S/169/62/000/004/010/103
D228/D302

AUTHOR: Gaynanov, A. G.

TITLE: Gravimetric determinations aboard the diesel-electric vessel "Ob'" on the first Antarctic voyage

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 4, 1962, 18, abstract 4A138 (V sb. Morsk. gravimetr. issledovaniya, no. 1, M., Mosk. un-t, 1961, 23.36)

TEXT: Gravity measurements were made with two triple-pendulum instruments (Cambridge and "Askania-Werke") in order to test new apparatus and clarify the conditions and possibilities of undertaking marine gravimetric observations. Before the beginning of the voyage the pendulum instruments were overhauled and fitted with gradient and vertical-acceleration recording blocks. Five marine chronometers and a device for checking the ПЧ-4 (PPCh-4) watch were used as time emitters. The instruments are described. The "Askania-Werke" pendulum instrument with invar pendulums was was placed in a Helmholtz coil. The original and the final observations were carried out in Moscow, the control observations be-

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S/169/62/000/004/010/103
Gravimetric determinations aboard ... D228/D302

ing made in the ports of Leningrad, Capetown, Wellington and Adelaide, as well as at many points with a known gravity value. Data on the gravity field of the coastal zone of Antarctica's Indian sector were obtained for the first time; the Bouguer anomalies were defined with a mean square error of from ± 8 to ± 9 milligals. The undertaken tests showed that on account of the strong engine vibrations it is only possible to carry out satisfactory pendulum observations on the diesel-electric vessel "Ob'" at stations.
[Abstracter's note: Complete translation.]

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S/169/62/000/004/014/103
D228/D302

AUTHORS: Zommer, I. E. and Gaynanov, A. G.

TITLE: Methods and results of gravity determinations in Antarctica

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 4, 1962, 19, abstract 4A143 (V sb. Morsk. gravimetr. issledovaniya, no. 1, M., Mosk. un-t, 1961, 63-68)

TEXT: Gravity measurements with a four-pendulum instrument, of the ГАИШ (GAISh) design with bronze pendulums, were carried out along the coast of Antarctica. The pendulum observation points were used as the original ones for a survey with ГАК-3М (GAK-3M) gravimeter, transported in an АН-2 (AN-2) aircraft and a helicopter. The pendulum gravity determinations are estimated to have a mean square error of ± 2.0 milligals. The gravity anomalies, defined by gravimeter at points located on the pack ice, are estimated to have an error of ± 3.2 milligals; the error at points, situated on the land ice, is from ± 10 to ± 15 milligals. The characteristic peculiari-

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S/169/62/000/004/014/103
D228/D301

Methods and results ...

ties of gravimetric determinations, made with pendulums and gravimeters under conditions of large diurnal temperature changes (up to 30 - 40°C) and ice-sheet movements of Antarctica, are described. A table is given for the physical properties (density and coefficient of magnetic susceptibility) of 10 Antarctic rock specimens. On the grounds of the gravity field's character the authors note the considerable deviations of the plumb-line. They point out that it is expedient to use the gravimetric method for determining the thickness of the ice-sheet over the continental bedrocks. [Abstracter's note: Complete translation.]

Card 2/2

S/035/62/000/003/046/053
A001/A101

9,6160

AUTHORS: Gaynanov, A. G., Smirnov, L. P.

TITLE: Gravimetric investigations on the expedition ship "Vityaz'" in the Pacific during 1957 - 1958

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 3, 1962, 32, abstract 3G219 (V sb. "Morsk. gravimetr. issledovaniya", no. 1, Moscow, Mosk. un-t, 1961, 77-99)

TEXT: Gravimetric observations were carried out during the voyage of the expedition ship "Vityaz'" in November 1957 to February 1958 in the central part of the Pacific along the route Vladivostok-Fiji islands - New Zecland - New Caledonia - Vladivostok. A marine six-pendulum instrument of the Institute of Physics of Earth, AS USSR (RZhAstr, 1960, no. 6, 5764) and marine board Gravimeters of VNIIGeofizika were used. Gravity measurements with pendulum instrument were carried out only at 18 points with sea swell force up to 3 - 4, since at the rest time strong storms prevailed. Multiple measurements were performed during staying of the ship in the ports. Starting observations were made in Moscow, reference ones at Vladivostok in the beginning and at the end of the

Card 1/4

Gravimetric investigations ...

voyage. Quartz-metallic pendulums (6 main and 3 reserve ones), quartz clock of the Aerogravimetric laboratory at the Institute of Physics of Earth, AS USSR, (RZhAstr, 1960, no. 6, 5766) were used. A suspended magnetometer M-8 was employed to check the variations of magnetic field. The authors note the stability of regulating the optical system of the pendulum instrument, the good quality of the Cardan joint, stability of quartz clock running, and small changes in the length of the pendulums. In view of a strong magnetic influence of the damper in the accelerometer unit on the periods of quartz-metallic pendulums (see 30221), magnetic damping was replaced by the air damping in the very beginning of the work. The authors describe the determination of the constants of the instrument, the program of initial and marine observations, methods of processing observations and calculating corrections. The accuracy of determination of Fay and Bouguer anomalies from pendulum observations is estimated by errors of $\pm$ 6 - 7 mgal. The design principle of gravimeter with strongly damped elastic system proposed by Veselov (RZhAstr, 1957, no. 6, 5172) is described, as well as the design of the quartz system with horizontal filament and pendulum in a position near the horizontal one, proposed by Smirnov. The quartz system is placed into a liquid whose density and viscosity are so selected that it could serve simultaneously as the thermocompensator of the quartz system

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Gravimetric investigations ...

and a damping medium. Moreover, a thin quartz plate is fastened to the pendulum for damping, whose movement is restricted by a narrow gap between two fixed metallic plates. Fundamentals of the motion theory of such a damped pendulum are expounded for the case of existence of alternate, in sign, perturbing vertical accelerations. The design of marine gravimeters with ordinary and double quartz system is described, as well as methods and results of determining their constants, methods of measuring and processing photographic records, two methods of stabilizing horizontal position of gravimeter by means of Cardan joint and gyrostabilized platform, and the design of the latter. The marine gravimeter with ordinary quartz system was mounted in a Cardan joint, and the gravimeter with the double quartz system - on the gyrostabilized platform. Measurement results were discordant, both between gravimeters and pendulums. Insufficient damping of oscillations of the pendulum quartz system at large vertical accelerations is supposed to be the main cause of discrepancies. Amplitudes of residual effect of vertical accelerations ranged from a few tens to 600 mgal. Mean amplitude values in adjacent portions of the records differ by 100 - 150 mgal. The authors note necessity of a further improvement of the gravimeter, its adjustment to observational conditions on an above-water ship, studying the

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Gravimetric investigations ...

functioning of the gyrostabilizing device, development of devices for position control of the gyrostabilizing platform relative to the true horizon.

