

Theory of the Motion of a Body With Cavities
Partly Filled With a Liquid, by D. E. Okhotsim-
skiy, 21 pp.

RUSSIAN, per, *Fizik Matemat i Mekh*, Vol XX,
No 1, Jan/Feb 1956, pp 3-20.

NASA TT F-33

NLL 116065

Sci. - Fluids

May 60

116,065

The Motion of a Rigid Body With a Cavity Partially Filled With Liquid, by G. S. Narimanov, 1956.

RUSSIAN, per, Prikl Matemat i Mekh, Vol XX, No 1, 1956, pp 21-38.

SLA 60-17360

Sci

OS, Vol IV, No 3

Oct 60

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Impact on a Compressible Fluid, by I. T. Egorov,
12 pp.

RUSSIAN, ENG, *Prilozheniye k Zhurnalu "Prilozheniye k Zhurnalu"*, Vol XX, No 1,
1956, pp 67-72.

NACA TM 1413

Sci - Phys

Apr 58

61, 491

Sokolovskii, V. V.
THE FORMS OF STABLE SEMI-ARCHES AND
ARCHES (O Formakh Ustoichivyykh Polusvodov i
Syodov). Jan 60 [16]p. 5 refs. TIL/T. 4880; [DSIR LLU]
M. 2694; AD-245 810.
Order from OTS or SLA \$1.60

61-27046

Trans. of Prikl[adnaya] Matematika i Mekh[anika]
(USSR) 1956, v. 20, no. 1, p. 73-86.

DESCRIPTORS: *Continuous media, Elasticity, Plasticity, Rupture, Internal friction.

An investigation is made of the two-dimensional limiting equilibrium of a connected medium with free contours, this being accompanied by rupture curves. Consideration is devoted to the limiting equilibrium of semi-arches and arches resulting from their own weight and an example is given of the determination of rupture
(Mechanics--Statics, TT, v. 6, no. 10) (over)

61-27046

1. Title: Arches
2. Title: Semi-arches
- I. Sokolovskii, V. V.
- II. TIL/T. 4880
- III. Ministry of Aviation
(Gr. Brit.)
- IV. DSIR LLU M. 2694
- V. AD-245 810

61-27046
Office of Technical Services

On the Theory of Stream Flow Around Bodies of Low
Aspect Ratio, by M. N. Kogan,

RUSSIAN, per, Prik Matemat i Mekh, Vol ~~XX~~ XX, No 1,
1956, pp 87-94.

*Rand Corp

Sci - Physics

Jan 59

as per telephone conversation with Mrs Wisniewski

Loytsyanskly, L. G.
ON THE THEORY OF SPHERICAL BEARING. [1961]
[8]p. (foreign text included) 2 refs. [DSIR LLU]
M. 2605.

Order from OTS or SLA \$1.10

61-23273

Trans. of Prikl[adnaya] Mat[ematika i] Mexh[anika]
(USSR) 1955 v. 20 no. 1, p. 133-135.

DESCRIPTORS: *Fluid flow, Analysis, Spheres, Theory

An analysis is presented of the motion of an incompressible fluid located between a stationary outer sphere and a moving inner sphere of approximately the same diameter. The integral found by G. H. Wannler (Quart. Applied Math. 8: 1-32, 1950) is used: the Reynolds equation corresponds to the case of rotation of the inner sphere around the axis perpendicular to the line joining sphere centers. The formulae of the main vector and of the main moment of the fluid re- (Mechanics--Hydrodynamics, TT, v. 6, no. 3) (over)

61-23273

L. Loytsyanskly, L. G.
II. DSIR LLU M. 2605

17536

Office of Technical Services

**Subsonic Flow Past a Profile in the Presence
of a Supersonic Region, which Terminates in a
Straight Compression Shock, by F. I. Frankl, 12 pp.**
CONFIDENTIAL

RUSSIAN, no per, Prik Matemat i Mekh Mekh, Vol XX,
No 2, Mar/Apr 1956, Encl to IR-1324-56, ATI
Intelligence Directorate.

