ACCESSION NR: AP4009083 S/0056/63/045/006/1693/1703

AUTHORS: Burgov, N. A.; Danilyan, G. V.; Dolbilkin, B. S.; Lazareva, L. Ye.; Nikolayev, F. A.

TITLE: Cross section for absorption of Gamma quanta by carbon nuclei in the giant resonance region

SOURCE: Zhurnal eksper. i teoret. fiziki, v. 45, no. 6, 1963, 1693-1703

TOPIC TAGS: carbon nucleus, gamma absorption cross section, giant resonance, nuclear absorption, nuclear absorption cross section, integral cross section

ABSTRACT: In order to gain additional information about the high-lying excited levels of carbon, the cross section for nuclear absorption of γ rays by carbon was measured by the absorption method in the 13--27 MeV region, using the 250-MeV synchrotron of the

Card 1/3

ACCESSION NR: AP4009083

Fizicheskiy institut AN SSSR (Physics Inst. AN SSSR) and a pair magnetic spectrometer as the γ detector. The cross section curve has five peaks at 16.5, 17.6, 19.1, 23, and 25.6 MeV. The measured C^{12} nuclear absorption cross section in the giant resonance region is compared with theoretical calculations and with experimental photonucleon spectra and cross sections for the $C^{12}(\gamma, n)$ and $C^{12}(\gamma, p)$ reactions in the same energy region. The integral cross section in this region is found to be 84 ± 10 MeV-mb and comprises about one-half the value calculated from the sum rule, indicating that in the case of carbon the giant resonance region below 30 MeV includes approximately half of the integral cross section for dipole transitions. "We wish to thank N. S. Kozhevnikov for much assistance with the measurement and data reduction, and B. A. Tulupov for numerous profitable discussions." Orig. art. has: 2 figures, 6 formulas, and 3 tables.

Card 2/3

ACCESSION NR: AP4009083

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki (Institute of Theoretical and Experimental Physics); Fizicheskiy institut im. P. N. Lebedeva AN SSSR (Physics Institute, AN SSSR)

SUBMITTED: 03Jul63 DATE ACQ: 02Feb64 ENCL: 00

SUB CODE: PH NO REF SOV: 003 OTHER: 029

Card 3/3

L 41003-65 EWT(m) Peb DIAAP
ACCESSION NR: AP5007704 S/0367/65/001/001/0046/0047

AUTHOR: Danilyan, G. V.

TITLE: The effect of nonmonochromaticity during measurements of the Gamma-quantum capture cross section on light nuclei

SOURCE: Yadernaya fizika, v. 1, no. 1, 1965, 46-47

TOPIC TAGS: giant resonance absorption, Gamma ray absorption, light nucleus, absorption cross section, nonmonochromatic radiation

ABSTRACT: This brief note explains that the integral γ-ray absorption cross sections for light nuclei in the giant resonance region obtained by measuring the total cross section utilizing the transmission method are lower than their true values in the case of relatively poor resolution and a thick sample. This is due to the fact that the calculations do not take into account the nonmonochromaticity of the radiation during resonant absorption, and the estimates made by the author (Preprint, ITEF, no. 254, 1964) show that data presented earlier by other authors (B. Ziegler, Nucl. Phys., 17, 238, 1960; N. A. Burgov, G. B. Danilyan, B. S. Dolbilkin, L. Ye. Lazareva, F. A. Nikolayev, ZhETF, 43, 70, 1962; 45, 1693, 1963)

Card 1/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R000509710009-0"

L 41003-65
ACCESSION NR: AP5007704

miss the correct values by 10-30%.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki, GKAE (Institute of Theoretical and Experimental Physics, GKAE)

SUBMITTED: 25Jun64 ENCL: 00 SUB CODE: NP

NO REF SOV: 001 OTHER: 002

Card 2/2

AUTHORS: Abrikosov, N.Kh., Dyul'dina, K.A., Danilyan, T.A. SOV/78-3-7-29/44

TITLE: Investigations of the System SnTe-PbTe (Issledovaniye sistemy SnTe-PbTe)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 7, pp 1632-1636 (USSR)

ABSTRACT: The diagram of state and the thermoelectric properties of the system SnTe-PbTe, in which isomorphic compounds are formed, were investigated. In the ternary system Pb-Sn-Te continuous series of solid solutions form on the sector SnTe-PbTe. The electric conductivity and the thermoelectric conductivity of the alloys produced from SnTe and PbTe have the same type of conductivity. Modification of the properties of alloys produced from SnTe and PbTe is complicated. Alloys which are enriched with SnTe have a maximum of thermoelectric conductivity of positive value, but alloys enriched with PbTe have a thermoelectric conductivity of negative value. Electric conductivity passes through a minimum. There are 7 figures, 2 tables and 13 references.

Card 1/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R000509710009-0"

Investigations of the System SnTe-PbTe

SOV/78-3-7-29/44

SUBMITTED: June 26, 1957

1. Lead-tellerium-tin systems--Analysis 2. Lead-tellerium-tin systems--Electrical properties 3. Lead-tellerium-tin systems --Temperature factors

Card 2/2

YAKZHIN, Aleksandr Andreyevich; KUZ'MENKO, V.I., retsenzent; red.; DANIL'YANETS, A.A.; retsenzent; ZONTOV, N.S., retsenzent; PETRENKO, Ye.Ye., retsenzent; FEDOTOVA, A.I., red.izd-va; GUROVA, O.A., tekhn.red.

[Prospecting for uranium deposits] Poiski i razvedka uranovykh mestorozhdenii. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr, 1961. 479 p. (MIRA 14:4)
(Uranium ores)

SKVORTSOV, Aleksey Anatol'yevich; KOLESINA, Antonina Matveyevna; DANIL'YANTS, Svetlana Alekseyevna; PETUSHKOVA, I.K., red.

[Ways to improve the operational reliability of the insulation of the windings of electric traction motors] Puti povysheniia ekspluatatsionnoi nadezhnosti izoliatsii obmotok tiagovykh elektrodvigatelei. Moskva, Izd-vo "Transport," 1964. 28 p. (MIRA 17:8)

USSR/General Problems of Pathology - Tumors. Human Tumors. U.

Abs Jour : Ref Zhur - Biol., No 2, 1959, N 8897

Author : Danil'yants, Ye.I.

Inst : Uzbekistan Scientific Research Cutaneous-Venereological Institute

Title : The Problem of Lymphangiomas and Cutaneous Lymphangiectasias

Orig Pub : Sb. tr. Uzbekist. n.-i. kozhno-venerol. in-ta, 1957, 6, 197-201

Abstract : Four women are reported on in 2 of which there were lymphangiomas and lymphangiectasias existing simultaneously; in 2, only lymphangiectasias. Localization of the eruptions was chiefly on the sexual organs; in 3 patients elephantiasis developed. In one of these patients (age 24) cancer developed subsequently at the

Card 1/2

USSR/Human and Animal Physiology. Metabolism. T

Abs Jour: Ref Zhur-Biol., No 20, 1958, 92962.

Author : Danil'yants, Ye. I.
Inst : Uzbek Scientific Research Dermo-Venereological Institute.
Title : Concentration of Ascorbic Acid in the Spinal Fluid, Blood, and Urine of Healthy Individuals and Patients with Syphilis of the Nervous System.

Orig Pub: Sb. tr. Uzbekist. n.-i. kozhno-venerol. in-ta, 1957, 6, 327-330.

Abstract: Ascorbic acid (I) determinations were carried out in the blood, urine, and CSF of 56 individuals suffering from syphilis, subject to discharge from the clinic following recovery, and of 35 patients with manifestations of neurosyphilis. There was a normal amount of I in the CSF of healthy people and of patients who had syphilitic involve-

Card : 1/2

DANIL'YANTS, Ye.I., assistent

Fluctuation of vitamin C content and prothrombin time in syphilis [with summary in English]. Vest.derm. i ven.31 no.6:41-43 N-D '57. (MIRA 11:3)

1. Iz kafedry kozhnykh i venericheskikh bolezney Tashkentskogo gosudarstvennogo meditsinskogo instituta (zav. - doktor meditsinskikh nauk prof. A.A.Akovbyan)

(VITAMIN C, metab.
in syphilis)
(PROTHROMBIN TIME, in various dis.
syphilis)
(SYPHILIS
prothrombin time & vitamin C metab.)

