to the borehole(s) in conditions of mixed working is the pressure (head) of the contour water, and the expansion of the occluded gases.

An equation for the material equilibrium can be set up for any such elementary area. The boundary of a region with gasfilled liquid will be subject to a time variation.

The change in saturation on the contour of the region, at which conditions of dissolved gas operation are initiated, is assumed as the basis for the relationship derived by K. A. Tashevich [T. A. Tashevich, Neft. In-ta no. 25, 1947].

Examples are given for setting up the equations of material equilibrium, for different elementary systems.

Courtesy of Referativnyi Zhurnal M. A. Gerasimov, USSR
Translation, courtesy Ministry of Supply, England

PISKUNOV, N.S.

Subject : USSR/Mining AID P - 822
Card 1/1 Pub. 78 - 7/26
Authors : Trebin, P. A. and Piskunov, N. S.
Title : Problem of utilization of large oil deposits of the platform type
Periodical : Neft. khoz., v. 32, #9, 25-33, S 1954
Abstract : The author presents a hydrodynamic substantiation for suitable location of the operating and pressurized wells in order to increase the oil output. Various cases of the relative location of these wells are discussed and the effect of pressure on the oil output increase is analytically formulated with an integral equation. 14 plans and 3 tables. (The article will be completed in the next issue).
Institution: Laboratory of Underground Hydrodynamics of the All-Union Scientific Research Institute (VNII)
Submitted : No date

Call Nr: AF 1106825
Transactions of the Third All-union Mathematical Congress* (Cont.)
J.n Jul '51. Trudy o. V.I., Sect. Rps., Izdatel'stvo AN SSSR, Moscow, 1951. 2 vols.
Nuzhin, M. I. (Kazan') and G. G. Tumashev (Kazan'). Inverse
Boundary Problems and Their Application in Mechanics. 208-209

Petrasheen', G. I. (Leningrad). On the Investigation of
Non-stationary Interference Phenomena in Media With
Thin Layers. 209

Piskunov, N. S. (Moscow). On Some Problems of Underground
Hydromechanics Leading to Boundary Problems of Partial
Differential With Variable Domains. 209-210

Rvachev, V. L. (Osipenko). Design of Infinite Beams
on Elastic Half-space. 210

Mention is made of Proktor, G. E. and Gorbunov-Posadov, M. I.

Rogozhin, V. S. (Rostov-na-Donu). Sufficient Conditions
for Univalence of Solution of Hydromechanics Inverse
Boundary Problems. 210-211

Card 70/80

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 4, p 87 (USSR) SOV.24-57-4-4472

AUTHOR: Piskunov, N. S.

TITLE: On Some Problems in Underground Hydromechanics Which Can Be Reduced to Boundary Problems Relative to Partial Differential Equations With a Variable Range. (O nekotorykh zadachakh podzemnoy gidromekhaniki, privodyashchikh k kraevym zadacham dlya uravneniy v chastnykh proizvodnykh s peremennoy oblast'yu)

PERIODICAL: Tr 3-go Vses. matem. s"vezda" Vol. I. Moscow, AN SSSR , 1956, pp 209-210

ABSTRACT: Bibliographic entry

Card 11

PHASE I BOOK EXPLOITATION

3

Piskunov, Nikolay Semenovich

Differentsial'noye i integral'noye ischisleniya dlya vtuzov (Differential and Integral Calculus for Vtuzes) Moscow, Gostekhizdat, 1957. 844 p.
15,000 copies printed.

Ed.: Smolyanskiy, M. L.; Tech. Ed.: Murashova, ... Ya.

PURPOSE: This book is intended as a textbook for a 300-400 hour course in mathematics at vtuzes.

COVERAGE: The monograph is a systematic presentation of calculus for engineering students. The author thanks Yu. S. Ochan and V. A. Solodikov for writing parts of the book, and A. N. Cherkasov, V. Ya. Kozolov, N. K. Brushlinskiy, I. Ya. Verchenko, and K. F. Malyavko for their assistance in writing the book.

Card 1/1

Differential and Integral Calculus (Cont.)

3

TABLE OF
CONTENTS:

Preface

11

Ch. I. Number. Variable. Function

1. Real numbers	13
2. Representation of real numbers by points on a number scale	14
3. Absolute value of a real number	15
4. Mathematical quantities. Variables and constants	16
5. Character of variation and interval of variable quantities	17
6. The order of variation. Monotonically variable and bounded variable quantities	18
7. Functions	20
8. The methods of definition of functions	24
9. Explicit and implicit functions	27
10. Increasing, decreasing, and monotonic functions	28
11. Functions bounded in an interval	29
12. Even and odd functions. Periodic function	30

Card 2/19

Differential and Integral Calculus (Cont.)

13. Functions with integral and continuous argument	38
14. Algebraic functions	39
15. Fundamental elementary functions	43
16. Elementary functions	48
17. Polar coordinate system	49
Exercises	51
Ch. II. Theory of Limits. Continuity of Functions	
1. Limit of a variable	53
2. Limit of a function with natural numbers as arguments (limit of sequence)	59
3. Limit of a function with continuous argument	62
4. Generalizing the concept of the limit of a function *1	68
5. Bounded function when $x \rightarrow a$ or when $x \rightarrow \infty$	75
6. Infinitesimals and infinitely large quantities	76
7. Fundamental properties of infinitesimals	80
8. Fundamental theorems on limits (rules of approaching limit)	83

1) Sections written in part by Yu. S. Ochan are indicated by an asterisk;
those written entirely by him are indicated by two asterisks.
Card 3/19

Differential and Integral Calculus (Cont.)

3

9. Criteria of the existence of a limit. Additional information on limits	86
10. Limit of the function $\frac{\sin x}{x}$ when $x \rightarrow 0 *$	88
11. The number e. Natural logarithms	91
12. Comparison of infinitesimals	97
13. Continuous functions. Points of discontinuity	101
14. Properties of functions, continuous at a point. Continuity of elementary functions	109
15. Inverse functions *	112
16. Composite functions **	116
17. Properties of functions, continuous in a closed interval	119
Exercises	123
Ch. III. Derivatives and Differentials	
1. Velocity of motion	126
2. Definition of a derivative	128
3. Geometrical interpretation of a derivative	130
4. Differentiability of functions	131
5. Derivatives of elementary functions. Derivative of the function $y = x^n$ for n integer and positive	133
6. Derivatives of functions $y = \sin x$, $y = \cos x$	135

Card 4/ 19

Differential and Integral Calculus (Cont.)