*JIB/S114-7-16-54
AF 1042683*

Sci - Physics, aerodynamics
Jan 57 CTS

412, 881

The Periodic Solutions of Differential Equations, by E. P. Krugla. UCL

RUSSIAN, part, Fizik Mat' i Mekh, Vol XX,
1956, pp 146-152.

RAH 89 865

JIB/SI.4 T 2172

Sci. - Math

Jun 60

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On Vibrations of a Plate Moving in A Gas,
by A. A. Morozhan, 19 pp.

RUSSIAN, part, Izvestiya Akademiya Nauk SSSR, Seriya Matematika i Mekhanika, Vol XI,
No 2, 1956, pp 211-222.

NASA WB 11-22-58W

Sci - Phys

Mar 59

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A problem of heat conduction for two media,
by D. Shil'krut, 11 pp.

RUSSIAN, per, Priklad Mat i Mekh, 20, no 2,
p 284-88, 1956.

SLA R-3623

Sci

Aug 59

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Concerning the Application of A. M. Lyapunov's
Method for Equations with the Lags, by N. H.
Krasovskiy.

RUSSIAN, per, Prikl Matemat i Mekh, Vol XX, 1956,
pp 325-327.

INSIDOC-T1909

Sci

Aug 58

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CIA/FDD X-2213

Morris D. Friedman

Three-Dimensional Streamline Flow Around Slender
Bodies by M. D. Khachatryan, 27/ 12 pp.

RUSSIAN, per, Prk. Mat. i Mekh, Vol. III, No 5, 1956,
pp 233-240.

Sci

Aug 58

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M. D. Khachatryan
Prk. Mat. i Mekh

27, 12/4

On the Motion of a Liquid in an Oscillating Container,
by V. V. Bolotin, 6 pp.
RUSSIAN, per, Prikl Matemat i Mekh, Vol XX, 1956,
pp 293-294. 9691889
DDC RSIC-133

Sci - Phys
Mar 64

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On the Drag Due to Generation of Lift in a
Supersonic Flow, by G. I. Tagnow, 18 pp. CONFIDENTIAL

RUSSIAN, memo per, Prik Mat i Mekh, Vol XX, ^{No 3,} /1956,
pp 382-394, Encl to IR 1665-56, USAFE, AFI
DÉpartement.

AP 1054597

Sci - Aeronautics, research
Feb 1957 FIS/dex

43464

Laminar Boundary Layer of a Compressed Gas on a
Plate in the Case of Considerable Temperature
Jumps, by V. V. Lunov. UNCLASSIFIED

RUSSIAN, per, Fizk Mat i Mekh, Vol XI, No 3,
1956, pp 395-401. CIA 9031276

TEL 4912

Sci - Phys
Dec 58

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About the Corresponding Equilibrium of a Physical
Pendulum With Movable Support Point, by A. Yu.
Ishlinskiy, 20 pp.

RUSSIAN, per, Prikladnaya Matematika i Mekhanika,
Vol XX, No 3, 1956, pp 307-308.

ATIC P-TS-9336/V

Sci - Engineering
Jun 58

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Approximate Solution of Some Nonstationary Bound-
ary Layer Problems, by E. M. Kobryshin.
RUSSIAN, per, Prikladnaya Matematika i Mekhanika
Vol 20, 1956, pp 402-410. P911129166
AEC JNL-tr-368

Sci/Sci/Physics
Dec 66

314,585

Relation Between Stresses and Deformation
in the Non-Linear Theory of KKH Elasticity
by L. A. Golokonnikov, 6 pp.

RUSSIAN, per, Prikl. Matemat. i Mekh., Vol XX,
No 3, 1958, pp 438-444.