DANIL'YANTS, Ye.I., Cand Med Sci--(diss) "Content of vitamin C and the prothrombin time in the dynamics of patients [redacted] syphilis and treatment with penicillin, ecmonovocillin, and [illegible] course." Tashkent, 1958. 16 pp (Tashkent State Med Inst), 200 copies (KL, -58, 125)

-70

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R000509710009-0"

BROGA, L.; DANILYAVICHYUS, E.[Danilevicius, E.]; GLIBAUSKAYTE, M., [Glibauskaite, M.], red.; MEDONIS, A., red.; CHECHITE, V. [Cecite, V.], tekhn. red.

[Tourist map of the Lithuanian S.S.R.] Turistskaia karta Litovskoi SSR. Vil'nos, Gos.izd-vo polit. i nauchn. lit-ry Litovskoi SSR, 1963. 72 p. (MIRA 17:4)

DANILYCHEV, I.A.; PLANOVSKIY, A.N.; CHEKHOV, O.S.

Study of mixing on sieve trays and methodology for the design of tray mass exchange apparatus. Khim. prom. no.6:461-465 Je '64. (MIRA 18:7)

1. Moskovskiy institut khimicheskogo mashinostroyeniya.

DANILYCHEV, I.A.; PLANOVSKIY, A.N.; CHEKHOV, O.S.

Studying mass transfer in the liquid phase on sieve plates taking the degree of longitudinal mixing into account. Khim. prom. 41 no.10:766-769 O '65. (MIRA 18:11)

DANILYCHEV, V.

On the airways of the world. Grazhd.av. 18 no.7:15 Jl '61.
(MIRA 14:8)

1. Nachal'nik Upravleniya mezhdunarodnykh vozdushnykh soobshcheniy.
(Aeronautics, Commercial)

DANILYCHEV, V., nachal'nik.

In the air lanes of China. Kryl.rod. 4 no.10:21-22 O '53. (MLRA 6:10)

1. Upravleniye mezhdunarodnykh vozdushnykh soobshcheniy Grazhdanskogo Vozdushnogo Flota SSSR.
(China--Aeronautics, Commercial) (Aeronautics, Commercial--China)

DANILYCHEV, V.A.; KARLOV, N.V.; OSIPOV, B.D.; SHIRKOV, A.V.; SHLIPPE, G.I.

Magnetic resistance used in field measurements at helium temperatures. Prib. i tekh. eksp. 8 no.5:221 S-O '63. (MIRA 16:12)

1. Fizivheskiy institut AN SSSR.

DANILYCHEV, V.A.

Ionization of donor atoms in n-InSb by a microwave electric field. Pis'. v red. Zhur. eksper. i teoret. fiz. 2 no. 10: 482-486 N '65 (MIRA 19:1)

1. Fizicheskiy institut imeni Lebedeva AN SSSR. Submitted October 2, 1965.

L 18007-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD

ACCESSION NR: AP3001297 S/0181/63/005/006/1724/1727

61

58

AUTHORS: Strukov, B. A.; Danily*cheva, M. N.

TITLE: Thermal capacity of acid ammonium sulfate in the temperature interval from -70 to +14C

SOURCE: Fizika tverdogo tela, v. 5, no. 6, 1963, 1724-1727

TOPIC TAGS: thermal capacity, ammonium sulfate, Curie point, calorimeter

ABSTRACT: The authors measured the temperature dependence of thermal capacity in crystals of NH_4HSO_4 by using an adiabiatic vacuum calorimeter. Experimental data show a jump in the curve of temperature dependence on thermal capacity at a point near the Curie temperature (-2.55C). This jump does not appear on the theoretical curve relating the same two factors. This jump in the curve of observed values caused the authors to consider the effect of fluctuations in polarization and the irregularity of distribution of these fluctuations throughout the body of the crystal in the critical region. "In conclusion we express deep thanks to V. A. Koptsik, who suggested the idea of the present paper, A. A. Sklyankin and A. P. Levanyuk for useful discussions and valuable remarks,

Card 1/2

L 18007-63
ACCESSION NR: AP3001297

3

and V. D. Letuchev and N. A. Berezina for aid in the work." Orig. art. has: 3 figures, 2 tables, and 3 formulas.

ASSOCIATION: Moskovskiy gosudarstvenny*y universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 21Jan63 DATE ACQ: 01Jul63 ENCL: 00

SUB CODE: PH NO REF SOV: 006 OTHER: 002

Card 2/2

DANILYCHEV, V.A.; OSIPOV, B.D.

Mechanismunderlying the effect of microwaves on the electroconductivity of n-InSb at low temperatures. Fiz. tver. tela 5 no.8:2369-2371 Ag '63. (MIRA 16:9)

1. Fizicheskiy institut im. P.N.Lebedeva AN SSSR, Moskva.
(Indium antimonide--Electric properties) (Microwaves)

L 9585-66 EWT(1)/EWT(m)/EWP(t)/EWP(b) IJP(c) JD

ACC NR: AP6001777 SOURCE CODE: UR/0386/65/002/010/0482/0486

73 B

AUTHOR: Danilychev, V. A. 44,55

ORG: Physics Institute im. P. N. Lebedev, Academy of Sciences, SSSR (Fizicheskiy institut Akademii nauk SSSR) 44,55

TITLE: Ionization of donors in n-InSb by a microwave field

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 2, no. 10, 1965, 482-486

TOPIC TAGS: indium antimonide, semiconductor carrier, electrical conductivity, Hall constant, electron donor, microwave, electric field, magnetic field

ABSTRACT: 21,44,55 The effect of a microwave electric field 21,44,55 at the 10-mm wavelength on the electrical conductivity (ρ) of n-type InSb was investigated in a magnetic field of 3 koe. The conductivity in the impurity band was distinguished from the free carrier conductivity by performing the experiments at 4.2 and at 1.1K. In high-purity samples with low ρ ($N_D - N_A = 1.1 \times 10^{13}$) the Hall constant ($R_H$) decreased sharply with an increase of the microwave power after the power reached a certain value. The decrease of R_H was greater at low temperatures, approaching a limit at 77K. As the microwave power was increased, an increase in ρ was observed simultaneously with the decrease of R_H (and long before R_H reached the critical value). It was established that the temperature of the samples did not increase during exposure to microwave

2

L 9585-66

ACC NR: AP6001777

radiation. The increase in conductivity caused by microwave radiation was accompanied by an increase in the number of carriers in the impurity levels and in the conduction band due to a decrease in recombination of electrons with donors. The electric field corresponding to the sharp increase of ρ was 0.2—0.4 v/cm. Orig. art. has: 2 figures and 1 table. [CS]

SUB CODE: 20/ SUBM DATE: 02Oct65/ ORIG REF: 004/ OTH REF: 001/ ATD PRESS: 4162

Card 2/2

LAVNIKOVA, G.A.; DANIYEL'-BEK, K.V. (Moskva)

Embryonic lipomas; myxoid, embryonic liposarcomas, myxosarcomas, and Gilmour's mesenchymomas. Arkh. pat. 27 no.8:36-43 '65.

(MIRA 18:10)

1. Patologoanatomicheskoye otdeleniye (zav. Z.V.Gol'bert) i khirurgicheskoye otdeleniye (zav. - doktor med.nauk A.P.Bazhenova) Nauchno-issledovatel'skogo onkologicheskogo instituta imeni Gertsena (dir. - prof. A.N.Novikov).

DANILYUK, A.A., aspirant

Damage by the Hessian fly to the winter wheat crop.
Zashch. rast. ot vred. i bol, 6 no.8:8-9 Ag '61. (MIRA 15:12)

1. Khar'kovskiy sel'skokhozyaystvennyy institut.
(Ukraine—Wheat—Diseases and pests)
(Ukraine—Hessian flies)

DANILYUK, A.A., osmotrshchik

Improve the inspection of axle equipment. Zhel. dor. transp. 47 no.5:83 My '65. (MIRA 18:6)

1. Punkt tekhnicheskogo osmotra, stantsiya Yevgen'yevka Dal'nevostochnoy dorogi.

L 63868-65 EWT(d)/EWP(k)/EWP(z)

ACCESSION NR: AP5021557

UR/0286/65/000/013/0024/0024
625.144.5

AUTHOR: Borodin, A. A.; Goltsman, V. A.; Grigorov, V. G.; Daniliuk, A. D.; Mokh, V. K.; Margolin, A. Y.