7. Derivatives of constants, of product of a constant and a function, of a sum, of a product, and of a quotient of functions	146
8. Derivatives of logarithmic functions	141
9. Derivatives of composite functions	142
10. Derivatives of the functions $y = \tan x$, $y = \cot x$, $y = \ln x $	144
11. Derivatives of implicit functions	145
12. Derivatives of power functions for any real exponent, derivatives of exponential functions, and of composite exponential functions	147
13. Derivatives of inverse functions	149
14. Derivatives of inverse trigonometric functions	151
15. Table of fundamental differentiation formulas	153
16. Parametric definition of a function	154
17. Equations of certain curves in parametric form	156
18. Derivatives of functions in parametric form **	158
19. Hyperbolic functions *	160
20. Differential	163
21. Geometric interpretation of a differential	168

Card 5/19

Differential and Integral Calculus (Cont.)

3

22. Derivatives of various orders	1
23. Differentials of various orders	1
24. Derivatives of various orders of implicit functions and of functions in parametric form	2
25. Mechanical interpretation of the second derivative	4
26. Equations of a tangent and of a normal. Lengths of a subtangent and a subnormal	10
27. Geometric interpretation of the radius-vector derivative with respect to the polar angle	18
Exercises	19

Ch. IV. Some Theorems on Differentiable Functions

1. Theorem on the roots of a derivative (Rolle's theorem)	15
2. Theorem of finite increments (theorem of Langrange)	16
3. Theorem on the ratio of increments of two functions (theorem of Cauchy)	191
4. Limit of the ratio of two infinitesimals ("Evaluation of the indeterminate form $\frac{0}{0}$ ")	193

Card 6/19

Differential and Integral Calculus (Cont.)

5. Limit of the ratio of two infinitely large quantities ("Evaluation of the indeterminate form $\frac{\infty}{\infty}$)	35
6. Taylor's formula	200
7. Expansion of the functions e^x , $\sin x$, $\cos x$ using Taylor's formula	203
Exercises	206
Ch. V. Investigation of the Behavior of Functions	
1. Statement of the problem	208
2. Increasing and decreasing of a function	209
3. Maximum and minimum of functions	211
4. The scheme of investigation of maximum and minimum of functions with the aid of first derivatives	217
5. Investigation of maximum and minimum of functions with the aid of second derivatives	219
6. Largest and smallest values of a function in an interval	233
7. Application of the theory of maximum and minimum of functions to the solution of problems	235
8. Investigation of maximum and minimum of a function with the aid of Taylor's formula	237

Card 7/19

Differential and Integral Calculus (Cont.)

- | | |
|--|-----|
| 9. Convexity and concavity of a curve. Points of inflection | 129 |
| 10. Asymptotes | 130 |
| 11. General plan of investigation of functions and of construction of graphs | 130 |
| 12. Investigation of curves in parametric form | 130 |
| Exercises | 131 |

Ch. VI. Curvature of a Curve

- | | |
|--|-----|
| 1. Length of an arc and its derivative * | 131 |
| 2. Curvature | 132 |
| 3. Calculation of curvature | 132 |
| 4. Calculation of the curvature of a line in parametric form | 132 |
| 5. Calculation of the curvature of a line in polar coordinates | 132 |
| 6. Radius and circle of curvature. Center of curvature. | 132 |
| Evolute and involute | 132 |
| 7. Properties of the evolute | 133 |
| Exercises | 133 |

Card 8/19

Differential and Integral Calculus (Cont.)

3

Ch. VII. Complex Numbers. Polynomials

1. Complex numbers. Preliminary definitions	272
2. Fundamental operations with complex numbers	274
3. Power and root of complex numbers	276
4. General form of a complex number. Limit of a complex variable **	279
5. Concept of a function of a complex variable. Exponential function and its properties. Euler's formula *	280
6. Factoring of a polynomial	284
7. On multiple roots of a polynomial	289
8. Factoring of a polynomial in the case of complex roots	290
9. Approximate calculation of the real roots of an equation	291
10. Interpolation. Lagrange interpolation formula	295
11. On the best approximation of functions by polynomials. Chebyshev theory	297
Exercises	299

Ch. VIII. Functions With Several Variables

1. Definition of a function with several variables	311
2. Geometric representation of function with two variables	312
3. Partial and total increment of a function	313

Card 9/19

Differential and Integral Calculus (Cont.)

3

4. Continuity of a function of several variables *
5. Partial derivatives of a function of several variables
6. Geometric interpretation of the partial derivatives of a function of two variables
7. Total increment and total differential
8. Use of a total differential in approximate calculations
9. Application of a differential to the estimate of error bounds in calculations **
10. Derivative of a composite function. Total derivative
11. Derivative of a function in implicit form **
12. Partial derivatives of various orders
13. Contour lines
14. Directional derivative
15. Gradient
16. Taylor's formula for a function of two variables **
17. Maximum and minimum of a function of several variables
18. Maximum and minimum of a function of several variables, connected by given equations (conditional maximum and minimum)
19. Singular points of a curve

Exercises

Card 10/ 19

Differential and Integral Calculus (Cont.)

Ch. IX. Application of Differential Calculus to Solid Geometry

1. Equations of a space curve	12
2. Limit and derivative of a vector function with scalar argument.	
Equation of a tangent of a curve. Equation of a normal plane	15
3. Rules of differentiation of vectors (of vector functions)	11
4. First and second derivatives of a vector with respect to the arc length. Curvature of the curve. Principal normal	13
5. Osculating plane. Binormal. Torsion	19
6. Tangential plane and normal of a surface	13
Exercises	

Ch. X. Indefinite Integral

1. Primitive function and indefinite integral	19
2. Table of integrals	12
3. Some properties of indefinite integrals	13
4. Integration by the method of changing the variable or by the substitution method *	15
5. Integrals of certain functions containing a quadratic trinomial *	17
6. Integration by parts **	41
7. Rational fractions. Simplest rational fractions and their integration	15
Card 11/19	

Differential and Integral Calculus (Cont.)

8. Decomposition of a rational fraction into partial fractions
9. Integration of rational fractions
10. Method of Ostrogradskiy *
11. Integrals of irrational functions
12. Integrals of the form $\int R(x, \sqrt{ax^2+bx+c}) dx$
13. Integration of differential binomials **
14. Integration of certain irrational functions with the aid of trigonometric substitutions *
15. Integration of certain classes of trigonometric functions
16. Integration of certain nonalgebraic functions **
17. On functions the integrals of which are not expressed by elementary functions *

Exercises

Ch. XI. Definite Integral

1. Statement of the problem. Lower and upper integral sums
2. Definite integral *
3. Fundamental properties of the definite integral
4. Calculation of the definite integral. The Newton-Leibnitz formula

Card 12/19

Differential and Integral Calculus (Cont.)