P. Shokin

[Abstracter's note: Complete translation]

Card 4/4

S/035/62/000/003/048/053
A001/A101

AUTHORS: Kuzivanov, V. A., Gaynanov, A. G.

TITLE: On measuring magnetic field while carrying out marine pendulum observations

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 3, 1962, 32, abstract 3G221 (V sb. "Morsk. gravimetr. issledovaniya", no. 1, Moscow, Mosk. un-t, 1961, 109-111)

TEXT: It was discovered at the starting point of the marine gravimetric expedition of GAISh (see 3G219) in 1957 that, in observations with a marine six-pendulum instrument, the unit of accelerometers with strong magnetic dampers creates magnetic fields up to 10 oe near the invar heads of the TsNIIGAiK quartz-metallic pendulums. This led to a change in the oscillation period of several TsNIIGAiK quartz-metallic pendulums up to 110 x 10^{-7} sec ($\sim$ 45 mgal). It is necessary to determine admissible strengths of magnetic field while using these pendulums, and in the field observations with pendulum instruments to observe that the magnetic field should not exceed admissible limits. A device widely used in practice of magnetometric studies is recommended for approximate

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S/035/62/000/003/048/053
On measuring magnetic field ... A001/A101

(± 10 - 15%) determination of components H and Z of the magnetic field. The device is described which contains compass pointer, conventional compass and electromagnet, and whose constants are determined by means of a Helmholtz coil.

P. Shokin

[Abstracter's note: Complete translation]

Card 2/2

GAYNANOV, A.G.; SMIRNOV, L.P.

Crustal structure in the transition area from the Asiatic continent to the Pacific. Sov.geol. 5 no.3:108-118 Mr '62. (MIRA 15:4)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova i Vsesoyuznyy nauchno-issledovatel'skiy institut razvedochnoy geofiziki.
(Soviet Far East--Earth--Surface)

L 10627-65 EWT(1)/EWG(v) Po-4/Pe-5/Pq-4/Pg-4 ASD(a)-5/AFETR/ESD/ESD(t)/ESD(ga) GW

ACCESSION NR: AR4046166 S/0169/64/000/008/G005/G005

SOURCE: Ref. zh. Geofizika, Abs. 8G17

AUTHOR: Gaynanov, A. G.

TITLE: Some results of gravimetric investigations in the Sea of Okhotsk, the Kurile-Kamchatka trench and adjacent parts of the Pacific Ocean

CITED SOURCE: Sb. Morsk. gravimetr. issledovaniya. Vyp. 2. M., Mosk. un-t, 1963, 66-76

TOPIC TAGS: gravimetry, gravimetric survey, earth crust, island arc, seismicity, volcanism, pendulum gravimeter, gravimeter, sea gravimeter, damped gravimeter, gravity anomaly, Mohorovicic discontinuity, deep seismic sounding, airborne magnetometer survey, geological fault, tectonics

TRANSLATION: This paper reports on integrated seismic, aeromagnetic and gravimetric investigations made for the purpose of clarifying the character of the structure of the earth's crust in the transition zone from the Asiatic continent to the Pacific Ocean in the zone of development of a recent geosyncline, island arcs, intense seismicity and volcanism. The gravimetric measurements were made using sea pendulum gravimeters and sea damped gravimeters. The accuracy of determination

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ACCESSION NR: AR4046166

of gravity anomalies in the Bouguer reduction ($\sigma = 2.67$ g/cm^3) in sectors with small gradients was ± 6-8 mgal and in sectors with large gradients was ± 15-20 mgal. The data from these investigations were used to compile a schematic map of the relief of the Mohorovicic discontinuity. It was found that the accuracy of determination of the thickness of the earth's crust to the Mohorovicic discontinuity on the basis of gravimetric data is influenced by the variation in Bouguer anomalies depending on the thickness of sedimentary deposits and their density. The paper includes an analysis and computation of the change of density of sedimentary rocks with depth. As a result, it was established that at depths of the order of 10 km there is no difference in densities between compacted sedimentary deposits and granite rocks. The upper 4-km layer of sedimentary rocks exerts the maximum influence on the Bouguer anomaly. The collected data on the influence of the sedimentary layer were taken into account in determinations of the thickness of the earth's crust. The computations of the latter were made by three methods: standard columns of the earth's crust; the R. M. Demenitskaya method; and the Tsuboi-Tomada-Aki method. The basis of all three methods is described. This made it possible to compile a schematic map of the relief of the Mohorovicic discontinuity; the isobath interval is 3 km. There is a description of the influence of various factors on the accuracy of determination of the Mohorovicic discontinuity on the basis of gravimetric data. It has been established that the principal error in the latter is associated with the complexity of the

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000514520018-5"

L 10627-65
ACCESSION NR: AR4046166

studied area of the earth's crust. In the region of the Okhotskiy platform the thickness of the earth's crust is 25-30 km. In the southern basin of the Sea of Okhotsk, in the central parts of the Kurile Island arc and in the little Kuril'skiy Ridge the thickness of the earth's crust decreases to 15-18 km. The northern and southern groups of the Kurile Islands are characterized by an increase in the thickness of the earth's crust to 20-27 km, while to the south of Petropavlovsk-Kamchatskiy the latter is 30 km. The comparison of gravimetric data with deep seismic sounding and airborne magnetometer surveys made it possible to detect the boundaries between the sedimentary and crystalline rocks and between the "granite" and "basalt" layers and detect zones of faults and the occurrence of thick extrusive strata, as well as determine the tectonic patterns for the Kurile Island arc. S. Zhitnikova

ASSOCIATION: Moskovskiy universitet (Moscow University)

SUB CODE: ES ENCL: 00

Card 3/3

S/215/63/000/003/001/002

AUTHOR: Solov'yev, O. N. and Gaynanov, A. G.

TITLE: Features of the deep-seated geological structures of the transitional zone from the asiatic continent to the pacific ocean in the region of the kurile-kamchatka island arc

PERIODICAL: Sovetskaya geologiya, no. 3, March 1963, pages 113-123

TEXT: The article deals with a complex and intensive geological and geophysical study of the Kurile-Kamchatka region in connection with International Geophysical Year. Observations were made by seismic, gravimetric and magnetometric methods. Participating agencies were Institut fiziki zemli Akademii nauk USSR (Institute of Physics of the Earth, AS, USSR), Vsesoyuzniy nauchno-issledovatel'skiy institut razvedochnoi geofiziki (All-Union Scientific Research Institute of Exploratory Geophysics), Gosudarstvenniy astronomicheskiy institute imeni P. K. Shternberga (State Astronomic Institute im. P. K. Sternberg), Geologicheskiy fakul'tet MGU (Geological Faculty of Moscow State University) and others. Overall direction was by Institute of Physics of the Earth.