TITLE: A device for mechanical installation of railroad track sections. Class 19, No. 172315

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1965, 24

TOPIC TAGS: railroad, railway construction, railway engineering

ABSTRACT: This Author's Certificate introduces: 1. A device for mechanical installation of railroad track sections. The unit consists of a flatcar which can be moved along the track. The devices needed for mechanical installation of the track sections are located on the frame of the car. The device is designed for efficient mechanization of the process and for continuous and uninterrupted operation. The installation mechanisms are made in the form of synchronously moving conveyers mounted one above the other in pairs. A lower pair of conveyers carries clamps for the crossties. A middle pair carries a pulsating rack with catches for picking up the blocking, which is finished with spike tips upward. This middle pair of convey-

Card 1/2

L 63868-65

ACCESSION NR: AP5021557

ers feeds the blocking to a press with an electric drive mechanism for assembling all the elements of the track framework into a section which is ready for laying. An upper pair of conveyers is equipped with a pneumatic pushrod and rollers for feeding both rails to the press. The car also contains a mechanism for moving the assembled section along the installation unit. 2. A modification of this device with a centering unit for placing the crossties in the roadbed on a curve. The centering unit is made in the form of a horizontal bar which is an extension of the pneumatic cylinder rod with a spring-return clamp hinged to its end. 3. A modification of this device with provision for simultaneously pressing both ends of the crosstie onto all vertically standing spikes at once. The press is made in the form of a crankshaft and connecting rod mechanism interlinked with a press table which is located symmetrically with respect to the longitudinal axis of the press. The press is equipped with electromagnetic punches.

ASSOCIATION: Proyektno-konstruktorskoye byuro Khabarovskogo instituta inzhenerov zheleznodorozhnogo transporta (Design and Planning Office of the Khabarovsk Institute of Railroad Transportation Engineers)

SUBMITTED: 02Dec63 ENCL: 00 SUB CODE: GO

NO REF SOV: 000 OTHER: 000

Card 2/2

DANILYUK, A.M., dotsent, kandidat tekhnicheskikh nauk; KOROYEV, Yu.I., arkh., redaktor; GORSHKOV, A.P., redaktor; SMOL'YAKOVA, M.V., tekhnicheskiy redaktor.

[Drawing in perspective directly from given dimensions] Postroenie perspektiv neposredstvenno po zadannym razmeram. Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1954. 126 p.(MLRA 7:8)
(Perspective) (Geometrical drawing)

DANILYUK, A.M.

USSR/Engineering - Mechanics of Soils and Foundations

Card 1/1 Pub. 41-10/17 FD-1129

Author : Danilyuk, A. M., Kuybyshev

Title : Calculation of settling of foundation on layered strata of soil

Periodical : Izv. AN SSSR. Otd. tekh. nauk 6, 87-96, Jun 1954

Abstract : Describes an approximate method, based on usual assumptions, for calculating the settling of rigid foundations on both layered soil and on a layer of soil underlaid by rock. Graph; tables. Six references.

Institution : Hydraulic Engineering Institute

Submitted : March 27, 1954

DANILYUK, Aleksey Mikhaylovich, dots., kand. tekhn. nauk;
KRASNEYEV, G.P., red.

[New method of indicating perspective] Novyi metod postroeniia perspektiv; metodicheskoe posobie. Kuibyshev, Kuibyshevskii inzhenerno-stroitel'nyi in-t, 1961. 45 p.
(MIRA 17:3)

DANILYUK, A.N.

Changes in the gaseous composition of the blood following transfusion of polyglucin, BK-8 and 10% solution of sodium lactate in experimental cardiac wounds. Gemat. i perel. krovi 1:53-56 '65.
(MIRA 18:10)

1. Kiyevskiy institut perelivaniya krovi.

DANILYUK, A.S.

Means of reducing the clogging of spinnerets. Khim.volok. no.4:61-62 '59. (MIRA 13:2)

1. Kalininskiy kombinat.
(Rayon spinning)

DANILYUK, I.A.; RASSIN, L.Ye., inzh.-konstruktor; PRONINA, L.N., mladshiy nauchnyy sotrudnik; SHEYNERMAN, Ye.M., starshiy nauchnyy sotrudnik

Apparatus for determining the permeability to air of textile fabrics. Tekst.prom. 21 no.12:68-69 D '61. (MIRA 15:2)

1. Rukovoditel' gruppy konstruktorskogo byuro zavoda Tekstil'pribor (for Danilyuk). 2. Zavod Tekstil'pribor (for Rassin). 3. TSentral'nyy nauchno-issledovatel'skiy institut khlopchatobumazhnoy promyshlennosti (for Pronina, Sheynerman).

(Textile fabrics--Testing)
(Manometer)

SHEYNERMAN, Ye.M.; DANILYUK, I.A.; RASSIN, L.Ye.; FRONINA, L.N.

Determining the permeability to air of textile fabrics on the universal "UPV" apparatus. Nauch.-issl.trudy TSNIIKHBI '60 [publ. '62]:209-216. (MIRA 18:2)

DANILYUK, I.D., zasluzhennyy vrach USSR

"Dispensary care of the rural population." Collection of works of the Vinnitsa Medical Institute and of practicing physicians of Vinnitsa Province. Edited by L.G.Lekarev. Reviewed by I.D.Daniliuk. Sov. zdrav. 20 no.7:85-88 '61. (MIRA 15:1)
(DISPENSARIES) (LEKAREV, L.G.)

DANILYUK, I.G.

Blood transfusion to children in a rural district hospital. Vop. okh.mat. i det. 1 no.5:85-88 S-O '56. (MLRA 9:11)

1. Iz Komsomol'skoy rayonnoy bol'nitsy (glavnyy vrach I.G.Danilyuk) Vinnitskaya oblast'.
(BLOOD--TRANSFUSION) (CHILDREN--DISEASES)

DANILYUK, I.G.

Prevention ofpostoperative mortality. Khirurgiia 32 no.12:73-74 D '56. (MLRA 10:2)

1. Iz komsomol'skoy rayonnoy bol'nitsy (glavnyy vrach i rayonnyy khirurg I.G.Danilyuk) Vinnitskoy oblasti.
(SURGERY, OPERATIVE, statist.
mortal., prev.)

DANILYUK, I.G. (selo Komsomol'skoye Vinnitskoy oblasti)

Feldsher's role in the prevention and treatment of hernia. Fel'd. i akush. 22 no.8:46-48 Ag '57. (MIRA 10:12)
(HERNIA) (PUBLIC HEALTH, RURAL)

DANILYUK, I.G.

DANILYUK, I.G.

Gall bladder calculus of rare size. Vest.khir. 79 no.8:120-121 Ag '57. (MIRA 10:10)

1. Iz Komsomol'skoy rayonnoy bol'nitsy Vinnitskoy oblasti (gl.vrach I.G.Danilyuk). Adres avtora: selo Komsomol'skoye, Vinnitskoy oblasti rayonnaya bol'nitsa.
(CHOLELITHIASIS, case reports
calculus of unusually large size)

DANILYUK, I.G.

Importance of blood transfusion in pediatric practice in rural hospital conditions. Sev.med. 22 no.11:134-137 N'58 (MIRA 11:11)

1. Glavnyy vrach Komsomol'skoy rayonnoy bol'nitsy Vinnitskoy oblasti.
(BLOOD TRANSFUSION, in various dis.
pediatric dis. in rural hosp. (Rus))
(PEDIATRIC DISEASES, ther.
blood transfusion in rural hosp. (Rus))

DANILYUK, I.G., zaslyzhenyy vrach USSR.

Rehabilitation and prevention of mortality in cases of hernias in rural districts. Khirurgiia 34 no.7:127-129 Jl'58 (MIRA 11:9)

1. Iz Komsomol'skoy rayonnoy bol'nitsy (glavnnyy vrach - zaslyzhennyy vrach USSR I.G. Danilyuk) Vinnitskoy oblasti.
(HERNIA, therapy
rehabil. & prev. of mortal. in rural areas (Rus))

DANILYUK, I.G.

Use of vitamin B1 in the postoperative period. Vest.khir. 81 no.8:105-106 Ag '58 (MIRA 11:9)

1. Iz Komsomol'skoy rayonnoy bol'nitsy (gl. vrach - I.G. Danilyuk) Vinnitskoy oblasti. Adres avtora: Vinnitskaya obl., Komsomol'skiy rayon, s. Komsomol'skoye, rayonnaya bol'nitsa.

(VITAMIN B-1, ther. use
peritonitis, postop. (Rus))
(PERITONITIS, surg.
postop. vitamin B1 (Rus))

DANILYUK, I.G., zasluzhennyy vrach UkrSSR (Komsomol'skoye, Vinnitskoy obl.)

"Stomach hemorrhages and their surgical treatment" by B.S. Rozanov. Reviewed by I.G. Daniliuk. Klin.khir. no.6:88-89 Je '62. (MIRA 16:3)

(STOMACH—SURGERY) (GASTROINTESTINAL HEMORRHAGE) (ROZANOV, B.S.)