- | | |
|--|-----|
| 5. Change of the variable in the definite integral | . |
| 6. Integration by parts | + 9 |
| 7. Improper integrals * | - 9 |
| 8. Approximate calculation of definite integrals | - 4 |
| 9. Chebyshev's formula | - 9 |
| 10. Integrals dependent on a parameter | - 2 |
| Exercises | |

Ch. XII. Geometric and Mechanical Applications of Determinate Integrals

- | | |
|--|-----|
| 1. Calculation of areas in rectangular coordinates | - 5 |
| 2. Area of a curvilinear sector in polar coordinates | - 1 |
| 3. Length of arc of a plane curve * | - 2 |
| 4. Calculation of the volume of a solid using areas with parallel cross sections | - 3 |
| 5. Volume of a solid of revolution | - 3 |
| 6. Area of a solid of revolution | - 1 |
| 7. Calculation of work using a definite integral | - 3 |
| 8. Coordinates of the center of gravity | - 1 |
| Exercises | |

Card 13/ 19

Differential and Integral Calculus (Cont.)

3

Ch. XIII. Differential Equations

- | | |
|---|---|
| 1. Statement of the problem | 2 |
| 2. Definitions | 3 |
| 3. Differential equations of the first order (general concepts) | 2 |
| 4. Equations with separated and separable variables | 2 |
| 5. Homogenous equations of first order | 2 |
| 6. Equations reducible to homogenous equations | 2 |
| 7. Linear equations of first order | 2 |
| 8. Bernoulli's equation | 2 |
| 9. Equation in total differentials | 2 |
| 10. Integrating factor | 3 |
| 11. Envelope of a family of curves ** | 2 |
| 12. Particular solutions of a differential equation of first order | 2 |
| 13. Clairault's equation | 2 |
| 14. Lagrange's equation | 2 |
| 15. Orthogonal and isogonal trajectories | 2 |
| 16. Differential equations of higher orders * (general concepts) | 2 |
| 17. Equation of the form $y^{(n)} = f(x)$ | 2 |
| 18. Certain types of differential equations of second order reducible to equations of first order | 2 |

Card 14/ 19

Differential and Integral Calculus (Cont.)

3

19. Graphical method of integration of a differential equation of second order	174
20. Linear homogenous equations. Definition and general properties	175
21. Linear homogeneous equations of second order with constant coefficients	192
22. Linear homogeneous equations of nth order with constant coefficients *	196
23. Nonhomogeneous linear equations of second order	198
24. Nonhomogeneous linear equations of second order with constant coefficients	203
25. Nonhomogeneous linear equations of higher orders	211
26. Differential equation of mechanical oscillations	215
27. Free oscillations	215
28. Forced oscillations	213
29. Systems of ordinary differential equations	222
30. Concept of Lyapunov's stability theory *	223
Exercises	227

Card 15/ 19

Differential and Integral Calculus (Cont.)

Ch. XIV. Multiple Integrals

- | | |
|---|-----|
| 1. Double integral * | 147 |
| 2. Calculation of a double integral | 143 |
| 3. Calculation of a double integral (continuation) * | 143 |
| 4. Calculation of areas and volumes with the aid of double integrals | 145 |
| 5. Double integral in a polar coordinate system | 145 |
| 6. Change of variables in a double integral (general case) | 145 |
| 7. Calculation of surface area | 146 |
| 8. Density of distribution of a substance and double integral | 147 |
| 9. Moment of inertia of plane area | 147 |
| 10. Coordinates of the center of gravity of plane area | 147 |
| 11. Triple integral | 147 |
| 12. Calculation of a triple integral ** | 147 |
| 13. Change of variables in a triple integral | 147 |
| 14. Moment of inertia and coordinates of the center of gravity of a solid | 147 |
| 15. Calculation of integrals dependent on a parameter * | 148 |
| Exercises | 144 |

Card 16/19

Differential and Integral Calculus (Cont.)

Ch. XV. Line Integrals and Surface Integrals

- | | |
|--|----|
| 1. Line integral | 2 |
| 2. Calculation of a line integral * | 3 |
| 3. Green's formula | 3 |
| 4. Conditions of independence of a line integral from the path
of integration | 2 |
| 5. Surface integral | 5 |
| 6. Calculation of a surface integral | 8 |
| 7. Stokes' equation | 1 |
| 8. Ostrogradskiy's equation | 6 |
| 9. Surface integrals of scalar functions (integrals over the surface
area) ** | 9 |
| 10. Line integrals of scalar functions (integrals over the length
of an arc) ** | 14 |

Exercises

Ch. XVI. Series

- | | |
|---|---|
| 1. Series. Sum of a series | 2 |
| 2. Necessary test for convergence of a series | 2 |

Card 17/19

Differential and Integral Calculus (Cont.)

3

- 3. Comparison of series with positive terms
 - 4. D'Alembert's test
 - 5. Cauchy's test
 - 6. Integral test for convergence of series
 - 7. Alternating series. Leibnitz theorem
 - 8. Series with variable signs. Absolute and conditional convergence
 - 9. Functional series
 - 10. Majorant series
 - 11. Continuity of the sum of a series
 - 12. Integration and differentiation of series
 - 13. Power series. Interval of convergence
 - 14. Differentiation of power series
 - 15. Power series of $x - a$
 - 16. Taylor's and Maclaurin's series
 - 17. Examples of expansion of functions into series
 - 18. Euler's equation
 - 19. Binomial series
 - 20. Expansion of the function $\ln(1+x)$ into a power series.
- Calculation of the logarithms
- 21. Calculation of definite integrals with the aid of series
 - 22. Integration of differential equations with the aid of series
 - 23. Bessel's equation

Exercises

Card 18/19

Differential and Integral Calculus (Cont.)

3

Ch. XVII. Fourier Series

1. Definition. Statement of the problem	314
2. Examples of expansion of functions into Fourier Series	318
3. A note on the expansion of a periodic function into a Fourier Series	323
4. Fourier series for even and odd functions	326
5. Fourier series for a function with the period 21	327
6. On the expansion of a nonperiodic function into a Fourier Series **	329
7. Mean approximation of a given function with the aid of a trigonometric polynomial	330
8. Dirichlet integral	336
9. Convergence of a Fourier Series at a given point	339
10. Fourier series for a differentiable function *	340
11. Practical harmonic analysis	343
Exercises	344

AVAILABLE: Library of Congress

LK/bmd
12-14-58

Card 19/19

PISKUNOV A.

124-11-12922

Translation from: Referativnyy Zhurnal. Mekhanika. 1957. Nr 11 p 92 (USSR)

AUTHOR: Piskunov, N.S.