A considerable bibliography (21 articles) mainly by researchers of named

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Features of the deep-seated....

organizations is included. One U.S. source is cited since results in similar structural areas are compared: Mason, R. B. and Raff, A. D. "Magnetic Survey of the West Coast of N. America", Bull. Geol. Soc. of Amer.,v. 72, No. 8, 1961.

Purpose of the study is clarification of characteristics of the earth's crust in the region. By seismic methods, three types of earth crust were determined to exist in the region: 1. Three layered continental type, consisting of sedimentary, granitic and basaltic layers, averaging 20-30 km; near Sakhalin, Kamchatka, Northern Kuriles and also between southern islands of the arc and the deep water basins. This continental type, characterized chiefly by its granitic layer, is typical of the northern and central parts of the Sea of Okhotsk. 2. Oceanic type crust, consisting of a thin sedimentary layer (up to 1 km) and basalt (5-12 km), and having an average thickness of 10-17 km, including 5 km of water. This is observed beyond the Kurile-Kamchatka deep water trough, in the region of the ocean plateau. 3. The intermediate zone, differing from the continental by the absence of a granitic layer, and from the oceanic by its significantly thicker sedimentary layer. Comparing these findings with those obtained by use of magnetometer surveys, discrepancies were found to exist. Several theories are postulated as to reasons for this, and it is concluded that further research, based on seismic, gravimetric and magnetometric methods, is

Features of the deep-seated....

necessary before a unified hypothesis can be developed.

Further surveys, as well as more intensive study of available data are recommended in order to clarify the deep structures of the complicated transitional zone.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatelskiy institut razvedochnoy geofiziki (All-Union Scientific Research Institute of Exploratory Geophysics) and Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University im. M. V. Lomonosov)

GAYNANOV, A.G.; SOLOV'YEV, O.N.

Nature of magnetic anomalies in the area of transition from the Asiatic continent to the Pacific Ocean. Dokl. AN SSSR 151 no.6: 1399-1401 Ag '63. (MIRA 16:10)

1. Predstavleno akademikom D.I.Shcherbakovym.

L 12454-65 EWT(1)/FCC/EEC(t) Po-4/P1-4 RAEM(c) GW
ACCESSION NR: AP4048356 S/0215/64/000/010/0122/0128

AUTHOR: Gaynanov, A. G.

TITLE: The nature of magnetic anomalies along transitional zones of the Pacific Ocean

SOURCE: Sovetskaya geologiya, no. 10, 1964, 122-128

TOPIC TAGS: geomagnetic field, ocean, Moho discontinuity

ABSTRACT: The author compares the topographic character of continental margins about the Pacific border with variations in magnetic intensity across these zones. There is practically no correlation between relief on the ocean floor and magnetic anomalies. Few data are available on susceptibilities of rocks on the North American side of the ocean floor. Several measurements on the Asiatic side, on basalts from the bottom, show variations from $200 \cdot 10^{-6}$ to $3600 \cdot 10^{-6}$ cm g sec. Relations between magnetic variations and topography along the Asiatic coast of the Pacific are shown in Figs. 1-3 on the Enclosures. Profiles on the North American side are shown in Figs. 4 and 5 on the Enclosures. In the Kurile zone the upper edge of the magnetically disturbed zone lies in the "basaltic" layer or, possibly, in the upper mantle. The lower edge also lies in the upper mantle. This means

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L 12454-65
ACCESSION NR: AP4048356

that the anomaly in the oceanic segment is due to inhomogeneities in the upper mantle. Depths to the upper edge have been computed to be 1-4 km, to the lower edge 6-9 km. The author considers the anomalies to be due to volcanic rocks of different thicknesses and ages. Computations for the Aleutian zone indicate the upper edge to be 14-24 km, the lower edge 48-60 km in the deepwater basin, 4-14 km and 17-26 km along the island ridge, and 3-9 km and 15-25 km in the Bering Sea. Basalts from drill holes at Guadalupe Island have susceptibilities ranging from $40 \cdot 10^{-6}$ to $1170 \cdot 10^{-6}$ cm g sec. The direction of the remanent field is reverse. The author concludes that the cause of the magnetic anomalies in the transitional zones of the Pacific Ocean is chiefly thermoremanent magnetism of bodies, produced during cooling in the earth's field. The variations in field may be due to variations in position of the Mohorovicic discontinuity in passing from the continents to the ocean basin. Magnetic anomalies in the ocean basin may be due to sources in the "basaltic" layer or even in the "peridotitic" layer. Orig. art. has: 5 figures.

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

SUBMITTED: 00 ENCL: 05

SUB CODE: ES NO REF SOV: 013 OTHER: 010

Card 2/3

L 13848-66 EWT(1) GW

ACC NR: AR6000807 SOURCE CODE: UR/0169/65/000/009/G004/G005

SOURCE: Ref. zh. Geofizika, Abs. 9G27

AUTHOR: Gaynanov, A. G.

TITLE: Some peculiarities in the structure of the earth's crust in transition zones of the Pacific Ocean according to geophysical data

CITED SOURCE: Sb. Geofiz. issledovaniya. No. 1. M., Mosk. un-t, 1964, 228-241

TOPIC TAGS: geophysics, magnetic anomaly, gravitational field

TRANSLATION: A brief general survey of the results of Soviet and foreign geophysical studies made in the Pacific Ocean. A general conclusion is drawn that the boundary regions of the ocean, which are transitional zones to the continental regions, are characterized by anomalous geophysical fields (gravitational, magnetic) associated with the structure not only of the earth's crust, but also of the upper mantle. This is shown by gravitational anomalies as the difference between the actual values and those theoretically calculated for deep seismic sounding profiles assuming a constant density within the layers of the earth's crust and the subcrustal layers.

Card 1/2 UDC: 550.311.551.14

L 13848-66

ACC NR: AR6000807

According to the author, these anomalies indicate a discompaction of the material in the upper mantle beneath the Kuril and Aleutian Archipelagoes. "Lower edges" (and sometimes "upper edges") of magnetic disturbing masses are also frequently associated with the upper mantle.

SUB CODE: 08

Card 2/2

L 24823-65 EWT(1) AFETR GW

ACCESSION NR: AP4046375 S/0020/64/158/003/0594/0597

AUTHOR: Gaynanov, A. G.; Ushakov, S. A.