Danilyuk, I. I.

Transactions of the Third All-union Mathematical Congress (Cont.) Moscow, Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.

Gladkiy, A. V. (Barnaul). On the Effectively Unbounded Additive Set Functions. 79

Danilyuk, I. I. (L'vov). Quasi-analytic Functions of Many Variables on Manifolds. 79-80

Dzhrbashyan, M. M. (Yerevan). On the Weighted Polynomial Approximations in Complex Regions. 80

Dzyadyk, V. K. (Lutsk). Precise Evaluation of the Best Approximations for a Class of Periodical Functions. 80-82

There are 2 references, both of them USSR.

Dzyadyk, V. K. (Lutsk). On Approximations by Polynomials of Non-periodical Functions Satisfying the Condition Lip α $(0<\alpha<1)$. 82-83

Mention is made of Bernshteyn, S. N., Nikol'skiy, S. M. and Timan, A. F.

Card 25/80

~~DANILYUK, I.I.~~ DANILJUK, I.I.

SUBJECT USSR/MATHEMATICS/Theory of functions CARD 1/1 PG - 670
AUTHOR DANILJUK I.I.
TITLE Quasiharmonic and quasianalytic functions on surfaces.
PERIODICAL Uspechi mat.Nauk 11, 5, 95-101 (1956)
reviewed 5/1957

As is well-known, complex-valued functions the real and imaginary parts of which yield solutions of elliptic systems with two independent variables, possess certain properties which are similar to those ones of analytic functions. The author studies how far this local analogue remains in the large and he investigates in this connection the solutions of the mentioned elliptic systems on certain surfaces which are defined as two-dimensional orientable topological manifolds with restricting properties. The author obtains a maximum principle and a Harnack principle. Some theorems concern Hilbert spaces of quasi-analytic functions and the quasiconformal mappings of surfaces. A great part of the present results has already been announced (Doklady Akad.Nauk 105, No.1 (1955)).

DANILYUK, I.I.

Problems of the theory of elliptic differential equations of the second order on surfaces. Dop.ta pov.L'viv.un. no.6 pt.2:96-99 '55.
(MIRA 10:3)

(Differential equations) (Riemann surfaces)

DANILYUK, I.I.

Integral representations of solutions of certain elliptical systems of the first order upon surfaces and their use in the theory of thin shells. Dokl. ZN SSSR 109 no.1:17-20 Jl-Ag '56. (MLRA 9:10)

1. L'vovskiy gosudarstvennyy universitet imeni Ivana Franko. Predstavleno akademikom M.A. Lavrent'yevym.
(Differential equations, Partial) (Elastic plates and shells)

DANILYUK, I.I.

General elliptical system of the first order and automorphous quasianalytical functions upon surfaces. Dokl. AN SSSR 109 no.2:253-255 Jl '56. (MLRA 9:10)

1. L'vovskiy gosudarstvennyy universitet imeni Ivana Franko. Predstavleno akademikom M.A. Lavrent'yevym.
(Differential equations, Partial)(Surfaces)

[illegible] On quasianalytic functions of many variables on manifolds of an even number of dimensions. Dokl. Akad. Nauk SSSR (N.S.) 109 (1956), 434-437. (Russian)

A complex function [illegible] of many complex variables is called quasianalytic if it satisfies an elliptic system [illegible] for each complex variable [illegible] and is continuous, except at some isolated points in all the variables. The author constructs a Hilbert space of quasianalytic functions, exhibits formulas and draws some conclusions based on the theory of continuous groups. No proofs are given.

D. C. Klaiwerks (Albuquerque, N.M.)

1-FW

DANILYUK, I. I.

SUBJECT USSR/MATHEMATICS/Theory of functions CARD 1/1 PG - 939
AUTHOR DANILYUK I.I.
TITLE On automorphic quasianalytic functions on surfaces.
PERIODICAL Mat.Sbornik,n.Ser. 41, 97-104 (1957)
reviewed 7/1957

A representation of the contents of this paper was already published in Doklady Akad.Nauk 109, 253-255 (1956).

AUTHOR: Danilyuk, I.I. SOV/20-120-1-3/63

TITLE: On the Mappings Which Correspond to the Solutions of Equations of Elliptic Type (Ob otobrazheniyakh, sootvetstvuyushchikh resheniyam uravneniy ellipticheskogo tipa)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 120, Nr 1, pp 17-20 (USSR)

ABSTRACT: Let the elliptic system

(1) $u_x - v_y = a(x,y)u + b(x,y)v \; ; \; u_y + v_x = c(x,y)u + d(x,y)v$

be given of the elliptic equation

$$A_1(x,y)\frac{\partial^2 U}{\partial x^2} + 2B_1(x,y)\frac{\partial^2 U}{\partial x \partial y} + C_1(x,y)\frac{\partial^2 U}{\partial y^2} +$$

(2)

$$D_1(x,y)\frac{\partial U}{\partial x} + E_1(x,y)\frac{\partial U}{\partial y} + F_1(x,y)U = 0$$

The author uses the solution methods for elliptic systems elaborated by Vekua [Ref 2,3], in order to show that under certain suppositions on the coefficients $a(x,y),\ldots, A_1(x,y),\ldots$ the system (1) and the equation (2) possess solutions in every finite simply connected domain G which realize an internal

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On the Mappings Which Correspond to the Solutions of Equations of Elliptic Type SOV/20-120-1-3/63

mapping of the domain G on a certain Riemannian surface according to Stoylov. In the case (2) the following suppositions must be satisfied : The coefficients $A_1(x,y),\dots$ must be analytic in x and y and must be continuable as analytic functions of $z = x+iy$ and $\zeta = x-iy$ into a bicylinder $G_z \times G_\zeta$. There are 3 Soviet references.

ASSOCIATION: Matematicheskiy institut imeni V.A.Steklova Akademii nauk SSSR (Mathematical Institute imeni V.A.Steklov of the Academy of Sciences of the USSR)

PRESENTED: December 16, 1957, by M.A.Lavrent'yev, Academician

SUBMITTED: October 11, 1957

1. Reimann surfaces--Theory 2. Conformal mapping

Card 2/2

AUTHOR: Danilyuk, I.I. SOV/20-122-1-1/44

TITLE: On the Problem With a Skew Derivative for First Order Elliptic Systems (O zadache s kosoy proizvodnoy dlya ellipticheskikh sistem pervogo poryadka)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 1, pp 9-12 (USSR)

ABSTRACT: Let the domain G of the z-plane have the boundary $\Gamma = \sum_{j=0}^{m} \Gamma_j$; let Γ_j be simple closed, non-intersecting, H-continuous curves, where Γ_o includes all other ones. In G the equation

$$(1) \quad \frac{\partial f(z)}{\partial \bar{z}} = B(z)\overline{f(z)} \quad , \quad f=u+iv, \quad \frac{\partial}{\partial \bar{z}} = \frac{1}{2}\left(\frac{\partial}{\partial x} + i\frac{\partial}{\partial y}\right)$$

is considered. Problem B: Find a complex-valued function f continuous in $G + \Gamma$, which in G is the generalized solution of (1), on Γ has a continuously continuable derivative $\frac{\partial f}{\partial z}$ and on Γ satisfies the boundary condition

$$(2) \quad \mathrm{Re}\left[a\frac{\partial f}{\partial z} + bf\right] = \gamma, \quad \frac{\partial}{\partial z} = \frac{1}{2}\left(\frac{\partial}{\partial x} - i\frac{\partial}{\partial y}\right)$$

(a, b, γ are functions defined on Γ).

Theorem: In G let B(z) have a generalized derivative $B_z \in L_p(G)$,

Card 1/3

On the Problem With a Skew Derivative for First Order Elliptic Systems SOV/20-122-1-1/44

$p>2$. If $f(z)$ is the solution of the problem B, then the three functions

(3) $F_1(z) = f(z)$, $F_2(z) = \frac{\partial f(z)}{\partial z}$, $F_3(z) = \overline{f(z)}$

in G satisfy the system

(4) $\frac{\partial F_1}{\partial \bar{z}} = B\overline{F_1}$, $\frac{\partial F_2}{\partial \bar{z}} = B_z\overline{F_1} + |B|^2 F_1$, $\frac{\partial F_3}{\partial \bar{z}} = \overline{F_2}$

and on Γ they satisfy the conditions

(5) $\mathrm{Re}\left[aF_2 + bF_1\right] = \gamma$, $\mathrm{Re}\left[F_1 - F_3\right] = 0$, $\mathrm{Re}\left[iF_1 + iF_3\right] = 0$.