TITLE: To the Question of the Seepage of a Liquid in a Layer of Heterogeneous Capacity and Permeability (K voprosu o fil'tratsii zhidkosti v neodnorodnom po moshchnosti i pronitsayemosti plaste)

PERIODICAL: Tr. Vses. neftegaz. n.-i in-t, 1956, Nr 8, pp 232-249

ABSTRACT: A fairly simple, approximate method is developed for the calculation of the utilization of petrolierous deposits in a heterogeneous layer, which makes possible a quantitative appraisal of the phenomenon under study and a sufficiently accurate assessment of its quantitative yield. An equation is derived for the seepage of a liquid in a heterogeneous layer, and the following questions are examined:

- 1) The applicability of the solution of the parabolic equation (equation of an elastic regimen) for an infinite layer to the investigation of operational processes in a finite layer.
- 2) The possibility of replacing a group of producing wells with a single, large well.
- 3) An evaluation of the pressure differentials introduced when a

Card 1 2

Translation from *Referativnyi zhurnal. Mekhanika*, 1958, Sov. 124, 58, 16, p. 118
AUTHOR Piskunov, N.S.

TITLE A Method for Computation of the Process of Exploitation of Oil Fields
Under Elastic Seepage Conditions at Given Free-surface Curves
Periodical: *Izv. Akad. Nauk SSSR. Tekhn. Kibernetika*, No. 10, pp. 10-24
SOV 124, 58, 16, p. 118

PERIODICAL: *Izv. Akad. Nauk SSSR. Tekhn. Kibernetika*, No. 10, pp. 10-24

ABSTRACT The author examines a number of problems dealing with the flow of reservoir fluid toward the operating wells and the consumption of fluid which is forced into the reservoir through injection wells. The placement of the wells is assumed to be arbitrary. The seepage conditions are elastic. In order to effect a solution of these problems, a system of linear difference equations is introduced which provides a relationship between the increments in discharge flow and the pressure drops occurring in it. The author does not advance any hydrodynamic considerations in favor of the system of equations proposed, however, inasmuch as the wells sink into the

Card 1 of 2

A Method for Computation of the Process of Exploitation of Oil Fields
SOV 124.88.17.12
reservoir are not uniformly distributed, the geometry of the system must have a significant effect on the process of seepage. This last consideration is reflected in the system of equations proposed. Bibliography: 5 references
V. P. Polatovskii

Card 2/2

SOV 124-58-7 7786

Translation from *Referativnyi zhurnal. Mekhanika i fizika SSSR*

AUTHOR Piskunov, N.S.

TITLE On Extracting Petroleum From Oil-bearing Layers With Underlying Water (Ob izysechenii nefti iz neftvanykh piastrov s podoshvennoy vodoy)

PERIODICAL Tr. Vses. neftegaz. nauch.-tekhn. inst. 1957, Nr 10, pp 88-100

ABSTRACT Examination of the flow of petroleum towards a shallow well situated in a layer limited by a cylindrical feed contour is made. The top part of the layer contains petroleum, the bottom part the underlying water. Both the petroleum and the water are considered incompressible. The seepage is considered stationary (the nonstationary problem for the case of unlimited layer was investigated by the author previously - Dokl. AN SSSR, 1952, Vol 85, Nr 1). On the petroleum-water boundary interface located below the well, continuity is assumed for the pressure and for the normal components of the seepage velocity. With these problem specifications, the water becomes immovable, the boundary interface will become that surface of the flow on which the pressure is a linear function of the z .

Card 1/2

SOV 124-58-3-7780

, On Extracting Petroleum From Oil-bearing Layers With Underlying Water

coordinate, thus the solution of the problem is reduced to the determination of the flow in one region only (matrix) that contains petroleum. Similar conditions on the boundary interface of the two liquids were introduced by P Ya Polubarnova-Kochina and were solved in the cases of the plane and axisymmetric problems [2]. AN SSSR Otd tekhn. 1940, Nr. 6, 1948, Nr. 21. The author obtains an outside estimate of the water-free yield of the well under consideration for an infinite depth of the boundary interface. This estimate is extended by him to the case of a transversely isotropic layer and it transpires that when the horizontal permeability of the layer is greater than the vertical permeability, the water-free yield of the wells. In addition, it is established that a complete flooding of the wells is impossible so long as the thickness of the oil-bearing portion of the layer is greater than zero.

N N Verigin

Editorial staff of the journal "Osnovy geofiziki i tekhnicheskogo poiskaniya naftы i gaza".

Card 2-2

PISKUNOV, N.S.

Method for calculating the elastic drive process at given pressures
in production and injection wells. Trudy VNII no.10:3-24 '57.
(MIRA 14:6)
(Oil field flooding)

PISKUNOV, N.S.

Petroleum recovery from layers containing bottom waters. Trudy VNII
no.10:88-100 '57. (MIRA 14:6)
(oil reservoir engineering)

PISKUNOV, N.S.

Analyzing the performance of parting and boundary rows of intake wells.
Trudy VNII 12:103-119 '58. (MIRA 12:3)
(oil field flooding)

PISKUNOV, N.S.

Formation fracturing and its effect on oil well exploitation.
Trudy VMII no.16: 3-24 '58. (MIRA 11:12)
(Oil wells--Hydraulic fracturing)

PISKUNOV, N.S., TESLYUK, Ye.V.

Problem of the length of time of water-free exploitation of a
water-oil layer by different tapping methods: hydraulic fracturing,
imperfect well, imperfect well with an exclusion screen. Nauch.-
tekh. sbor. po dot. nefti no.1:5-10 '58. (MIRA 15:0)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.
(Oil fields—Production methods)

PISKUNOV, N.S., ROSENBERG, M. D., KEROG, D. A., BOBILYK, YI. P., KRYLOV, E. F.,
PILATEVSKY, V. P. (Moscow)

"The Hydrodynamic Problems of the Flow of Explosives."

report presented at the First All-Union Conference on Theoretical and Applied Mechanics, Moscow, 11-13 Jan. - 1958.

PICKUNOV, N. S. (Moscow)

"An Approximate Variational Method for Solving the Dirichlet-Neumann Problem in Two Adjacent Domains with a Common Variable Boundary Applied to Problems of Spherical Hydrodynamics."

report presented at the First All-Union Congress on Theoretical and Applied Mechanics, Moscow, 27 Jan. - 1 Feb. 1961.

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001341

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001341

EMBRYONIC TISSUE DERIVED FROM EMBRYOS, CELLS, PROTEINS, AND OTHER MATERIALS.

Differentiation of stem cells into different types of cells is often induced by adding growth factors or other substances to the culture medium. Nature, 1990, 345, 131-132.