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Sci. - Phys.
Nov 61

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Some Direct Methods in the Nonlinear
Theory of Shallow Shells, by I. I. Vorovich,
37 pp.
RUSSIAN, per, Prikl. Matem. i Mekh., Vol XX,
1956, pp 449-474. F100066866
ITD-11-65-1746

Sci - Math Sci
Oct 60

312,864

Barenblatt, G. I.
ON CERTAIN PROBLEMS OF THE THEORY OF ELASTICITY THAT ARISE IN THE INVESTIGATION OF THE MECHANISM OF HYDRAULIC RUPTURE OF AN OIL-BEARING LAYER (O Nekotorykh Zadachakh Teorii Uprugosti, Voznikayushchikh pri Issledovanii Mekhanizma Gidravlicheskogo Razryva Neftenosnogo Plasta). [1962] [27]p. (foreign text included) 12 refs.
Order from OTS or SLA \$2.60 62-14583

Trans. of Prikladnaya Matematika i Mekhanika (USSR) 1956, v. 20 [no. 4] p. 475-486.

DESCRIPTORS: *Elasticity, Theory, Petroleum, Sources, Rock, Fracture (Mechanics).

A clarification is presented of the hypothesis of S. A. Christianovich (Akad. Nauk SSSR Otdel. Tekh. Nauk Izvestia 1955: no. 5 and 1955: no. 11) from (Mechanics, TT, v. 8, no. 9) (over)

62-14583

1. Title: Hydraulic fracturing
1. Barenblatt, G. I.

Office of Technical Services

On the Theory of Gyro-horizon Compass, by A. Yu. Ishlinskiy, 25 pp. UNCLASSIFIED

RUSSIAN, per, Prik Matemat i Mekh, Vol. XX, No 4, 1956, pp 487-499.

ATIC F-TM-9335/V

Sci - Engineering

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Feb 58

On ~~the~~ ^{the} Asymptotical Stability of Systems with
Aftereffect, by N. N. Krasovskiy, 14 pp.

RUSSIAN, per, Prikl Matemat i Mekh, Vol XX, 1956, pp
513-518.

SLA R-2331

Sci

Aug 58

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Some Properties of Three-Dimensional Supersonic
Flow, by M. N. Kogan, ~~by~~ 4 pp.

RUSSIAN, per, Prik Mat. i Mekh., Vol XX, No 5,
Sep/Oct 1956, Encl to IR 520-57, USAFE, ATI Dir.

AF 1093644

Sci - Aeronautics
Jun 57

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Problems in the General Theory of Elastic
Stability, by V. V. Bolotin,
RUSKIN, per, Prikladnaya Mat. i. Mekh.,
Vol. 30, No. 5, 1956, pp 561-577.
RLL RPS 3555
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Sci-Tech
Apr 67

524,024

**Influence of Internal Pressure on the Critical Shear
Stress for an Infinitely Long Cylindrical Shell,
by L. A. Snopalov.
RUSSIAN, Per. Prikl Matemat i Mekh, Vol XX, No 5,
1958, pp 569-671.
NASA TT F-8470**

**Sci - Phys
Mar 64**

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On the Theory of Stability of Control Systems,
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RUSSIAN, part, Fizk Mat i Mekh, Vol 20, 1956,
pp 714-722.
NLL Ref: 5207 (1210)

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Aug 68

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Prik Matemat i Mekh, Vol XXI, No 1, 1957, pp 3-153.

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On the Theory of the Gyroscopic Pendulum, by
A. Yu. Ishlinskiy, 28 pp.

RUSSIAN, per, Prikl Matemat i Mekh, Vol XXI, 1957,
pp 3-14.

ATIC F-TS-9289/V

Sci - Phys

Jan 58

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The Flow of a Heavy Liquid Over an Undulating
Surface, by N. H. Moiseyev,
RUSSIAN, per. Prik. Mat. i Mekh., Vol 21, 1957,
pp 15-20,
NLL Ref: 5828.4F (7807)

Sci/Physics
Mar 70

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Shock Wave Damping, by M. D. Ladyzhenskiy.