TITLE: Isostasy and plutonic structure of the zone of the transition of the Asiatic Continent toward the Pacific Ocean in the region of the Chishima-Kamchatka Depression

SOURCE: AN SSSR. Doklady*, v. 158, no. 3, 1964, 594-597

TOPIC TAGS: earth crust, isostatic deflection, Chishima Kamchatka depression, geology

ABSTRACT: Recent investigations have disclosed that the earth crust has a considerable plasticity (W. A. Heiskanen and F. A. Vening-Meinst, The Earth and its Gravity Field, N. Y. 1958). The present paper investigates the isostatic state of a given region by the method suggested by Lyustikh, Tr. Geofiz. inst. 38, 2 (1957) in which the pressure $P = \sum_{i}^{n} \sigma_i H_i = \text{const.}$, where σ_i is the density of the i-layer, H is the depth of the compensating surface, n-number of layers. This expression is valid for H≤100 km. The method was applied to the study of the isostatic state of the transition: Asiatic continent-Pacific Ocean, in the region of the Chishima-

Card 1/2

L 24823-65

ACCESSION NR: AP4046375

Kamchatka depression. Orig. art. has: 1 figure

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

SUBMITTED: 29Feb64 ENCL: 00

SUB CODE: ES NO REF SOV: 009 OTHER: 002

Card 2/2

L 21427-66 EWT(1)/FCC/EWA(h) GW

ACC NR: AT6010298 SOURCE CODE: UR/3195/65/000/006/0060/0065

AUTHOR: Gaynanov, A. G.; Tulina, Yu. V.; Kosminskaya, I. P.; Zverev, S. M.; Veytsman, P. S.; Solov'yev, O. N.

ORG: none

TITLE: Comprehensive interpretation of data from geophysical observations in the Sea of Okhotsk and the Kurile-Kamchatka zone of the Pacific Ocean

SOURCE: AN SSSR. Mezhduvedomstvennyy geofizicheskiy komitet. Seysmicheskiye issledovaniya, no. 6, 1965, 60-65

TOPIC TAGS: seismology, gravimetry, geomagnetism, deep seismic sounding, geophysical anomaly, transition zone

ABSTRACT: Data on the earth's crust acquired during the IGY from geological and geophysical studies (by magnetic, gravimetric, and seismic methods) in the transitional zone between Asia and the Pacific Ocean were used to investigate two problems: 1) qualitative comparison of special features of anomalous gravitational and magnetic fields with structures of the earth's crust determined by seismic data (deep seismic sounding); and 2) some results from a quantitative comparison of gravitational and magnetic anomalies with deep seismic-sounding data. A map of magnetic anomalies shows moderate isometric anomalies in the Sea of Okhotsk and pronounced anomalies in narrow belts in the Sea of Okhotsk, along the Kurile-Kamchatka ridge and adjacent

Card 1/2

L 21427-66

ACC NR: AT6010298

parts of the Pacific, and near the Komandorskiye Islands. The sources of magnetic anomalies in the North Okhotsk and Sakhalin depressions seem to be confined to the uppermost or lowermost portions of the "granitic" layer and the upper part of the "basaltic" layer. In areas in the Pacific off the Kurile Islands, the anomalies are in the uppermost part of the mantle, and east of the deep offshore trench, they are in the upper mantle and the "basaltic" layer. It can be assumed that these magnetic anomalies are caused by processes associated with the formation of discontinuities and lava intrusions from the upper mantle onto the ocean floor. Comparisons of the anomalous gravitational field with deep seismic-sounding data showed that the principal features of the field coincide with the structures in the crust indicated by the sounding data thus making it possible to identify regions of anomalous density. Orig. art. has: 4 figures. [EO]

SUB CODE: 08/ SUBM DATE: none/ ATD PRESS: 4221

Card 2/2 ULR

L 7977-66 EWT(1) GW

ACC NR: AP5026536 SOURCE CODE: UR/0286/65/000/019/0079/0080

AUTHORS: Veselov, K. Ye.; Gaynanov, A. G.; Luginets, A. P.; Smirnov, L. P.; Shelkovnikov, G. I. 44,55 44,55 44,55 44,55 44,55

ORG: none

TITLE: Gravimeter for measuring the force of gravity in motion. Class 42, No. 175257 [announced by All-Union Scientific Research Institute of Geophysical Reconnaissance Methods (Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki) 44,55]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 19, 1965, 79-80

TOPIC TAGS: gravimeter, 12,44,55 gravimetry, 12,44,55 gravitation

ABSTRACT: This Author Certificate presents a gravimeter for measuring the force of gravity while in motion. The gravimeter is provided with an automatic compensating system (see Fig. 1). It includes an elastic sensitive system, photoelectric converter of angular displacements, filter, amplifier, electric motor, reducer, and measuring potentiometer. To increase the accuracy of continuous measurements of the gravity force, the quartz sensitive system of the gravimeter

Card 1/2 UDC: 550.831

L 7977-66

ACC NR: AP5026536

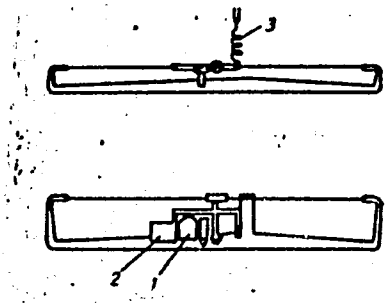

Fig. 1. 1- pendulum; 2- damping plate; 3- spiral compensating spring

is provided with a damping plate rigidly connected to a pendulum. The plate is located in the opening between the auxiliary immovable plates and a spiral compensating spring. The auxiliary plates and the spring are submerged in a viscous liquid. Orig. art. has: 1 figure.

SUB CODE: IE/ SUBM DATE: 18Sep63

Card 2/2

L 52144-66 EWT(1) GW

ACC NR: AP5021211 SOURCE CODE: UR/0213/65/005/004/0684/0691

AUTHOR: Stroyev, P.A.; Gaynanov, A.G. 36 B

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: The structure of the Earth's crust in the Indian Ocean from geophysical investigation data

SOURCE: Okeanologiya, v. 5, no. 4, 1965, 684-691

TOPIC TAGS: ocean floor topography, oceanographic expedition, gravimetric analysis, earth crust/Indian Ocean

ABSTRACT: The structure of the Earth's crust under the Indian Ocean is not well known. The present article: 1) gives a comprehensive survey, with 29 references, of geophysical research carried out in the Indian Ocean from the first studies of Vening-Meiness in 1923 to the present; 2) presents a comprehensive discussion of the newest results obtained during the IGY by British, US, and Soviet expeditions; 3) establishes, on the basis of these recent data, the Capetown-Queen Maud Land and Ceylon-Shackelton Ice Shelf profiles; and 4) presents the graphs showing the Fay and Bouguer anomalies as function of

Card 1/2 UDC: 550.311

0901 1345

L 5244-66

ACC NR: AP5021211

the Indian Ocean depths. Orig. art. has: 2 formulas and 2 figures.

SUB CODE: ES / SUBM DATE: 19Jun64 / ORIG REF: 021 / OTHER REF: 008

Card 2/2

L 08532-67 EWT(1) GW

ACC NR: AP6035596 SOURCE CODE: UR/0387/66/000/010/0030/0039

AUTHOR: Gaynanov, A. G.