PISKUNOV, Nikolay Semenovich: SMOLYANSKIY, M.L., redaktor; MURASHOVA, N.Ya.,
tekhnicheskiy redaktor

[Differential and integral calculus for higher technical schools]
Differentsial'noe i integral'noe ischisleniia; dlja vtuzov. Moskva,
Gos.izd-vo tekhniko-teoret. lit-ry, 1957. 844 p. (MIRA 10:8)
(Calculus, Differential) (Calculus, Integral)

PISKUNOV, Nikolay Semenovich; KEPPEL, I.V., red.; GAVRILOV, S.S.,
tekhn.red.

[Differential and integral calculus for technical institutions
of higher learning] Differentsial'noe i integral'noe ischislenie
dlja vuzov. Izd.2., perer. Moskva, Gos.izd-vo fiziko-matem.
lit-ry. 1960. 748 p. (MIRA 13:9)
(Calculus, Differential) (Calculus, Integral)

EISKUNOV, Nikolay Semenovich; KEPPEL, I.V., red.; GAVRILOV, S.S.,
tekhn. red.

[Differential and integral calculus for schools of higher
education] Differentsial'noe i integral'noe ischisleniia v lice
vtuzov. Izd.3., stereotipnoe. Moskva, fizmatgiz, 1961. 748 p.
(MIRA 15:7)

(Calculus, Differential) (Calculus, Integral)

PISKUNOV, Nikolay Semenovich; KEPPEN, I.V., red.; PLAKSHE, L.Yu.,
tekhn.red.

[Differential and integral calculi for institutes of higher
technical education] Differentsial'noe i integral'noe
ischiisleniia dlja vtush. Izd.4., dop. Moskva, Gos.izd-vo
fiziko-matem.lit-ry, 1962. 855 p. (MIRA 15:5)
(Calculus, Differential) (Calculus, Integral)

FISKUNOV, Nikolay Semenovich; KEPPEL, I.I., red.; ROKKOV, N.A.,
red.

[Differential and integral calc II for institutions of higher
technical education] Differentsial'naya i integral'naya ischisleniya dlya vuzov. Izd. 4. M.: Nauka, 1980. 312 s.
(MFA 75:1)

FISKUROV, Nikolay Semenovich; KEPFER, I.V., red.; GOK'KOV, Yu.A.,
red.; MURASHOVA, N.Ya., red.

[Differential and integral calculi for technical schools of
higher education] Differentsial'noe i integral'noe ischis-
lenie : v. vtoroy. Izd... Moskva Izd-vo "Nauka," Vol.1.
(1962. 4.2.)

BORISOV, Yu.A.; PISKUNOV, N.V.

Information. Tekst. prom. 23 no.9:95-96 S '63. (MIRA 16:10)

1. Glavnnyy inzh. Kostromskogo zavoda Tekstil'mash Verkhne-Volzhskogo soveta narodnogo khozyaystva (for Borisov). 2. Reduktor radioveshchaniya Kostromskogo zavoda Tekstil'mash Verkhne-Volzhskogo soveta narodnogo khozyaystva (for Piskunov).
(Textile machinery)

PISKUNOV, P.I., doktor tekhn.nauk.

Experimental testing of uniflow multiple-stage clarifiers.
Trudy GISI no.25:141-144 '86.
(Water--Purification) (MIRA 11:5)

F. I. Piskunov, et al.
USSR /Chemical Technology. Chemical Products
and Their Application
Water treatment. Sewage water.

Abs Jour: Referat Zhur - Khimiya, No 1, 1953, 1959

Author : Piskunov F.I.

Inst : Gor'kiy Institute of Civil Engineering

Title : Experimental Study of Uniflow Multilevel Settling
Tank

Orig Pub: Tr. Gor'kivsk. inzh.-str. in-ta, 1951, № 15,
141-144

H-5

Abstract: A study was made of the operation of the two-level, horizontal settling tanks of the Gor'kiy water supply system. It is shown that the multilevel settling tanks with parallel flow of water along bottom and top level operate like two identical

Card 1/2

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001341

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001341

KOLOMNY, Yury Izrailevich; PISKOV, I.I., nat'l. reporter;
nauki i tekhniki SFSR, prof., dokt. tekhn. nauk, rec.;
TAN, A.A., rec.; MEL'NIK, V.V., rec.

Prezenting a review of the book "Dobrovolnoye vvedenie v
experiencii sovremennoy strany: Sovetskaya Rossiya bez
gravitatsii" by G. G. Kostylev, L. N. Kuznetsov, and V. V.
Ostapchuk, published by "Nauka".

LENISKIY, Vasiliy Alekseyevich, dots. kand.tekhn.nauk; PAVLOV, Vasiliy Ivanovich, dots.kand.tekhn.nauk [deceased]; PISKUNOV, P.I., prof. doktor tekhn.nauk, retsenzent; LAVEVSKIY, M.S., dots.kand.tekhn.nauk, nauchnyy red.; POPKOVICH, S.S., kand.tekhn.nauk, dots., nauchnyy red. BORSHCHEVSKAYA, N.M., red.izd-va; SMIRNOVA, A.P., red.izd-va; GUSIYVA, S.S., tekhn.red.

[Water supply and sewerage] Vodosнohranenie i kanalizatsiya. Izd. 2-eе, perer. Moskva, Gos. izd-vo lit-ry so strit. i tekhn., 1957. 379 p.

(MIRA 11:1)

(Sewerage) (Water supply engineering)

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001341

CIA-RDP86-00513R001341

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001341

PISKUNOV, Pavel Ivanovich, prof., doktor tekhn.nauk; NAGORNOV, Nikolay Ivanovich; PERLINA, A.M., red.; SHVEDOV, Yu.F., red.izd-va; KONYASHINA, A.D., tekhn.red.

[Operation of clarifiers with suspended filters] Praktika eksploatatsii osvetliteli so vveshennym fil'trom. Moskva, Izd-vo M-va kommun.khos.RSFSR, 1957. 48 p. (MIRA 11:1)

1. Glavnnyy inzhener Gor'kovskogo vodoprovoda.
(Water--Purification)

PISKUNOV, P. I., Professor

Doc Tech Sci

Dissertation: "Experimental and Theoretical Investigation of horizontal
Settling Tanks in a Water Supply System." 27/6/50

Moscow Order of the Labor Red Banner Engineering Construction Inst imeni
V. V. Kuybyshev

SO Vecheryaya Moskva
Sum 71

PISKUNOV, P. I.

The water supply of factories and plants) Moskva, Gos. izd-vo strukt. lit-ry,
1951. 106 p. (52-1909r)

TD745.P5

PISKOV, R.A., Inzh.

Prescribed proof sheet of James Biggar, Jr., Sr., 1964
Jr. 1965.
M.A. (P)

PISKUNOV, S.A., inzh.