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Vol XXI, No 1, 1957, pp 27-34.

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Various Abstracts of Articles, 11 pp.

RUSSIAN, no per, Prikl Matemat i Mekh, Vol I,
1957, pp 3-152, Encl to IR 975-57, USAFK, ATI
Directorate.

AF 1120363

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Sci - Mathematics; Eng

Aug 57

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Asymptotic Integration of Equations of the Static
Stability of a Conical Shell of Rotation, by N. A.
Alamyayn.

RUSSIAN, per, Pril Matemat i Mekhanika, 1957,
Vol XXII, No 1, pp 83-89.

Co-op Tr Schman 583

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Sci - Math, Physics

Mar 59

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Approximate Integration of Equations of a Plane Problem
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UNCLASSIFIED

RUSSIAN, per, ^{edit} Prik Mat i Mekh, Vol XXI, No 1, 1957,
pp 109-115.

*DSIR/TCL 101

Sci - Math
Oct 58

Razumikhin, B. S.
ESTIMATES ON SOLUTIONS OF SYSTEMS OF DIFFERENTIAL EQUATIONS WHICH ARE EQUATIONS OF DISTURBED MOTION WITH VARIABLE COEFFICIENTS. [1961] 7p. 2 refs.
Order from UTS or SLA \$1.10 f1-16124

Trans. of Prikladnaya Matematika i Mekhanika (USSR)
1957, v. 21, no. 1, p. 119-120.

DESCRIPTORS: *Differential equations, Numerical analysis, *Motion, Stability, Equations.

(Mechanics, TT, v. 6, no. 2)

61-16124

I. Razumikhin, B. S.

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Office of Technical Services

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On asymptotic stability in the first approximation

Ueber die asymptotische Stabilität nach erster Näherung

Prikl. Mat. i Mekh., 21, 133-136 (1957) - German

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On the Theory of Conical Flows, by B. M. Bulakh.
UNCLASSIFIED

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pp 143-145.

*DSIR/TCL 101

Sci - Math
Oct 58

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FDD X 26 2 cl

On the Stability of the Rotating Movements of a
Solid Body the Cavity of which is Filled With an
Ideal Liquid, by N. G. Chetayev, 17 pp. UNCL.

RUSSIAN, per, Prikl Matemat i Mekh, Vol XXI, No 2,
1957, pp 157-168. 9660800

ATTC MIL-89/V

Sci - Phys

Apr 61

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The Theory of the Two-Gyroscope Vertical, by A. Yu. Ishlinskiy, 15 pp.

RUSSIAN, per, Prikl Matemat i Mekh, Vol XXI, No 2, 1957, pp 175-183.

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Sci - Phys
Feb 59

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Certain Variational Problems in the Gas Dynamics of
Axisymmetric Supersonic Flow, by Yu. D. Shmyglevskiy,
18 pp.

RUSSIAN, per, Izv. Akad. Nauk SSSR, Ser. Matematika i Mekhanika USSR,
Vol XXI, No 2, 1957, pp 195-206.

SLA 59-10317

MSF 5-134-10317

Sci - Electron

Sep 59

Vol 2, No 1

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On Bodies of Minimum Drag in a Supersonic
Gas Flow, by M. N. Kogan, 12 pp.

RUSSIAN, part, Prik Mesto 1 Makh, Vol XXI,
No 2, 1957, pp 207-212.

OPS 60-17349

Sci

30 Mar 62

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Wings of Minimum Drag, by Y. L. Zhilin,
14 pp.

RUSSIAN, par, Prikl Mate i Mekh, Vol XXI,
No 2, 1957, pp 213-220.