ORG: Geology Department, Moscow State University (Geologicheskiy fakul'tet Moskovskiy gosudarstvennyy universitet)

TITLE: Density inhomogeneity of the upper mantle

SOURCE: AN SSSR. Izvestiya. Fizika Zemli, no. 10, 30-39

TOPIC TAGS: upper mantle, seismic modeling, earth crust, gravity anomaly, earth density measurement

ABSTRACT: Investigations of the correlation dependence of gravity anomalies on the thickness of the Earth's crust, carried out on various models of a single-layer and double-layer crust, have shown that computations of the density difference between layers of the Earth's crust and the upper mantle using the formula for attraction of an infinitely plane-parallel layer considerably underestimate the true difference in density. Comparison of correlations between crustal thicknesses, as determined from seismic data, and gravity anomalies for different regions with correlations computed for models of the Earth's crust reveal the density inhomogeneity of the upper mantle. This inhomogeneity is most evident in the transition zones from continents to oceans. To

Card 1/2 UDC: 550.312

L 08532-67

ACC NR: AP6035596

2

compute the effect of gravity, a model of the Earth's crust 120 km in radius with an uplift of 15 km for cases with apexes located at depths of 15, 30, 45, and 60 km was selected. Computations were made on the "Strela" computer programmed by O. K. Litvinenko and V. R. Melekhova of Moscow State University for 18 different models of the Earth's crust For the first three groups of models, the Earth's crust is assumed to be a single layer or a double layer with the following density differences in subcrustal and crustal matter: 1) 3.4—2.7 = 0.7 g/cm^3, 2) 3.3—2.8 = 0.5 g/cm^3, and 3) 3.2—2.9 = 0.3 g/cm^3. It is recommended that in future investigations gravity and seismic data be combined with data obtained by artificial satellites so as to provide an even better picture of the horizontal density inhomogeneity of the upper mantle. Orig. art. has: 4 figures and 3 formulas.

SUB CODE: 08/ SUBM DATE: 25Mar66/ ORIG REF: 018/ OTH REF: 009/
ATD PRESS: 5103

Card 2/2

ACC NR: AP6035896 SOURCE CODE: UR/0413/66/000/020/0131/0131

INVENTOR: Gaynanov, A. G.; Dmitriyev, V. A.; Luginets, A. P.; Mikhaylova, K. K.; Panteleyev, V. L.; Smirnov, L. P.

ORG: none

TITLE: Gravimeter for measurement of gravity during motion. Class 42, No. 187337 [announced by the All-Union Scientific Research Institute of Prospecting Geophysical Methods (Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 131

TOPIC TAGS: gravimetry, gravimeter, geodetic instrument, surveying instrument

ABSTRACT: An Author Certificate has been issued for a gravimeter for the measurement of gravity during motion. The device consists of a gravimeter with double optical-mechanical damping and two flexible quartz sensitive systems on a single armature immersed in a damping fluid. To increase measurement accuracy and work productivity, the flexible sensitive systems have equal products of time constants for each system on the scale division.

SUB CODE: 08/ SUBM DATE: 23Apr65/ ATD PRESS: 5106

Card 1/1 UDC: 550.831

ACC NR: AT6028018 SOURCE CODE: UR/0000/63/000/000/0066/0076

AUTHOR: Gaynanov, A. G.

ORG: none

TITLE: Several results of gravimetric investigations in the Sea of Okhotsk, the Kurile-Kamchutka depression, and in adjacent parts of the Pacific

SOURCE: Moscow. Universitet. Astronomicheskiy institut. Geologicheskiy fakul'tet. Morskiye gravimetricheskiye issledovaniya; sbornik statey, no. 2, 1963, 66-76

TOPIC TAGS: gravity measurement, marine pendulum, damped gravimeter, accelometer, gravity anomaly, Bouguer reduction, anomaly gradient, Mohorovicic DISCONTINUITY, GRAVIMETRY, EARTH CRUST, STRATIGRAPHY, OCEANOGRAPHIC EXPEDITION / OKHOTSK SEA

ABSTRACT: Gravity measurements were made with a Soviet marine pendulum apparatus and marine damped gravimeters. Second-order corrections for sea swells were determined by accelerometers. A quartz clock was used for time measurements. The low accuracy of the determination of the ship's position and sea depth caused a mean error in Bouguer anomaly reductions of ±6—8 mgl in regions with small gradients and ±15—20 mgl in regions with steep gradients. The northern part of the Sea of Okhotsk and Sakhalin are characterized by weak positive and negative Bouguer anomalies. The southern basin of the Sea of Okhotsk has intense positive Bouguer anomalies. The arc formed by the Kurile Islands and the Kurile-Kamchatka deep depression have anomalies with great gradients located along the ridge beneath the

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water. In the northwest part of the Pacific, great positive Bouguer anomalies are predominant. A schematic map of the Mohorovicic discontinunity was compiled on the basis of gravity anomalies and deep seismic soundings. The accuracy of the thickness of the earth's crust to the Mohorovicic discontinunity depends upon the sediments and their influence on the Bouguer anomalies. The maximum quantity of sediments was found to the south of Sakhalin and the southern basin of the Sea of Okhotsk. The density of the sediment matter was determined by an exponential formula. Table 1 shows the dependence of the gravity anomaly upon the mass sediments. Bouguer

Table 1.

Thickness of sediments in km	1	2	3	4	5	6	7	10
Variations of anomaly in mg	−34	−60	−81	−95	−104	−112	−119	−128

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000514520018-5"

ACC NR: AT6028018

anomalies were corrected for sediemnt influence, and thickness of the earth's crust was determined. A standard column for the whole thickness was chosen with a mean density consisting of sediment, granite, and basalt layers. The thickness of the column was determined from Bouguer anomalies allowing the depth of the Mohorovicic surface to be computed. A preliminary map of depths was compiled for the Sea of Okhotsk and the Pacific depression. Orig. art. has: 2 tables, 3 figures, and 12 formulas.

SUB CODE: 08/ SUBM DATE: 22Nov63/ ORIG REF: 014/ OTH REF: 003

Card 3/3

ACC NR: AT7000193 SOURCE CODE: UR/0000/64/000/000/0228/0241

AUTHOR: Gaynanov, A. G.