Conversely: If a system of functions continuous on $G+\Gamma$ solves the problem (4),(5), then F_1 is the solution of the problem B.

Theorem: The homogeneous problem (4)-(5) (i.e. $\gamma = 0$) and therewith the homogeneous problem B have only finitely many solutions linearly independent over the field of real numbers. For the solvability of the problem (4)-(5) and consequently the problem B it is necessary and sufficient that $\int_\Gamma h(t)\,\chi_j(t)ds = 0$, $j=1,2,\ldots,q$

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Here h(t) is defined by the matrix form of the condition (5):

$$(5^*) \quad \mathrm{Re}\left[g(t)F(t)\right] = h(t), \quad g = \begin{pmatrix} b & a & 0 \\ 1 & 0 & -1 \\ i & 0 & i \end{pmatrix}, \quad h = \begin{pmatrix} \gamma \\ 0 \\ 0 \end{pmatrix},$$

while χ_j are the solutions of the conjugate system $A^*(\chi) = 0$ if by $A\mu = h_1$ (μ - unknown vector function) the system of singular integral equations is denoted to which (4)-(5) can be reduced with the aid of a certain integral representation. Two further theorems reduce the solvability of the problem B and (4)-(5) to certain conditions for the solutions of the homogeneous problem conjugate to (4)-(5).
There are 5 Soviet references.

ASSOCIATION: Matematicheskiy institut imeni V.A.Steklova Akademii nauk SSSR (Mathematical Institute imeni V.A.Steklov of the Academy of Sciences of the USSR)

PRESENTED: April 11, 1958, by I.N.Vekua, Academician
SUBMITTED: April 3, 1958

AUTHOR: Danilyuk, I.I. SOV/ 20-122-2-3/42

TITLE: Investigation of a Problem With Skew Derivative With the Aid of a System of Fredholm Equations (Issledovaniye odnoy zadachi s kosoy proizvodnoy pri pomoshchi sistemy uravneniy Fredgol'ma)

PERIODICAL: Doklady Akademii nauk SSSR 1958, Vol 122, Nr 2, pp 175-178 (USSR)

ABSTRACT: Let D be the unit circle, Γ its boundary, $z = x + iy$, $f = u + iv$, $\frac{\partial}{\partial z} = \frac{1}{2}(\frac{\partial}{\partial x} - i\frac{\partial}{\partial y})$, $\frac{\partial}{\partial \bar{z}} = \frac{1}{2}(\frac{\partial}{\partial x} + i\frac{\partial}{\partial y})$.

Problem B_λ: A function f continuous in $D + \Gamma$ which is generalized solution of $\frac{\partial f}{\partial \bar{z}} = \lambda B(z)\overline{f(z)}$ and possesses a derivative which is continuously extendable on Γ is to be found, whereby it holds on Γ: $\mathrm{Re}\left[a\frac{\partial f}{\partial z} + \lambda bf\right] = \mu$. Here B(z) is

Card 1/4

a function given in D ; $B_z \in L_p(D)$, $p > 2$; a,b are continuously differentiable functions defined on Γ ; γ is H-continuous, λ a real parameter, $a(t) \neq 0$ for $t \in \Gamma$.
Problem C_λ : The generalized solution continuously extendable on Γ of the system $\frac{\partial F_1}{\partial \bar{z}} = \lambda B \bar{F}_1$, $\frac{\partial F_2}{\partial \bar{z}} = \lambda B_z \bar{F}_1 + \lambda^2 |B|^2 \bar{F}_1$, $\frac{\partial F_3}{\partial \bar{z}} = \bar{F}_2$, is to be found which satisfies on Γ the condition $\mathrm{Re}\left[g_1(t)F(t)\right] = h_1(t)$, where

$$g_1 = \begin{pmatrix} \lambda b & a & 0 \\ 1 & 0 & -1 \\ i & 0 & i \end{pmatrix}, \quad F = \begin{pmatrix} F_1 \\ F_2 \\ F_3 \end{pmatrix}, \quad h_1 = \begin{pmatrix} \gamma \\ 0 \\ 0 \end{pmatrix}$$

The problems B_λ and C_λ are equivalent (see [Ref 1]). By relatively simple transformations the system of the problem C_λ is brought into a special form. It is shown, that the solution of this special problem satisfies the system of integral equations $\varphi(z) = T_\lambda \varphi(z) + \phi(z)$, and conversely. The spectrum S^+ of the integral operator T_λ is denoted as the spectrum of the problems B_λ and C_λ (for a nonnegative index $\varkappa$). Here it is $\varkappa$ = increase of $\frac{1}{2\pi}\left[\arg \overline{a(t)}\right]$ for a single circulation on Γ in positive direction.

Theorem: S^+ is always discreet. If λ is no eigen value, then the homogeneous problems B_λ^0 , C_λ^0 possess exactly $2\varkappa + 3$ solutions linearly independent over the real number field; the inhomogeneous problems B_λ , C_λ are then solvable for an arbitrary right side. If $\lambda \in S^+$, then the number 1 of linearly independent solutions of B_λ^0 , C_λ^0 is equal to $l_* + 2\varkappa + 3$. Here l_* is the number of linearly independent solutions of the homogeneous conjugate problem and satisfies the inequalities $l_* \leqslant k$ and $l \geqslant k - 3$, where $k > 3$ is the multiplicity of λ .

Investigation of a Problem With Skew Derivative With the Aid of a System of Fredholm Equations SOV/20-122-2-3/42

Similar results for $\varkappa < 0$ are given (if λ is an eigen value, then $l = 1$ or $l = 2$).
There are 5 references, 4 of which are Soviet, and 1 American.

ASSOCIATION: Matematicheskiy institut imeni V.A. Steklova Akademii nauk SSSR (Mathematical Institute imeni V.A. Steklov of the Academy of Sciences of the USSR)

PRESENTED: April 19, 1958, by I.N. Vekua, Academician

SUBMITTED: April 14, 1958

Card 4/4

16(1)

AUTHOR: Danilyuk, I.I. SOV/20-127-5-4/58

TITLE: On the Oblique Derivative Problem for the General Quasilinear Elliptic System of First Order

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 5, pp 953-956 (USSR)

ABSTRACT: Let the quasilinear elliptic system of first order with the unknowns u, v be given in complex form ($w = u + iv$) :

$$\frac{\partial w}{\partial \bar{z}} + \mu_1(z,w)\frac{\partial w}{\partial z} + \mu_2(z,w)\frac{\partial \bar{w}}{\partial \bar{z}} + \nu(z,w) = 0$$

(1)

$$\frac{\partial}{\partial \bar{z}} = \frac{1}{2}\left(\frac{\partial}{\partial x} + i\frac{\partial}{\partial y}\right) ; \quad \frac{\partial}{\partial z} = \frac{1}{2}\left(\frac{\partial}{\partial x} - i\frac{\partial}{\partial y}\right)$$

Let $z \in D$, $w \in R$. Let on the boundary Γ of D a differential operator of first order be given

(2) $\tilde{\omega}(z,u,v,u_x,u_y,v_x,v_y) \equiv \mathrm{Re}\ \omega(z,w,w_{\bar{z}},w_z)$.

Card 1/3

5

On the Oblique Derivative Problem for the General Quasilinear Elliptic System of First Order SOV/20-127-5-4/58

Problem F : In the class $W_p^{(1)}(D)$, $p > 2$ there is to be determined a function w satisfying in D the equation (1) and on Γ the boundary condition (2) . As in /Ref 1,2/ the author formulates a Riemann-Hilbert problem E for certain new unknown functions F_1, F_2, F_3, whereby now the boundary condition contains no derivatives. In theorem 1 the author proves : If $w = w(z)$ is solution of F , then $F_1 \equiv w$, $F_2 \equiv \frac{\partial w}{\partial z}$, $F_3 \equiv \overline{w}$ are solutions of E ; conversely : If F_1, F_2, F_3 are solutions of E, then F_1 is solution of F. Then the author restricts himself to the case $\omega \equiv a(z) \frac{\partial w}{\partial z} + b(z)w$, where a and b are continuously differentiable on Γ , $a \neq 0$ on Γ . Under certain further assumptions (among others the coefficients of (1) have to satisfy the Lipschitz conditions) it is shown (theorem 2 and 3) that the problem F possesses a unique solution. The author distinguishes two cases

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(in dependence of the sign of $\varkappa = \frac{1}{2\pi}\left[\arg \overline{a}(z)\right]_{\Gamma}$) .

There are 2 Soviet references.