OPB 60-17350

Sci

30 Mar 62

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Axissymmetric Movements of a Friable Medium, by
S. S. Grigoryan.
RUSSIAN, per, Prikladnaya Matematika i Mekhanika,
Vol 21, No 2, 1957, pp 221-230.

HTD-S-286 290 6y

Jan 69

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On the Stability of a Panel Moving in a
Gas, by A. A. Novichen, 23 pp.

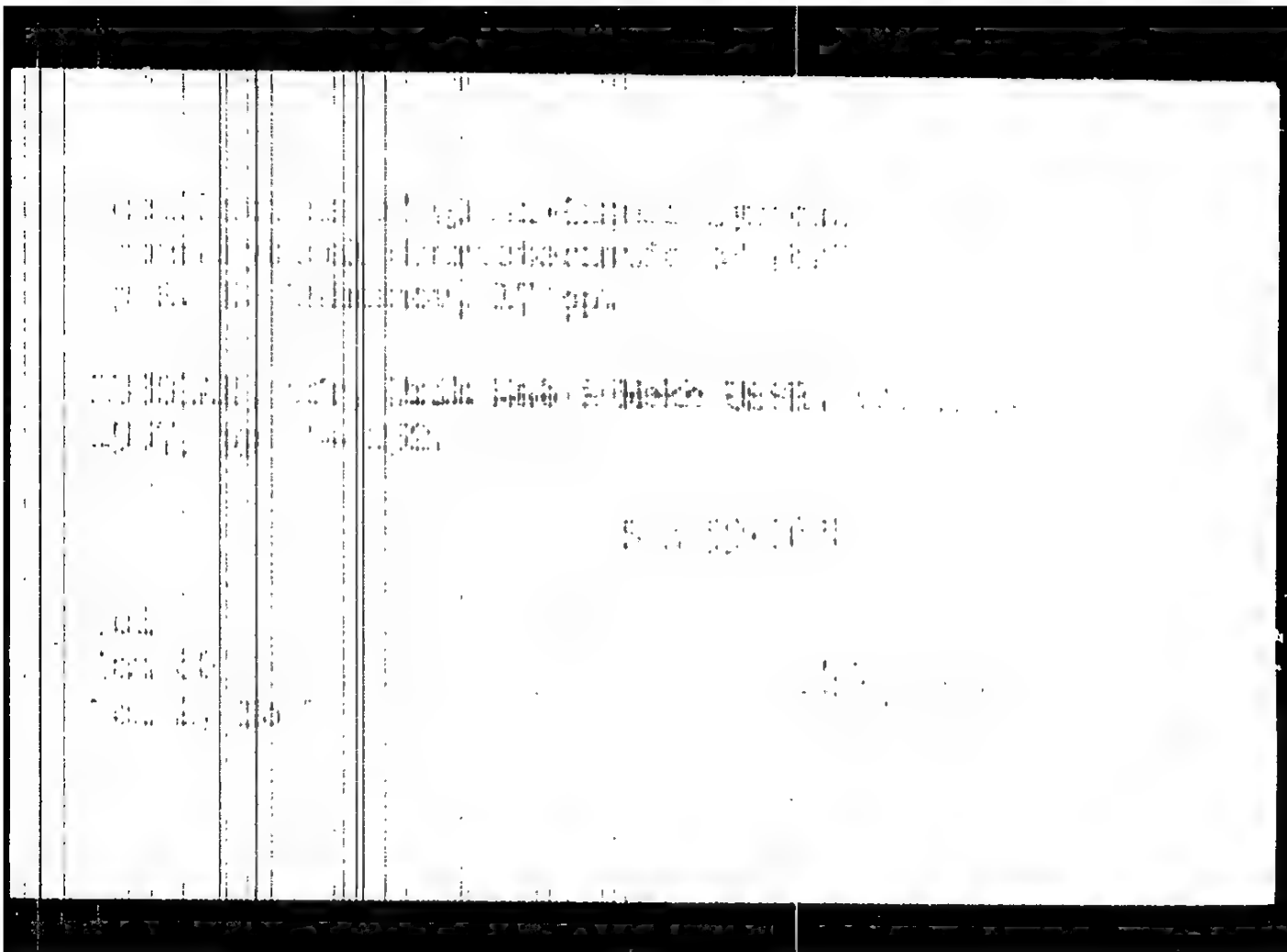
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NASA FILE 11-21-58W

Sci - Phys, Mathe

Mar 59

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Asymptotic Solution of a Nonlinear Differential
Equation of Second Order.