Device for studying the wear of the collectors of electrical machines. Vest. elektroprom. 34 no.2:62 F '63. (MIRA 16:2)
(Electric machinery—Measurements)

DEVYATKOV, Aleksandr Fedorovich; VOLOTSKIY, N.P.; PISKUNOV, S.A.; SHATS,
Ye.L.; KRYUKOV, V.L., red.; BALKUD, A.I., tekhn.red.; GOR'KVA,
Z.D., tekhn.red.

[Repair of electric machines and transformers] Remont elektri-
cheskikh mashin i transformatorov. Moskva, Gos.izd-vo sel'khoz.
lit-ry, 1960. 270 p. (MIRA 13:11)
(Electric machinery--Maintenance and repair)

PISKUNOV, S.A., inzh.

Problems concerning the use of the collectors of electrical
machines. Prom.energ. 17 no.5:6-9 My '62. (MIA 15:5)
(Electric machinery)

PISKUNOV, S. I.

95

8/089/62/013/006/019/027
B102/B106

AUTHORS: G. T. and M. R.

TITLE: Nauchnaya konferentsiya Moskovskogo inzhenerno-fizicheskogo
instituta (Scientific Conference of the Moscow Engineering
Physics Institute) 1962

PERIODICAL: Atomnaya energiya, v. 13, no. 6, 1962, 603 - 606

TEXT: The annual conference took place in May 1962 with more than 400
delegates participating. A review is given of these lectures that are
assumed to be of interest for the readers of Atomnaya energiya. They are
following: A. I. Leypunskiy, future of fast reactors; A. A. Vasil'yev,
design of accelerators for superhigh energies; I. Ya. Pomeranchuk,
analyticity, unitarity, and asymptotic behavior of strong interactions at
high energies; A. B. Migdal, phenomenological theory for the many-body
problem; Yu. D. Fiveyskiy, deceleration of medium-energy antiprotons in
matter; Yu. M. Kogan, Ya. A. Iosilevskiy, theory of the Mössbauer effect;
M. I. Ayasnov, theory of ionization losses in nonhomogeneous medium;
Yu. B. Ivanov, A. A. Buhatse, h-f conductivity of subcritical plasma;

Card 1/4

35

Nauchnaya konferentsiya...

8/08/62/013/006/019/027
B102/B186

design of 30-Mev electron linear accelerators; Ye. G. Pyatnov, A. A. Glazkov, V. G. Lopato, A. I. Finogenov, G. N. Slepakii, V. D. Seleznev, experimental characteristics of low-energy electron linear accelerators; G. A. Zeytlenk, V. M. Levin, S. I. Piskunov, V. L. Smirnov, V. K. Khokhlov, radiocircuit parameters of Ny3(LUE)-type accelerators; G. A. Tyagunov, O. A. Val'dner, B. K. Gokhberg, S. I. Korshunov, V. I. Kotov, Ye. M. Moros, accelerator classification and terminology; O. S. Milovancv, V. B. Verakine, P. B. Zenkevich, theoretical analysis of magnetron operation; A. G. Tragov, P. R. Zenkevich, calculation of attenuation in a diaphragmated waveguide; Yu. P. Lazarenko, A. V. Ryabtsev, optimum attenuation length for linear accelerator; A. A. Zhigarev, B. Ye. Yeliseyev, review on trajectographs; I. G. Morozova, G. A. Tyagunov, review on more than 500 ion sources; M. A. Abroyan, V. L. Komarov, duoplasmatron-type source; V. S. Kusnetsov, A. I. Solnyshkov, calculation and production of intense ion beams; V. M. Rybin (Ye. V. Armentskiy), inductive current transmitters of high sensitivity; V. I. Koross, G. A. Tyagunov, kinetic description of linear acceleration of relativistic electrons; A. D. Vlasov, phase oscillations in linear accelerators; E. L. Burabtayn, G. V. Voskresenskiy, beam field effects in the waveguide of an electron linear accelerator; E. S. Bobovikov,

Card 3/4

1. 34419-68	B7(d)/ED-2/PD(1)	Pg-4/Pg-4/Pg-4	LJP(c)	BB/GG	
ACCESSION NO.:	AP501341				DD/0266/65/000/006/0066
2. 17741. Summator with pulse width representation of numbers. Class 42, No. 29 D 70200 16C					
3. 1963. Byulleten' ischretelen' i tovarnykh snakov, no. 8, 1963, 66					
TOPIC-NAME: summator.					
ABSTRACT: This Author Certificate presents a summator with pulse width representation of numbers, containing multistable time-pulse units. One unit is connected through an "OR" circuit, which is connected to the transfer output of the preceding summator digit, to the first inputs of a second "OR" circuit and an "AND" circuit, whose second inputs are connected to the other unit (see Fig. 1 on the Enclosure). There are also a third "OR" circuit forming the sum module ten and a transfer pulse shaper section. To utilize high stability chronotrons, a shaping circuit is connected between the second and third "OR" circuits. The supply inputs of the multistable time-pulse units are connected to sources of forward and additional reference voltages. Orig. art. has: 1 diagram.					
ASSOCIATION: Institut matematiki, SO AN SSSR (Institute of Mathematics, SO AN SSSR)					
CONT 142					

54549-66	ACCESSION NR: AP5015527	ENCL: 01	SUB CODE: DP
SUBMITTED: 21Jan64	OTHER: 000	O	
NO REF SOV: 000			
Card 2A2			

L 42036-65 EWT(1)/EWA(h) Feb

UR/0286/65/000/007/0135/0135

ACCESSION NR: AP5010958

1/
ID
D

AUTHOR: Piskunov, S. V.

TITLE: Sequential decimal summator. Class 42, No. 169891

PUBLISHER: Byulleten' izobreteniy i tovarnykh znakov, no. 7, 1965, 135

TOPIC CLASS: summator, counter circuit

ABSTRACT: This Author Certificate presents a sequential decimal summator containing a phase-to-pulse number converter and a decade counter. To insure algebraic summation and to simplify the circuit, the first input of the trigger of the first term to time-pulse representation converter is connected to a source of pulses of the first term. The second input is connected to sources of null pedestal pulses of the main and secondary cycles, and the trigger output is connected to the first input of the "AND" circuit of the first term to direct unitary code converter. Its second input is connected to the main cycle pulse source, and its output is connected to the first input of an "OR" circuit. The first input of the trigger of the second term to time-pulse representation converter is connected to a source of pulses of the second term. The second input is connected to the source of pulses of the main and secondary cycles. The direct output of the trigger is connected to the first input of the three-input "AND" circuit of the second term to direct unitary

Card 1/3

L 42036-65

ACCESSION NO: AP5010958

code converter. Its two other inputs are connected to a source of pulses of the main cycle from the first to the ninth and to a source of summation command. The inverse output of the trigger is connected to the first input of the three-input "AND" circuit of the second term to secondary unitary code converter. Its two other inputs are connected to a source of pulses of the main cycle from the first to the eighth. The outputs of these "AND" circuits are connected to the second and third inputs of the "OR" circuit whose output is connected to the counter input of a phase-pulse multistable unit. The second cutoff input of the unit is connected to the source of null pedestal pulses. The cycle pulse input is connected to the source of secondary cycle pulses. The output of the phase-pulse multistable unit is connected to the first inputs of sum selection coincidence circuits and a transfer (borrowing, exclusion) pulse shaper circuit. The second inputs are connected to sources of pulses of the secondary and main cycles respectively. The output of the transfer (borrowing exclusion) pulse shaper circuit is connected to the unit input of the register whose zero input is connected to the source of the first term pulses. The register output is connected through a differentiating circuit to the fourth input of the "OR" circuit.