ASSOCIATION: Institut gidrodinamiki Sibirskogo otdeleniya Akademii nauk SSSR (Institute for Hydrodynamics of the Siberian Department, AS USSR)

PRESENTED: April 25, 1959, by I.N. Vekua, Academician

SUBMITTED: April 9, 1959

DANILYUK, I.I. (Novosibirsk)

General representation of axially symmetric fields. PMTF no.2: 22-33 Jl-Ag 60. (MIRA 14:6)

(Hydrodynamics)

16.3500

S/020/60/132/04/03/064

AUTHOR: Danilyuk, I.I.

TITLE: General Representation of Solutions to Axially Symmetrical Stationary Problem

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 4, pp. 743-746

TEXT: Theorem 1: Under the assumption

$$(3)\qquad \begin{aligned} &\frac{\partial A(z,\zeta)}{\partial z} - B(z,\zeta)B^*(\zeta,z) = -C_1(z,\zeta)A(z,\zeta) \\ &\frac{\partial B(z,\zeta)}{\partial z} - B(z,\zeta)A^*(\zeta,z) = -C_1(z,\zeta)B(z,\zeta), \end{aligned}$$

where $C_1(z,\zeta)$ is a function analytic and regular in $(D_z \times D_\zeta)$, every solution of the equation

$$(2')\qquad \frac{\partial F(z,\zeta)}{\partial \zeta} + A(z,\zeta)F(z,\zeta) + B(z,\zeta)F^*(\zeta,z) = 0$$

the coefficients of which are analytic and regular in the bicylindric domain $(D_z \times D_\zeta)$, $D_\zeta = D_{\bar{z}}$, can be represented in the form:

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General Representation of Solutions to Axially Symmetrical Stationary Problem S/020/60/132/04/03/064

(5) $$F(z,\zeta) = \alpha G(z_0,\zeta_0,z,\zeta) + \int_{z_0}^{z} \varphi(t) G(t,\zeta_0,z,\zeta)\,dt + \int_{\zeta_0}^{\zeta} \varphi_1(\tau) G(z_0,\tau,z,\zeta)\,d\tau ,$$

where G is the Riemannian function of the equation

(4) $$\frac{\partial^2 F(z,\zeta)}{\partial z\,\partial\zeta} + A(z,\zeta)\frac{\partial F(z,\zeta)}{\partial z} + C_1(z,\zeta)\frac{\partial F(z,\zeta)}{\partial\zeta} = 0,$$

z_0 - fixed point of the D_z, $\zeta_0 = \bar{z}_0$, α = const. and $\varphi(t)$, $\varphi_1(\tau)$ are combined by the differential equation

(6) $$\varphi(z) = -\frac{1}{B^*(\zeta_0,z)}\frac{d\varphi_1^*(z)}{dz} + \frac{1}{B^{*2}(\zeta_0,z)}\left[\frac{\partial B^*(\zeta_0,z)}{\partial z} - C_1(z,\zeta_0)B^*(\zeta_0,z)\right]\varphi_1^*(z),$$

where $\varphi_1(\zeta_0) = -\alpha B(z_0,\zeta_0)$ and $B^*(\zeta_0,z) \neq 0$.

Reversely: If $\varphi(t)$, $\varphi_1(t)$ satisfy the equation (6), if they are regular in D_z and D_ζ, respectively, and if $\varphi_1(\zeta_0) = -\alpha B(z_0,\zeta_0)$ then (5) is the

General Representation of Solutions to Axially Symmetrical Stationary Problem S/020/60/132/04/03/064

solution of (2') for arbitrary values of the constant α. [Abstractor's note: The star is defined by $F^*(\zeta,z) = \overline{F(\bar{\zeta},\bar{z})}$]. From this theorem there results in the special case the behavior of the solutions of the hydrodynamic equations (incompressibility, absence of sources and vortices for an axialsymmetric flow)

(1) $\frac{\partial}{\partial x}(rV_x) + \frac{\partial}{\partial r}(rV_r) = 0, \quad \frac{\partial}{\partial x}V_r - \frac{\partial}{\partial r}V_x = 0.$

Putting $z = x-ir$, $f = V_r+iV_x$, $\frac{\partial}{\partial \bar{z}} = \frac{1}{2}\left(\frac{\partial}{\partial x} + i\frac{\partial}{\partial r}\right)$, then (1) can be replaced by

(1') $\frac{\partial f}{\partial \bar{z}} - \frac{1}{4ir} f - \frac{1}{4ir}\bar{f} = 0.$

The solution of (1') can be represented by $f(x,r) = F(z,\bar{z})$, where $F(z,\bar{z})$ satisfies the equation

(2) $\frac{\partial F(z,\zeta)}{\partial \zeta} \frac{1}{2}\frac{1}{z-\zeta}F(z,\zeta) - \frac{1}{2}\frac{1}{z-\zeta}F^*(\zeta,z) = 0,$

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General Representation of Solutions to Axially Symmetrical Stationary Problem S/020/60/132/04/03/064

which is a specail case of (2'). Theorem 2 describes the relations in this case. The author mentions I.N.Vekua. There are 4 references: 3 Soviet and 1 Italian.

PRESENTED: February 1, 1960, by I.N.Vekua, Academician

SUBMITTED: February 1, 1960

X

Card 4/4

DANILYUK, I.I.

Hilbert problem with measurable coefficients. Sib. mat. zhur. 1 no.2:171-197 Jl-Ag '60. (MIRA 13:12)
(Functions, Analytic)

16.3500

32456

S/044/61/000/010/020/051
C111/C222

AUTHOR: Danilyuk, I.I.

TITLE: On the Poincaré problem for elliptic systems of first order

PERIODICAL: Referativnyy zhurnal. Matematika, no. 10, 1961, 49, abstract 10 B 212. ("Tr. Vses. soveshchaniya po differentsial'n. uravneniyam, 1958. Yerevan, AN Arm SSR, 1960, 83-84)

TEXT: In a region D the author considers the boundary value problem for an elliptic system of differential equations of first order

$$\sum_{\alpha=0}^{2} \sum_{k=1}^{2} a_{ik}^{\alpha} \frac{\partial u_k}{\partial x^{\alpha}} = f_i, \quad i = 1,2, \qquad (1)$$

with the boundary conditions

$$\sum_{\alpha=0}^{2} \sum_{k=1}^{2} b_k^{\alpha} \frac{\partial u_k}{\partial x^{\alpha}}\Big|_{\Gamma} = \gamma \qquad . \qquad (2)$$

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If $a_{ik}^{\alpha} \in C^1$ then the problem (1)-(2) can be reduced to the problem

$$\frac{\partial f}{\partial z} = B_1 \bar{f}, \quad f = u_1 + iu_2, \quad \frac{\partial}{\partial \bar{z}} = \frac{1}{2}\left(\frac{\partial}{\partial x} + i\frac{\partial}{\partial y}\right).$$

$$R_e\left[af_z + b\bar{f}\right] = \gamma, \quad z \in \Gamma, \quad \frac{\partial}{\partial z} = \frac{1}{2}\left(\frac{\partial}{\partial x} - i\frac{\partial}{\partial y}\right) \qquad (B)$$

where $a = (b_1^1 + b_2^2) + i(b_1^2 - b_2^1)$, b_1, b, γ are certain functions of the data of the problem (1)-(2). The following theorems are formulated:

Theorem 1: If $B_z \subset L_p(D)$, $p > 2$ then the problem B is equivalent to the problem C:

$$\frac{dF}{dZ} = AF + B\bar{F}, \quad F = \begin{pmatrix} f \\ f_z \\ \bar{f} \end{pmatrix}, \quad A = \begin{pmatrix} 0 & 2\,00 \\ B_1 & 00 \\ 0 & 00 \end{pmatrix} .$$

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R000509710009-0"

$$B = \begin{pmatrix} B_2 & 0 & 0 \\ B_{1z} & 0 & 0 \\ 0 & 1 & 0 \end{pmatrix}, \quad R_e\left[g(t),\ F(t)\right] = h(t),\ t \in \Gamma\ ,$$

$$g = \begin{pmatrix} b & a & 0 \\ 0 & 0 & -1 \\ i & 0 & i \end{pmatrix},\ L = \begin{pmatrix} \gamma \\ 0 \\ 0 \end{pmatrix}.$$

The problem

$$\frac{\partial \psi}{\partial \bar{z}} = -A'\psi - \bar{B}'\bar{\psi}\ ,\quad R_e\left[\frac{dt}{ds}\, g'^{-1}(t)\,\psi\right] = 0$$

is called the homogeneous conjugate problem C_o^*.