ORG: none

TITLE: Some characteristics of the structure of the earth's crust in the transition zones of the Pacific Ocean

SOURCE: Moscow. Universitet. Kafedra geofizicheskikh metodov issledovaniya zemnoy kory. Geofizicheskiye issledovaniya (Geophysical research), no. 1. Moscow, Izd-vo Mosk. univ., 1964, 228-241

TOPIC TAGS: earth crust, seismic profiling, gravity survey, upper mantle, continental shelf, geophysic survey, earth structure/Pacific Ocean

ABSTRACT: A short general survey is presented of the results of Soviet and non-Soviet geophysical investigations conducted in the Pacific Ocean. The general conclusion is drawn that the marginal zones of the ocean, those marking the transition to the continents, possess features of anomalous geophysical fields (gravity and magnetic) related to the structure not only of the earth's crust but of the upper mantle as well. This is proven by the presence of remanent gravity anomalies obtained as the difference between their actual values and the values computed theoretically for deep seismic profiling on the assumption of a constant density within the layers of the earth's crust and subcrustal layer. These anomalies suggest a decrease in the density of the upper mantle under the Kurile and Aleutian Island chains. Lower

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ACC NR: AT7000193

"fringes" and sometimes upper "fringes" of magnetically disturbed masses are often associated with the upper mantle. Orig. art. has: 3 figures.

SUB CODE: 08/ SUBM DATE: 05Nov64/ ORIG REF: 016/ OTH REF: 018/

Card 2/2

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R000514520018-5"

GAYNANOV, S. I.

USSR

[illegible] to "readiness" of coke [illegible] the coking process. B. A. Omnaltis, P. I. Turchenko, S. I. Gaynanov, N. P. Yur'evskaya, and S. I. Sukhenko. *Trudy Inst. Goryuch. Iskopaemykh, Akad. Nauk S.S.S.R.* 3, 69–77 (1951).—The status of coke in the oven when the coking process is complete is called its "readiness." The properties of the coke depend on the coking regime and the final temp. during coking; they are detd. by resistance measurements of the product (C.A. 43, 4830d). Four degrees of readiness are distinguished: I with the coke resistance of 0–0.7 ohm, II 0.7–5.0 ohms, III 5–100 ohms, and IV over 100 ohms. I is obtained with excessive coking, II with correct coking, III insufficient coking, and IV, only on incipient coking. The method can be applied in design of possible increase in oven capacity by reducing the coking time, and also to produce [illegible] coke of specified properties.

LYALYUTSKAYA, Ye., nauchnyy sotrudnik; GAYNANOVA, S., aspirantka;
PUSVASHKITE, O. [Pusvaskyte, O.], aspirantka

Garden pests feeding on leaves. Zashch. rast. ot vred. i bol. 10 no.12:26-27 '65. (MIRA 19:1)

1. Odesskaya sel'skokhozyaystvennaya opytnaya stantsiya (for Lyalyutskaya). 2. Saratovskiy sel'skokhozyaystvennyy institut (for Gaynanova). 3. Litovskaya sel'skokhozyaystvennaya akademiya (for Pusvashkite).

11-58-5-6/16

AUTHORS: Ivanov, B.V.; Moléva, V.A.; Gaynanova, Ye.I.

TITLE: On the Alteration of Crystalline Schist During Heating (Ob izmenenii kristallicheskogo slantsa pri nagrevanii)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1958, Nr 5, pp 60-77 (USSR)

ABSTRACT: The authors studied the alteration of the crystalline shist in a block taken out of the lining of the furnace used for the lime-calcination. This block was cut out of the albito-actinolitic shist and the results of its roentgenographic study are given (Table 1). This block underwent a long process of furnace heating and was composed of three different colored parts: grey, brown, and dark-brown (shokoladno korichnevaya). The microscopic study of the grey part showed that its mineralogic composition remained unchanged, and only the crystals of the actinolite were gradually transformed into separate filaments. The results of the roentgenographic study of this part (Table 4) showed that it was composed of albinite, diopside, and hematite. The last two products could be called the pseudomorphic actinolite. The roentgenographic study also showed

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On the Alteration of Crystalline Schist During Heating

oxidation of the magnetite and its transformation into hematite. The albite remained absolutely unchanged. The brown part of the block, sharply differs from the grey part in its structure and mineral composition. The lineal-parallel texture disappears and the glass-like phase appears in a small quantity, indicating the beginning of the melting of the rock. The transformation of the albite is also observed. Its larger grains had started to melt and its smaller grains were transformed into a mass of fine-grained plagioclase. The labradorite was found in the glass-like phase. The results of the roentgenographic study are shown in Table 5. The dark-brown, porous part of the block had a very dense caked structure and was characterized by the presence of large and small pores. Caverns were found in spots on the surface, filled by a light-grey fine-grained mass. The albite disappeared completely, it had melted and formed a part of the glass-like mass. The quantity of the labradorite increased, and a new product appeared in the glass - colorless crystals of pyroxene. The ferric oxides were also found in the glass-like substance, containing small cubic crystals

On the Alteration of Crystalline Schist During Heating

of secondary magnetite. Results of the roentgenographic study of this part of the block are given in Table 6. The caverns on the surface of the block were filled with a powder, caked into a solid mass. Between this mass and the dark-brown surface, small seams of characteristic minerals were formed. According to the authors, these seams represent a miniature skarn. The roentgenographic study of the powder showed that it was composed of calcite. The seams were formed as a result of interaction of the lime and the components of the block. The composition of these seams were: well formed crystal of melilite; yellow-green pyroxene and colorless pyroxene. The comparison of the chemical analysis of the original minerals and of two heated parts showed the identity of their composition, which proved the supposition that in the zones of the blocks of rocks, reactions in a hard state occur by the redistribution of the oxides of the composing products of the rock without addition of any new material. There are 8 tables, 2 figures, 9 photos and 14 Soviet references.

11-58-5-6/16

On the Alteration of Crystalline Schist During Heating

ASSOCIATION: Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moscow (Geological Institute of Ore Deposits, Petrography, Mineralogy and Geochemistry of the AS USSR, Moscow)

SUBMITTED: 12 July 1957.

AVAILABLE: Library of Congress

Card 4/4 1. Rocks-Crystal-Heating-Physical effects

IVANOV, B.V.; GAYNANOVA, Ye.I. [Hainanova, O.I.]