ASSOCIATION: Institut matematiki, SO AN SSSR (Institute of Mathematics, SO AN SSSR)

Card 2/3

L 42036-65

ACCESSION NR: AP5010958

SUBMITTED: 14May64

ENCL: 00

SUB CODE: DP, EC

NO REP SOV: 000

OTHER: 000

Card 3/3 ✓

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001341

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001341

PISKUNOV, V.

What is published in economics by the State Publishing House
of Political Literature in 1964. Vop. ekon. no.1:144-147
Ja '64. (MIRA 17:3)

PISKUNOV, V., master sports

"Abrakadabra" is a new figure in advanced flying. Kryl. rod.
14 no.2:21 F '67. (MIRA 16:4)

(Aerial sports)

PISKUNOV, V.

Literature for studying economics. Vop. ekon. i ekonomika
Mr '62. M.R.A.
(Bibliography--Economics)

ABRAMOV, V.A.; RUMYANTSEV, A.F.; CHAYKIN, P.I.; ABATURIN, L.V.;
GAVRILOV, V.I.; ALTAJSKIY, I.P.; LAMINSKIY, A.Ye.; SUPACH,
P.V.; VASIL'YEV, V.N.; OBOLENSKIY, K.P.; SAVEL'YEV, Ye.A.;
MOTOV, S.I.; GLSAKOV, G.K.; IVANOV, F.G.; FISKUNOV, V.,
red.; POLYAKOV, A., red.; MUGHIN, Yu., tekhn. red.

[Economy of agricultural enterprises; textbook] Ekonomika
sel'skokhoziaistvennykh predpriatii; uchebnoe posobie. Mo-
skva, Gospolitizdat, 1962. 510 p. (MIRA 15:9)

1. konsuristicheskaya partiya Sovetskogo Soyuza. Vysshaya
partiynaya shkola.

(Farm management)

PISKUNOV, V.; PODGORNOVA, V.; POLYAKOVA, N.; ROCHKO, V.; KHOLOD, S.

[Study the economics of your enterprise; visual aid for
students of economics schools] Izuchai ekonomiku svoego
predpriyatiia; nagliadnoe posobie dlia slushatelei nachal'-
nykh ekonomiceskikh shkol. Leningrad, Gospolitizdat, 1961.
46 p. (MIRA 14:4)

(Industrial management--Audio-visual aids)

BERRI, Lev Yakovlevich; TOLKACHEV, Aleksandr Sergeyevich; PISKUNOV, V..
red.; DANILINA, A., tekhn.red.

[Economic and technical foundation of communism] Material'no-
tekhnicheskaisa baza kommunizma. Moskva, Gos.isd-vo polit.lit-ry.
1960. 97 p. (MIRA 13:7)

(Russia--Industries) (Communism)

LOKSHIN, B.Yu., prof., doktor ekon.nauk; ANDREYeva, O.I., kand.ekon.nauk;
VOROSHILOVA, T.S., dotuent, kand.ekon.nauk; TARAS'YANTS, dotsent,
kand.ekon.nauk; PASOLYAK, N.D., dotsent, kand.ekon.nauk; BYDEL'MAN,
M.R., kand.ekon.nauk; YAKOBI, A.A., dotsent, kand.ekon.nauk;
PISKUNOV, V., red.; MUKHIN, Yu., tekhn.red.

[Economics of the supply of materials and equipment; a textbook]
Ekonomika material'no-tehnicheskogo snabzheniya; uchebnoe posobie.
Moskva, Gos.izd-vo polit.lit-ry, 1960. 510 p.

(MIRA 13:11)

(Industrial procurement)

KOVALEV, P.P.; GLADKOV, I.A., redaktor; MITROFANOVA, S., redaktor;
PISKUNOV, V., redaktor; DANILINA, A., tekhnicheskij redaktor

[Development of electrification in Soviet lands from 1921 to 1925;
a collection of documents and papers] Razvitiye elektrifikatsii
sovetskoi strany 1921-1925 gg.; sbornik dokumentov i materialov.
Moskva, Gos. izd-vo polit. lit-ry, 1956. 703 p. (MLRA 10:1)
(Electrification)

POLYANOVSKIY, Valentin Naumovich; PISKUNOV, V., red.; TROYANOVSKAYA, N.,
tekhn.red.

[In the interests of the people] V interesakh naroda. Moscow, 308.
izd-vo polit.lit-ry, 1957. 31 p. (MIRA 11:?)
(Agriculture)

ALEKSEYEV, A.N., red.; PISKUNOV, V., red., MUKHIN, Yu., tekhn. red.

[Economic competition between the two world systems; a collection of articles] *Ekonomiceskoe sovremenanie dvukh mirovykh sistem; sbornik statei.* Moskva, Gos.izd-vo polit. lit-ry, 1957. 381 p.

1. Moscow, Nauchno-issledovatel'skiy ekonomicheskiy institut
(Economics)

(MIRA 11:2)

KAVENITSER, G. Ye.; FEDOROVICH, V.; PISHCHULIN, G.; PISKOVSKY, V., red.;
TRUDOVYCKAYA, N., tekhn.red.

Economics, organization and planning of industrial enterprises;
a textbook; Ekonomika, organizatsiya i planirovaniye promysh-
lennoy predpriyatii; uchebnoe posobie. Moscow, Gos.izd-vo
polit. lit-ry, 1958. 503 p. (MIRA 11:12)
(Industrial management)

SPOLITAK, I., gornyy master; OTT, V., mashinist ekskavatora; PISKUNOV, V.