Theorem 2 : If $a(t) \neq 0$, $t \in \Gamma$ then the following assertions are valid:

a) The problems C_o^*, C_o (problem C with z = 0) and the problem B_o (B with $\gamma = 0$) have a finite number of solutions l^* and l, respectively,

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being linearly independent over the field of real numbers.
b) For the solvability of the problem C it is necessary and sufficient that for every solution of the problem C_0^* the integral conditions

$$\int_\Gamma Lh(t)g'^{-1}(t)\psi(t)dt = 0$$

are satisfied. Besides : B^* is solvable for every γ for $l^* = 0$.

c) It holds $l - l^* = 2\chi - 3(m-1)$, $\chi = \frac{1}{2\pi}\left[\arg(at)\right]_\Gamma$; where m + 1 is the order of connectivity. It is stated that an analogous problem can be considered on a finite Riemannian surface R with the genus p and with (m + 1) boundary contour.

[Abstracter's note : Complete translation.]

Card 4/4

33741
S/199/62/003/001/001/003
B112/B108

16.3700

AUTHOR: Danilyuk, I. I.

TITLE: A problem with a directional derivative

PERIODICAL: Sibirskiy matematicheskiy zhurnal, v. 3, no. 1, 1962, 17 - 55

TEXT: The author considers boundary value problems of the form $\partial w/\partial \bar{z} = g(x,y,u,v,\partial u/\partial x+\partial v/\partial y,\partial v/\partial x-\partial u/\partial y) \equiv g(z,w,\partial w/\partial z)$, $\operatorname{Re} h(x,y,u,v,\partial u/\partial x+\partial v/\partial y,\partial v/\partial x-\partial u/\partial y) \equiv \operatorname{Re} h(z,w,\partial w/\partial z) = 0$, where g and h are complex functions which depend on purely real variables. By the substitution $F_1 = w$, $F_2 = \partial w/\partial z$, $F_3 = \bar{w}$, such a problem is reduced to the following one: $\partial F_1/\partial \bar{z} = g(z,F_1,F_2)$, $\partial F_2/\partial \bar{z} = q_1(z,F_1,F_2)\partial F_2/\partial z + q_2(z,F_1,F_2)\partial \bar{F}_2/\partial \bar{z} + \nu(z,F_1,F_2)$, $\partial F_3/\partial \bar{z} = \bar{F}_2$; $\operatorname{Re} h(z,F_1,F_2) = 0$, $\operatorname{Re}(F_1 - F_3) = 0$, $\operatorname{Re}(iF_1 + iF_2) = 0$, where $q_1 = (1 - |\partial g/\partial \bar{F}_2|^2)^{-1}\partial g/\partial F_2$, $q_2 = (1. - |\partial g/\partial F_1|^2)^{-1}(\partial g/\partial \bar{F}_2)(\partial \bar{g}/\partial \bar{F}_2)$,

Card 1/2

$$v(z, F_1, F_2) =$$

$$= \left[1 - \left|\frac{\partial g}{\partial \bar{F}_2}\right|^2\right]^{-1} \left[\frac{\partial g}{\partial z} + \frac{\partial g}{\partial F_1} F_2 + \frac{\partial g}{\partial \bar{F}_1} \bar{g} + \frac{\partial g}{\partial \bar{F}_2} \left(\frac{\partial \bar{g}}{\partial \bar{z}} + \frac{\partial \bar{g}}{\partial \bar{F}_1} \bar{F}_2 + \frac{\partial \bar{g}}{\partial F_1} g\right)\right].$$

The boundary conditions of the second form contain no derivatives of the sought functions. This fact is of great importance. For the solution of such problems, a number of theorems of existence are derived. Vekua N. P. (Obobshchennyye analiticheskiye funktsii - Generalized analytic functions, Fizmatgiz, M., 1959) is referred to. There are 20 references: 17 Soviet and 3 non-Soviet. The reference to the English-language publication reads as follows: Tamarkin J. D. On Fredholm's integral equations, whose kernels are analytic in a parameter, Ann. of Math., 2, Ser. 28 (1947), 127 - 152.

SUBMITTED: January 27, 1961

Card 2/2

16 2000,

40561
S/020/62/146/002/011/013
B112/B102

AUTHOR: Danilyuk, I. I.

TITLE: Generalized Cauchy formula for axially symmetrical vector fields

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 146, no. 2, 1962, 293 - 295

TEXT: The complex differential equation $\partial f/\partial \bar{z} - (1/4ir)f - (1/4ir)\bar{f} = 0$, $f = V_r + iV_x$, $\partial/\partial \bar{z} = (\partial/\partial x + i\partial/\partial r)/2$ (1) is solved by an integral of the form $f(x, r) = (1/2\pi i)\int U(z_0, \bar{z}_0; z, \bar{z})f(x_0, r_0)dz_0 - V(z_0, \bar{z}_0; z, \bar{z})f(x_0, r_0)d\bar{z}_0$, (7) where the kernel functions U and V have the following properties (regardless of their properties of regularity and analyticity): In the neighborhood of the point $z = z_0$, the function U has the main part $-\sqrt{\zeta_0 - \bar{z}_0}\sqrt{-\bar{z}}/(z - z_0)\sqrt{-z_0}\sqrt{\zeta - \bar{z}}$, $\zeta_0 = \bar{z}_0$; (2) U and V satisfy the equations $\partial U/\partial \bar{z}_0 - AU - \bar{B}V = 0$, $\partial V/\partial \bar{z}_0 - AV - \bar{B}U = 0$, $A(z_0, \bar{z}_0) = B(z_0, \bar{z}_0) = -1/2(z_0 - \bar{z}_0)^{-1}$, $z_0 \neq z$; (3) $\partial U/\partial \bar{z} + AU + \ldots V = 0$,

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$\partial V/\partial \bar{z} + AV + B\bar{U} = 0$, $A(z, \bar{z}) = B(z, \bar{z}) = -1/2(z - \bar{z})^{-1}$, $z \neq z_0$; (4)
$U(z_0, \bar{z}_0; x, x) + V(z_0, \bar{z}_0; x, x) = 0$, $-\infty \leqslant x \leqslant \infty$; (5) $U(x_0, \ldots; \ldots)$
$= V(x_0, x_0; z, \bar{z}) = 0$, $-\infty \leqslant x_0 \leqslant \infty$. (6) If $|z|$ or $|z_0|$ tend to infinity, the functions U and V tend to zero.

ASSOCIATION: Institut gidrodinamiki Sibirskogo otdeleniya AN SSSR (Hydrodynamical Institute of the Siberian Branch of the Academy of Sciences USSR)

PRESENTED: April 12, 1962, by I. N. Vekua, Academician

SUBMITTED: April 9, 1962

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43330

S/020/62/146/003/001/019
B172/B186

AUTHOR: Danilyuk, I. I.

TITLE: Study of spatial boundary value problems with axial symmetry

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 146, no. 3, 1962, 523-526

TEXT: The elliptic system

$$\frac{\partial}{\partial x}(rV_x) + \frac{\partial}{\partial r}(rV_r) = rG_1(x,r)$$

$$\frac{\partial}{\partial x}V_r - \frac{\partial}{\partial r}V_x = G_2(x,r)$$

in a multiply connected unbounded region G of the upper semi-plane $r \geq 0$ is considered. The boundary condition

$$\alpha V_x + \beta V_r = \gamma$$

is set up for that part of the margin which does not lie on r=0; where α, β, γ are given functions. The system is considered in the complex plane

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Study of spatial boundary value... S/020/62/146/003/001/019
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by introducing the field

$$f = V_r + iV_x,$$

For the zeros of f a general theorem is proved from which a number of conclusions are derived as to the uniqueness, existence, and properties of the solutions of the homogeneous ($\gamma \equiv 0$) and inhomogeneous problems. Among other applications, these can be used in solving the external Neumann problem in the case of axial symmetry.

ASSOCIATION: Institut gidrodinamiki Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Hydrodynamics, Siberian Department of the Academy of Sciences USSR)

PRESENTED: April 12, 1962, by I. N. Vekua, Academician

SUBMITTED: April 9, 1962

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DANILYUK, I. I.

"On the oblique derivative problems"

report submitted at the Intl Conf of Mathematics, Stockholm, Sweden, 15-22 Aug 62

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R000509710009-0"

16.4500

S/044/62/000/007/032/100
C111/C222

AUTHOR: Danilyuk, I.I.