RUSSIAN, per, Prikl Mat i Mekh, Vol XII, 1957,
pp 262-271.

Language Sv Bu

OTS 64-10347

Sci - Math

Nov 60

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On Stability with Large Initial Perturbations, by
N. H. Krasovskiy, 14 pp.

RUSSIAN, per, Pril Matemat i Mekh, Vol XXI, 1957,
pp 309-319.

Amer Math Soc

Sci - Math

Aug 63

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Krein, M. G.
ON THE CHARACTERISTIC FUNCTION $\chi(\lambda)$ OF
THE LINEAR CANONICAL SYSTEM OF SECOND
ORDER DIFFERENTIAL EQUATIONS WITH PERI-
ODIC COEFFICIENTS [1961] [19] p. 9 refs.
Order from L. Gov. SL 701 \$2.10, pb \$3.30 61-10021

Trans. of the Academy of Sciences, Mathematics (USSR)
1957, v. 21, no. 3, p. 320-329.

(Mathematics, IT, no. 5, no. 10)

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1. Functions - Theory
2. Differential equations - Theory
1. Krein, M. G.

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Office of Technical Services

Concerning One Case of the Movement of a
Kelvin Free Wave, by V. V. Musstov, 3 pp.

RUSSIAN, ser, Prikl Matemat i Mekh, Vol XXI.
1957, pp 347-352.

NIOT/57

Sci + Eng

Mar 62

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NL M 5143

Calculation of Certain Sonic Flows of a Gas,
by P. I. Chushkin. UNCL

RUSSIAN, per, Prikl Mat i Mekh, Vol XXI, No 3,
1957, pp 353-360.

RAE 8:16

Set - Phys
84p 59

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Chushkin, P. I.
CALCUL DES ÉCOULEMENTS SONIQUES D'UN GAZ
(Raschet Nekotorykh Zvukovykh Tsechenii Gaza)
[Calculation of Some Gas Flows for Sonic Velocity] tr.
by Vinogradoff, B. 9 Sep 60 [20]p. (foreign text in-
cluded) 10 rubs. CEA Trans, no. R 1007 (text in
French).

Order from OTS or SLA \$1.60

61-15786

Trans. in French of Prikl[adnaya] Mat[ematika i]
Mekh[anika] (USSR) 1957, v. 21, no. 3, p. 353-360.

DESCRIPTORS: Bodies of revolution, *Gas flow,
Numerical analysis, Differential equations, Velocity.

Consideration is given to the approach flow of ellipses,
ellipsoids of revolution (direction of the flow coincides
with the large axis) and arbitrary plane contours by a
flow which propagates with sonic velocity. With the aid
of a method of A. A. Dorodnitsyn for the calculation of
(Mechanics--Aerodynamics, TT, v. 6, no. 9) (over)

61-15786

- I. Chushkin, P. I.
- II. CEA-tr-R1007
- III. Commissariat à l'Énergie
Atomique (France)

Office of Technical Services

The Formation of a Boundary Layer on a Laminar Sheet
a Moving Discontinuity in the Density, by Yu. A.
Dan'yakov, 30 pp.

RUSSIAN, per, Prikl Matemat i Mekh, Vol XXI, No 3,
May/June 1957, pp 368-374.