Iron cordierite, $Fe_2Al_4Si_5O$, from the bottom of an electric furnace used for smelting calcium carbide [with summary in English]. Dop.AN URSR no.12:1328-1331 '58. (MIRA 12:1)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN USSR. Predstavil akademik AN USSR P.P.Budnikov [P.P.Budnykov].
(Cordierite)

15(2)
AUTHORS: Tatarskaya, T.B., Gaynanova, Ye. I. SOV/131-59-11-5/13

TITLE: Peculiarity of the Destruction of the Fireproof Casing of a Molybdenum Furnace With Hydrogen Filling

PERIODICAL: Ogneupory, 1959, Nr 11, pp 507-510 (USSR)

ABSTRACT: In the work under review the authors carried out physico-chemical as well as petrographic investigations of high-aluminiferous chamotte and magnesite for their use in hydrogen medium. With respect to the chamotte with high content of alumina, samples were investigated from vault and bottom of a molybdenum furnace with hydrogen filling after uninterrupted work in the course of 12 days at a working temperature of 1500° and were compared with a muffle sample before its use. The sample from the furnace vault exhibits a strong change in its external appearance after use. The furnace bottom changed but little in its chemical composition (see Table). The petrographic investigation agrees basically with the chemical analysis, as may be seen from the microstructures in figures 1 and 2. Magnesite samples of the casing of a molybdenum furnace with hydrogen filling were investigated after their use during 30 days at a working temperature of 1600°. Their

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microstructures are shown in figures 3 and 4. It is stated in conclusion that the refractories with a high content of alumina change markedly after their use in the vault of a furnace with hydrogen filling, namely in their coloring, density and mineralogical structure. The porosity of the furnace bottom dropped from 23.8 to 1.8%. Data from publications are confirmed, according to which refractories with an SiO_2 content are not suited for use in hydrogen medium. Under these conditions, at temperatures of from 1000 to 1600°, compact corundum products are advisable. When used in hydrogen medium, magnesite also changes markedly, namely in coloring and crystallization, which is, however, not accompanied by a change in porosity, in volumetric weight, and in shrinkage. The use of ordinary magnesite tiles in hydrogen medium can be recommended only at temperatures of 1400-1600°. There are 4 figures, 1 table, and 6 references. 3 of which are Soviet.

ASSOCIATION: TsNIIChERMET = Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (Central Scientific Research Institute of Ferrous Metallurgy) Institut geologii rudnykh mestorozhdeniy,

Peculiarity of the Destruction of the Fireproof Casing of a Molybdenum Furnace With Hydrogen Filling

SOV/131-59-11-5/13

petrografii, mineralogii i geokhimii AN SSSR (Institute of Geology of Ore Deposits, Petrography, Mineralogy and Geochemistry of the Academy of Sciences, USSR)

Card 1/3

GAYNANSHINA, A.M.; POLUYAN, L.G.; CHERMODANOV, V.S.

Efficiency in using production wells drilled in layer D_1 of the Bavly oil field. Nefteprom.delo no.10:3-5 '65.
(MIRA 19:1)

1. Neftepromyslovoye upravleniye "Bavlyneft'" i Tatarskiy neftyanoy nauchno-issledovatel'skiy institut.

GAYNASHIN, I.G.

Useful initiative. Bezop. truda v prom. 3 no.11:37 N '59.
(MIRA 13:3)

1.Neftepromyslovoye upravleniye Bavlyneft'.
(Bavly--Oil fields--Safety measures)

GAYNANSHIN, I.G.; ZINATULLINA, A.M.; DANILIN, R.A.; RAFIKOV, R.A.

Stimulating the recovery of oil in the Bavly field by using surfactants. Neftepром. delo no.2:24-26 '64. (MIRA 17:4)

1. Neftepromyslovoye upravleniye "Bavlyneft'".

S/057/61/031/003/005/019
B125/B202

9,2585

AUTHORS: Zagorodnov, O. G., Gaynberg, Ya. B., Yegorov, A. M., and Bolotin, L. I.

TITLE: Multiplication of the frequency by means of plasma "slamming"

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 3, 1961, 297-300

TEXT: The present paper deals with the experimental study of the problem of frequency multiplication by slamming. As is known, a Doppler effect occurs when electromagnetic waves are reflected from a moved surface. In this case frequency and amplitude of the incident wave are changed. The effect concerned can be considerably increased in the case of multiple reflection. This is attained, e.g., by concentrating the electromagnetic energy in a volume completely or partially filled with the plasma. This volume is then rapidly reduced by slamming the plasma. In this case not only density but also the total electromagnetic energy are increased. In the case concerned the energy of the photons that are multiply reflected from the plasma is increased. This effects the reversal of the Fermi

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acceleration effect. In the case of multiple reflection frequency and amplitude strongly increase even in the case $V_\phi \gtrsim C (V \ll C)$. This effect was experimentally checked for an H_{011} wave in the 10-cm region. The electromagnetic field was compressed in a resonator having the shape of a metallic rectangular resonator. The plasma piston entered the resonator by a grating consisting of three metal bands. The second front face of this waveguide gradually passed into a waveguide with the critical wavelength λ_{cr} = 4.6 cm. This waveguide serves as filter for the harmonic frequencies. The plasma piston was produced by a two-electrode discharge with special ignitor and with additional electrodynamic acceleration. Fig. 1 shows the general block diagram of the experimental arrangement. The beginning of discharge can be regulated such that the plasma compression occurs two to three microseconds after the beginning of the high-frequency pulse in the waveguide. On slamming also the frequency of the electromagnetic field increases as a result of multiple reflection from the moved plasma until the frequency of the field exceeds the critical frequency of the waveguide filter. Fig. 3 illustrates the oscillograms of the high-frequency signals with the "multiplied" frequency at different instants of time of the

plasma slamming. In this case the maximum pulse height of the high-frequency signal with the multiplied frequency corresponds to the shortest duration of slamming. These outputs are separated from the high-frequency pulse which is interrupted by the moving piston by the time interval τ. This time interval corresponds to the "slamming time", i.e., the time required for the multiplication of the frequency of the initial value (in this case 2840 megacycles) to a value slightly exceeding the critical frequency of the waveguide (6530 megacycles). Thus, the frequency was increased by little more than 2.3 times. The spectrum of the oscillations produced by the magnetron contained harmonic oscillations of small amplitudes which penetrate into the waveguide. Their amplitudes reproduce the form of the magnetron pulse. During slamming dissipation of the field energy caused by losses in the cavity and in the plasma compression occurs besides the frequency multiplication and the intensification of the field amplitude. To obtain a sufficiently large amplitude of the signal at the output the "slamming time" must be of the same order of magnitude as the attenuation time $\tau_0 = Q/\omega$. In the experiments described slamming takes ~0.4 microseconds, which corresponds to a

velocity of motion of $2 \cdot 10^7$ cm/sec of the plasma compression. Thus, it was shown that by slamming a sufficiently strong frequency multiplication can be attained. There are 3 figures and 8 references: 6 Soviet-bloc and 2 non-Soviet-bloc. The 2 references to English language publications read as follows: E. L. Ginston, Science, 127, 3303, 1858; A. C. Kolb, Phys. Rev., 107, 345, 1957.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN USSR Khar'kov (Institute of Physics and Engineering of the AS UkrSSR Khar'kov)

SUBMITTED: May 20, 1960

GAYNETDINOV, M., kand.ekonomicheskikh nauk

Possibilities for lowering costs on state fattening farms.
Mias. ind. SSSR 31 no.4:34-35 '60. (MIRA 14:7)

1. Ryazanskiy sel'skokhozyaystvennyy institut.
(Cattle—Feeding and feeds)

GAYNETDINOV, M.