Let's give more iron ore to our industry. Sov. profaciuny t no.12:
29-31 S '58. (MIRA 11:9)

1.Chleny tsakhovogo komiteta Sokolovskogo rudnika, g.Rudnay,
Kustanayskaya oblast'. 2.Nachal'nik planovogo byuro Sokolovskogo
rudnika, g. Rudnay, Kustanayskaya oblast' (for Piskunov)
(Rudnyy--Iron mines and mining)

ITIN, Lev Iosifovich; PISKUNOV,V., redaktor; KHOLOD,S., redaktor; MUKHIN,
Yu., tekhnicheskiy redaktor

[Ways of improving the use of the productive capacity of in-
dustrial enterprises] Puti uluchsheniia ispol'zovaniia proiz-
vodstvennykh moshchnostei promyshlennyykh predpriiatii. Moskva,
Gos.isd-vo polit. lit-ry, 1956. 71 p. (MIRA 9:4)
(Efficiency, Industrial)

PISKUNOV, V.

Toward new boundaries. Za rul. 20 no.7:5 Li '62. (M.R. 15:7)

1. Predsedatel' mototsikletny sektsii pervichnoy organizatsii
Dobrovol'nogo obshchestva sodeystviya armii, aviaitsii i flotu
Cherepovetskogo metallurgicheskogo zavoda.
(Education, Military)

PISKUNOV, V.; ZHUK, I.; KURILIN, N.; KAYDALOV, D.; VYSOTSKAYA, V.

Economic literature in 1961. Vop.ekon. no.4:120-126 Apr '61.
(MIRA 14:3)
(Bibliography--Economics)

BYCHEK, Nikolay Romanovich; PISKUNOV, V., red.; MUKHIN, Yu., tekhn.red.

[Planning industrial production] Planirovaniye promyshlennogo
proizvodstva. Moskva, Gos.izd-vo polit.lit-ry, 1959. 101 p.
(MIRA 12:10)
(Russia--Economic policy)

KURAKOV, Ivan Grigor'yevich; PISKUNOV, V., redaktor; MUKHIN, Yu.,
tekhnicheskiy redaktor

[Technical progress and the development of labor productivity]
Tekhnicheskii progress i rast proizvoditel'nosti truda. Moskva,
Gos. izd-vo polit. lit-ry, 1956. 29 p. (MLRA 10:2)
(Technology)

MANEVICH, Yefim L'vovich; PISKUNOV, V., red.; DANILINA, A., tekhn.red.

[Living standards of the Soviet people] Zhiznennyi uroven'
sovetskogo naroda. Moskva, Gos.izd-vo polit.lit-ry, 1959.
93 p. (MIRA 12:12)
(Labor and laboring classes)

IGNATOV, Stepan Andreyevich; PISKUNOV, V., redaktor; MUKHIN, Yu., tekhnicheskiy redaktor

[Innovations in the economics of collective farms; the production and finance plan and monthly wages on collective farms] Novoe v ekonomike kolkhosov; proizvodstvenno-finansovyj plan i estemesiachnaja opłata truda v kolkhosakh. Moskva, Gos. izd-vo polit. lit-ry, 1956. 30 p.
(MIRA 10:1)

1. Pervyy sekretar' Amurskogo obkoma Kommunisticheskoy partiï Sovetskogo Soyuza (for Ignatov)
(Collective farms) (Wages)

PISKUNOV, V., inzhener.

Planning of working processes in elevator construction. Muk.-elev.
prom. 20 no.4:5-7 Ap '54. (MLRA 7:7)

1. Kuybyshevskoye otdeleniye GI Promsernoproekt.
(Grain elevators)

PISKUNOV, V.

Literature for those studying economics. Vop. ekon. no.2:140-141
F '63. (MIRA 12:3).
(Bibliography—Economics)

SERZBRYAKOV, S.V., prof., doktor ekonom.nauk; GOGOL', B.I., dotsent;
LIFITS, M.M., prof.; PEFILOV, A.I., dotsent; KISTANOV, Ya.A.,
dotsent; GENKINA, L.S., dotsent; VASIL'YEV, S.S., dotsent;
DNEPROVSKIY, S.P., prof.; PIROGOV, P.V., dotsent; SHOTRINA, N.A.,
dotsent; KULIKOV, A.G., dotsent; KUZIN, N.I., dotsent; PISKUNOV,V.
red.; MUKHIN, Yu., tekhn.red.

[Economics of Soviet commerce] Ekonomika sovetskoi torgovli;
uchebnoe posobie. Moskva, Gos.izd-vo polit.lit-ry, 1959. 472 p.
(MIRA 12:12)

(Russia--Commerce)

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001341

110000, 1.A.1. 1000, 1.1.

2. 100000, 1.A.1. 1000, 1.1.

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001341

L 53611-65 EWG(j)/EWT(m)/EPF(c)/EPR/T/EWP(t)EWP(b) Pr-4/Ps-4 IJP(c)
ACCESSION NR: AP5011692 JD/WE UR/0065/65/000/005/0049/0052
665.521.3

AUTHORS: Piskunov, V. A.; Zrelov, V. N.

TITLE: Abrasive properties of microimpurities and oxidation products in jet propulsion fuels

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 5, 1965, 49-52

TOPIC TAGS: jet motor, jet engine fuel, fuel, abrasion, abrasive, impurity content, impurity movement/ T3 1 jet propellant, T 1 jet propellant, T 5 jet propellant

ABSTRACT: Special experiments were conducted in an effort to determine the nature of machine detail abrasion by microimpurities and precipitates in jet propulsion fuels. From 60 to 70% of such admixtures consisted of highly abrasive oxides of iron, silicon, calcium, magnesium, aluminum, sodium, and copper. In supersonic aircraft the heating of fuel to 100-150° increased the formation of hard thermo-oxidation precipitates. At 150° their content in the T3-1 propellant was 84.7 g/T, in T-1 it was 114.9 g/T, and in T-5 fuel 44.9 g/T, with particles ranging in size from 1 to 1000 microns. The experiments consisted in measuring of the time periods required for a pump to transit from minimum to maximum of its capacity (determined

Cord 1/2

L 53611-65

ACCESSION NR: AP5011692

by the carrying capacity of a special jet tube) for the TS-1 fuel containing 30 mg/liter of impurities at the temperature range from 100 to 1500. This transition time period decreased due to the erosion of the regulating jet tube. The amount of wear was equal to that obtained with TS-1 containing corundum powder. High destruction processes were observed in engines working at higher rates and in supersonic jets, due to the formation of thermal oxidation products. Experimental results obtained for different engines and fuel types are tabulated. Orig. art. has: 3 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: FP, PR

NO REF SOV: 006

OTHER: 002

AB
Card 2/2

"APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001341

MARKET INVESTIGATION REPORT
MARKET INVESTIGATION REPORT
MARKET INVESTIGATION REPORT

MARKET INVESTIGATION REPORT

APPROVED FOR RELEASE: Tuesday, August 01, 2000 CIA-RDP86-00513R001341