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Sci - Geophysics
Sep 58

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Elasto-Plastic Equilibrium of a Wedge in a Plane
Stress Condition, by L. M. Kachanov. UNCL

RUSSIAN, per, Prik Mat Mekh, Vol XXI, No 3,
1957, pp 413-418.

DSIR 34177/OT

Sci - Math
Mar 59

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Some Thermohydrodynamic Problems in Connection with
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Liquid, by S. A. Rogirer, 1957. UNCLASSIFIED

USSIAN, per, Prikladnaya Matematika i Mekhanika, Vol
21, No 3, May-Jun 1957, pp 424-430.

ATIC P-TS-9489/III

Sci - Phys
Jul 58

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Heat Convection in a Revolving Round Pipe With a
Constant Temperature Gradient, by V. N. Golubenkov.
UNCLASSIFIED

RUSSIAN, per, Frik Matemat i Mekh, Vol III, May-Jun
1957, pp 439-440.

*ATIC F-TS-9489/III

Sci - Phys

Apr 58

Some Precise Solutions of the Equations of
Uniform Unsteady Motion of an Ideal Gas, by
N. N. Kochina.

RUSSIAN, per, Prikl Matemat i Mekhan, Vol XXI,
No 4, 1957, pp 449-458.

TIL T 4982

Sci - Phys

Jan 61

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On the Stability of a Plane Stationary Shock
Wave, by S. V. Iordanskii."
RUSSIAN, par, Prikladnaya Matematika i Mekhanika,
Vol 21, 1957, pp 465-472.
NTC 71-14360-01A

REC / LA / TR - 71-10

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Feb 72

Influence of a Boundary Layer on the Flow Characteristics of a Gas Behind a Moving Shock Wave in a Pipe, by V. A. Dem'yanov, 7 pp.

RUSSIAN, per, Prikl. Matem. i Mekh., Vol. XXI, No. 4, Jul/Aug 1957, pp 473-477.

AHS Lab Tr

Sci - Physics
Sep 58

*PTIC

73.152

(check)

On the Motion of a Container Partially Filled With a
Liquid Taking Into Account Large Motions of the
Latter, by G. S. Narimanov.

RUSSIAN, per, Prik Mate i Mekh, Vol XXI, 1957,
pp 513-524.

*Redstone Arsenal

Sci - Phys

Aug 63

Yakovlev, I. I. and Yudin, V. I.
RECENT PROGRESS BY A BOUND DISC IN A
FIELD OF PHYSICAL THEORY. [1961] 11p. 3 refs.
Cadastral RIS 13.00 RIS S-2110

Trans. of the Academy of Sciences of the USSR (USSR)
1967, v. 21, no. 4, p. 525-532.

AEC-SECRET-65-271

(Cf. Studies in Mathematics, TT, v. 5, no. 11)

61-2205

1. Lyubis--Ray leaf...
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1. Yakovlev, I. I.
- II. Yudin, V. I.
- III. RIS S-2110
- IV. Research in Mathematics Service, New York

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Canonical Transformations of Equations of the
Automatic Control Theory with the Presence of
Multiple Radicals, by Va A. Troitskii, 5 pp.
RUSSIAN, per, Prik Matera i Mekh, Vol 21, 1957,
pp 574-577.
ARM/RSIC-Tr-574-577

Sci/Mech
Jul 70

A Contribution to the Construction of Periodic
Solutions of Autonomous Systems with One Degree of
Freedom, by A. P. Bronkuryakov, 11 pp.

RUSSIAN, per, Prikladnaya i Mekhanika, Vol XXI, No 12,
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ATIC IP-TS-9453/III

Sol - ENGR
Feb 59

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Boundary-Layer Equations and Their Boundary
Conditions in the Case of Motion at Supersonic
Velocities in a Moderately Rarefied Gas, by
Yu. I. Lunin, 15 p.