TITLE: On the theory of one-dimensional singular equations

PERIODICAL: Referativnyy zhurnal, Matematika, no. 7, 1962, 60, abstract 7B287. ("Probl. mekhaniki sploshn. sredy". M., AN SSSR, 1961, 135-144)

TEXT: The operator

$$K^{o}\varphi = a(s)\varphi(s) + \pi^{-1}b(s)\int_{0}^{2\pi}[1 - \exp i(s-\sigma)]\varphi(\sigma)d\sigma$$

is considered, where the integral is understood in the sense of the Cauchy principal value, while a(s) and b(s) satisfy the conditions: 1.) There exist positive numbers m,M such that the inequalities

$$|a(s)| \leqslant M\ ,\ |b(s)| \leqslant M\ ,$$

$$|a(s) + b(s)| \geqslant m\ ,\ |a(s) - b(s)| \geqslant m$$

hold almost everywhere on $[0,2\pi]$; 2.) there exists a unique branch $\theta(s)$

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of the function arg $[(a-b)(a+b)^{-1}]$ such that the boundary values $\theta(\sigma - 0)$, $\theta(\sigma + 0)$ exist in every point $\sigma \in [0,2\pi]$, where the difference $h(\sigma) = \theta(\sigma + 0) - \theta(\sigma - 0)$ vanishes for all $\sigma \in [0,2\pi]$ except on a closed at most denumerable point set $\{s_k\}$ and the series

$$\sum |h(s_k)|$$

converges ; 3.) $\theta(s) = \theta_0(s) + \theta_1(s)$, where $\theta_0(s)$ is a continuous 2π - periodic function and $\theta_1(s)$ is the function of the jumps of $\theta(s)$. In the paper results are given on the homogeneous equation $K^0\varphi = 0$, $\varphi \in L_p, p > 1$, and on its adjoint equation which have been known up to now only for the case, where $a(t)$, $b(t)$ are continuous and $a^2 - b^2 \neq 0$ everywhere on $[0,2\pi]$. If $f \in L_p$ and if moreover a certain additional condition is

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C111/C222

satisfied, then corresponding results are given also for the inhomogeneous equation $K^o \varphi = f$ as well as for $K^o \varphi + L \varphi = f$, where L is a completely continuous operator in L_p.

[Abstracter's note : Complete translation.]

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S/199/63/004/001/002/005
B112/B102

AUTHOR: Danilyuk, I. I.

TITLE: Generalized Cauchy formula for axially symmetric fields

PERIODICAL: Sibirskiy matematicheskiy zhurnal, v. 4, no. 1, 1963, 48 - 85

TEXT: On the basis of the results from a previous paper (Prikl. matem. i tekhn. fizika, No. 2 (1960), 22 - 23) the author constructs, in the semi-plane $r \geqslant 0$, kernels $U(z_0, \bar{z}_0, z, \bar{z})$ and $V(z_0, \bar{z}_0, z, \bar{z})$ of a generalized Cauchy's formula

$$f(x, r) = \frac{1}{2\pi i}\int_{\Gamma} U(z_0, \bar{z}_0; z, \bar{z}) f(x_0, r_0) dz_0 - \overline{V(z_0, \bar{z}_0; z, \bar{z}) f(x_0, r_0) dz_0}; \quad (161)$$

for the Eq.

$$\frac{\partial f}{\partial \bar{z}} - \frac{1}{4ir} f - \frac{1}{4ir}\bar{f} = 0,$$

$$f(x, r) = V_r(x, r) + iV_x(x, r), \quad \frac{\partial}{\partial \bar{z}} = \frac{1}{2}\left(\frac{\partial}{\partial x} + i\frac{\partial}{\partial r}\right), \quad (2)$$

which assumes the form

$$\frac{\partial F(z, \zeta)}{\partial \zeta} - \frac{1}{2}\frac{1}{z-\zeta} F(z, \zeta) - \frac{1}{2}\frac{1}{z-\zeta}\overline{F(\bar{\zeta}, \bar{z})} = 0,$$

$$F(z, \zeta) = f\left(\frac{z+\zeta}{2}, \frac{z-\zeta}{2i}\right). \quad (3)$$

if

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$z = x + ir$ and $\zeta = x - ir$; it satisfies the differential Eqs.

$$\frac{\partial U(z_0, \bar{z}_0; z, \bar{z})}{\partial z_0} - A(z_0, \bar{z}_0) U(z_0, \bar{z}_0; z, \bar{z}) - \overline{B(z_0, \bar{z}_0)}\, \overline{V(z_0, \bar{z}_0; z, \bar{z})} = 0,$$

$$\frac{\partial V(z_0, \bar{z}_0; z, \bar{z})}{\partial \bar{z}_0} - A(z_0, \bar{z}_0) V(z_0, \bar{z}_0; z, \bar{z}) - \overline{B(z_0, \bar{z}_0)}\, \overline{U(z_0, \bar{z}_0; z, \bar{z})} = 0, \qquad (150)$$

$$A(z_0, \bar{z}_0) = B(z_0, \bar{z}_0) = -\frac{1}{2} \frac{1}{z_0 - \bar{z}_0}, \quad z \neq z_0.$$

and

$$\frac{\partial U(z_0, \bar{z}_0; z, \bar{z})}{\partial z} + A(z, \bar{z}) U(z_0, \bar{z}_0; z, \bar{z}) + B(z, \bar{z}) V(z_0, \bar{z}_0; z, \bar{z}) = 0,$$

$$\frac{\partial V(z_0, \bar{z}_0; z, \bar{z})}{\partial \bar{z}} + A(z, \bar{z}) \overline{V(z_0, \bar{z}_0; z, \bar{z})} + B(z, \bar{z}) \overline{U(z_0, \bar{z}_0; z, \bar{z})} = 0, \qquad (153)$$

$$A(z, \bar{z}) = B(z, \bar{z}) = -\frac{1}{2} \frac{1}{z - \bar{z}}, \quad z \neq z_0.$$

$(z = x + ir)$.

SUBMITTED: February 27, 1962

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DANILYUK, I.I.

Study of three-dimensional axisymmetric boundary value problems. Sib.mat.zhur.4 no.6:1271-1310 N-D '63. (MIRA 17:9)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R000509710009-0"

DANILYUK, Ivan Il'ich

[Lectures on the equations of mathematical physics] Lektsii po uravneniiam matematicheskoi fiziki. Novosibirsk, Novosibirskii gos. univ. Vol.1. 1964-. (MIRA 17:11)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R000509710009-0"

[illegible], I.I., [illegible], I.[illegible]

[illegible]oviet - [illegible]ican Symposium on [illegible]artial [illegible]ifferential Equations.
Usp.mat.nauk 19 no. 2:241-250 Mr-Ap '64. (MIRA 17:6)

DANILYUK, I.I.

Nonlinear problem with a free boundary. Dokl. AN SSSR 162 no.5:979-982 Je '65. (MIRA 18:7)

1. Novosibirskiy gosudarstvennyy universitet. Submitted December 22, 1964.

DANILYUK, I.S.

Frequency selective characteristics of a phase detector. Avtom. kont.i izm.tekh. no.6:35-38 '62. (MIRA 16:2)
(Radio detectors) (Radio filters)

9.4310

S/651/62/000/006/006/010
E140/E135

AUTHOR: Danilyuk, I.S.

TITLE: Experimental study of high-stability transistor phase detector

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Instytut mashynoznavstva i avtomatyky, L'viv. Avtomaticheskiy kontrol' i izmeritel'naya tekhnika. no.6. 1962. 109-113.

TEXT: The stability of the phase detector is obtained by using the transistors in inverted connection (collector-emitter interchanged). Four detectors were tested using alloy-junction transistors, under varying conditions of temperature, carrier frequency, etc. Suppression of residual signals improved with increase of frequency, and deteriorated with increase of temperature.
There are 2 figures and 4 tables.

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ACCESSION NR: AT4008773 S/3054/63/000/000/0330/0342

AUTHORS: Vorobkevich, V. Yu.; Danilyuk, I. S.; Sinitskiy, L. A.; Rakov, M. A.; Shumkov, Yu. M.

TITLE: Pulse-width modulated phase detector

SOURCE: Pribory* promy*shlennogo kontrolya i sredstva avtomatiki. Doklady* i soobshcheniya. Kiev, 1963, 330-342

TOPIC TAGS: phase detector, pulse width modulation, transistorized phase detector, second harmonic detector, demodulator, transistorized detector, pulse width modulated detector

ABSTRACT: The operating principles and properties of a second-harmonic detector using transistors operating in the switching mode are analyzed. The operation is based on double conversion of the measured signal. The second-harmonic signal is first mixed with a fundamental-frequency reference voltage. The resultant difference in

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