RUSSIAN, part, Prikl Matemat i Mekh, Vol XXI,
1957, pp 597-605. 2692002

NIL M. 2392

FTC-101-611-7

Sci - Math

173,882

Nov 61

The Stability (Based on Linear Approximation) of
the Periodic Solution of the System of Differential
Equations Having Discontinuous Right-Hand Sides,
by M. A. Aizerman, F. R. Gantmakher.

RUSSIAN, per, Prikl Matemat i Mekhan, Vol XXI,
1957, pp 658-669.

IAE 890

Sci - Eng

Jan 61

137,378

Krasovskii, N. N.
ONE OPTIMAL CONTROL PROBLEM. [1963] 12p.
9 refs.
Order from OTS or SLA \$1.60

63-14455

Trans. of Prikladnaya Matematika i Mekhanika
(USSR) 1957, v. 21, no. 5, p. 670-677.
Another trans. is available from LC or SLA mi\$2.40,
pb\$3.30 as 60-18806 [1960] 13p.

DESCRIPTORS: *Control systems, Mathematical
analysis, *Difference equations, *Differential
equations.

For abstract see Technical Translations 5: 147, 1961.

(Mathematics, TT, v. 10, no. 8)

63-14455

I. Krasovskii, N. N.

Office of Technical Services

Drakhlín, E. Kh.
THE SOLUTION OF THE EQUATIONS FOR A CASE
OF STATIONARY HEAT CONVECTION IN AN INFI-
NITE OBLIQUE CIRCULAR CYLINDER (Reshenie Ura-
vnenii dlya Odnogo Sluchaya Statsionarnoi Teplovoi
Konveksii v Beskonechnom Naklonnom Krugovom Tsil-
indre). July 61 [5]p. 2 refs. RTS 1885.

Order from OTS or SIA \$1.10

61-27298

Trans. of Prikladnaya Matematika i Mekhanika (USSR)
1957, v. 21, no. 5, p. 693-695.

DESCRIPTORS: *Cylindrical bodies, Mathematical
analysis, *Heat transfer, Convection, Thermal
radiation.

In the problem of stationary heat convection in the cen-
tre section of a long oblique circular cylinder, con-
tained in an infinite solid mass with a temperature gra-
(Physics--Thermodynamics, TT, v. 6, no. 8) (over)

61-27298

- I. Drakhlín, E. Kh.
- II. RTS-1885
- III. Department of Scientific and
Industrial Research
(Gt. Brit.)

185265

Office of Technical Services

On The Motion of a Container Partially
Filled with Liquid: Effects of Nonsmallness
of Liquid Motion, by G. S. Narimanov, 24pp.
RUSSIAN, per, Prikladnaya Matematika i
Mekhanika, Vol 21, No 5, 1957, pp 690-700.
CFSTI TT-64-71347.

322,661

Sci - Mechanics
Mar 67

Boundary Layer Equations and Boundary Conditions
for Motion in a Slightly Rarefied Gas at Supersonic
Speed, by Y. P. Lunkin. UNCL

RUSSIAN, per, Prik Matemat i Mekh, Vol. XXI, No 5,
1957, pp 597-606.

DBIR ILU (loan) M.470

#possibly #ATIC

Sci - Math
Sep 59

95, 814

Application of the Method of Small Disturbances
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$$x_i(k+1)h - x_i(kh) = [a_{1j}x_j(kh) + \dots + a_{1n}x_n(kh) + q_{11}u_1(kh) + \dots + q_{1r}u_r(kh) + f_1(kh)]h$$

where $(i = 1, \dots, n)$, $(k = 0, 1, \dots)$, and $(h > 0 = \text{const})$; x_1, \dots, x_n are the coordinates of a point in the phase space of the system; u_1, \dots, u_r are the control variables; $f_j(kh)$ are known functions; and a_{ij}, q_{ij} are constants. The solution is described and the passage to the limit in the corresponding problem for differential equations when $h \rightarrow 0$ is substantiated.

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