Beef cattle should be fattened in specialized enterprises. Mias. ind. SSSR 34 no.3:34-35 '63. (MIRA 16:7)

1. Ryazanskiy sel'skokhozyaystvennyy institut.

GAYNETDINOV, M., kand. ekon. nauk.

Capacity of livestock fattening farm. Mias. ind. SSSR 28 no.5:41 '57.
(Bashkiria--Cattle--Feeding and feeding stuffs) (MIRA 11:1)

GAYNETDINOV, M.F.

Using stillage as animal feed. Spirt. prom. 24 no. 4:19-20 '58.
(MIRA 11:7)
(Distilling industries--By-products)
(Feeding and feeding stuffs)

GAYNETDINOV, M. F., dots.

Fattening swine on distillers' feed. Nauka i perod.op.v sel'-khoz. 9 no.8:17-18 Ag '59. (MIRA 12:12)

1. Sverdlovskiy sel'skokhozyaystvennyy institut.
(Swine--Feeding and feeds)
(Distilling industries--By-products)

GAYNETDINOV, M.F.

Fattening of cattle with the by-products of the alcohol industry.
Spirt.prom. 26 no.7:25-26 '60. (MIRA 13:10)
(Distilling industries--By-products) (Cattle--Feeding and feeds)

GAYNETDINOV, M.F.

Wastes of distilleries as an important source for increasing feed production. Spirt. prom. 29 no.7:35-37 '63. (MIRA 16:12)

1. Ryazanskiy sel'skokhozyaystvennyy institut.

GAYNETDINOV, M.F.

Use of distillery wastes for cattle fattening. Ferm. i spirt. prom. 30 no.6:15-17 '64. (MIRA 17:11)

1. Ryazanskiy sel'skokhozyaystvennyy institut.

GAYNETDINOV, M.

Transportation of food industry by-products used as feeds. Avt. transp. 42 no.10:39-41 O '64. (MIRA 17:11)

1. Ryazanskiy sel'skokhozyaystvennyy institut.

GAYNIYEV, S.S., dots.; KIRILLOVA, A.A., dots., glav. red.; BLAGOVESHCHENSKAYA, N.N., dots., red.; SINYAGINA, N.P., st. prepod., red.

[Vertebrates of Ul'yanovsk Province] Pozvonochnye zhivotnye Ul'ianovskoi oblasti. Ul'ianovsk, Gos. pedagog. in-t, 1959. 74 p. (MIRA 16:10)
(Ul'yanovsk Province--Vertebrates)

GAYNOV, A.T.

Identical correlations for binary Lie's rings. Usp.mat.nauk 12 no.3:141-146 My-Je '57. (MIRA 10:10)
(Rings (Mathematics))

GAYNOV, A. T.

Cand Phys-Math Sci - (diss) "Several problems of the theory of non-associative rings." Novosibirsk, 1961. 9 pp; (Academy of Sciences USSR, Siberian Division, Joint Academic Council for Physics-Mathematics and Technical Sciences); 160 copies; free; bibliography at end of text (11 entries); (KL, 7-61 sup, 218)

86369

S/020/60/133/006/015/031XX

C 111/ C 333

16.1700

AUTHOR: Gaynov, A. T.

TITLE: Free Commutative and Free Anticommutative Products of Algebras

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 6, pp. 1275-1278

TEXT: Let the polylineal and homogeneous polynomials $p_i(x_1, \ldots, x_{n_i})$ $(i = 1,2,\ldots)$ of degree > 1 be elements of a free nonassociative algebra over a field Ω with characteristic 0. If A_α, $\alpha \in S$ are algebras over Ω, then

$$\overline{G} = \prod_{\alpha \in S}^{*} A_\alpha$$

is said to be the nonassociative free product of the A_α which is constructed under a certain selection of the bases L_α of the A_α. Let I be the set of all elements from $\overline{G}$ of the kind

$$(1) \qquad \sum \alpha\, b_1 b_2 \ldots b_k F_i(a_1, \ldots, a_{n_i})\, c_1 c_2 \ldots c_l$$

where $\alpha \in \Omega$, b, a, c with indices are regular words of the $\overline{G}$ in the sense of Kurosh (Ref.1), where: if all the words

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S/020/60/133/006/018/031XX
C 111/ C 333

Free Commutative and Free Anticommutative Products of Algebras

$\mathfrak{A}_1, \ldots \mathfrak{A}_n$ have the length 1, then at least two of them lie in different $\mathfrak{A}_\alpha$. Parentheses are arbitrarily distributed in the product $b_1 b_2 \ldots b_k p_i (\mathfrak{A}_1, \ldots \mathfrak{A}_{n_i}) c_1 c_2 \ldots c_l$. Definitions

The factor algebra $G = \bar{G}/I$ is called the reduced free product of the algebras A_α , $\alpha \in S$, which is given by the identity relations (P) $p_i(x_1, \ldots, x_{n_i}) = 0$ ($i = 1, 2, \ldots$), or in short: P-free product of the algebras A_α , and is denote with

$G = \prod_\alpha^\nabla A_\alpha = A_1 \nabla A_2 \nabla \ldots$. The author gives a second equivalent definition. He enumerates nine properties of the P-free products, e.g. I. $A \nabla B = B \nabla A$ V. If $G = A \nabla B$, and $\bar{A}$ is the bilateral ideal which is generated by A in G, then it is $G/\bar{A} \cong B$. Every algebra, for the arbitrary elements $x_1, x_2, \ldots, x_{n_i}$ of which all the equations (P) are satisfied, is called P-algebra.

The reduced free products defined by the systems (K) $xy - yx = 0$ or (AK) $xy + yx = 0$ are denoted as free commutative (K-free) or free anticommutative (AK-free) products of algebras.

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Free Commutative and Free Anticommutative Products of Algebras

In the following P-free is understood as K-free or AK-free.

Theorem 1: Let

$$G = \prod_{\alpha \in S}^{\nabla} A_\alpha \nabla F$$

be the P-free product of arbitrary algebras A_α and of the free P-algebra F; let H be a P-algebra which is assumed to be a subalgebra of G. Then it is

$H = \prod_{\alpha \in S}^{\nabla} B_\alpha \nabla V$, where $\prod^{\nabla}$ is the same P-free product,

$B_\alpha = H \cap A_\alpha$ and V a certain free P-algebra.

Theorem 2: Let G be a P-algebra with finitely many generators

(2) $g_1, g_2, \ldots, g_n$

and let $G = A_1 \nabla A_2 \nabla \ldots \nabla A_k$ be a P-free product. By elementary transformations (see (Ref.5)) the system (2) can be

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Free Commutative and Free Anticommutative Products of Algebras

brought to a form such that all generators (2) lie in the factors $A_1, \ldots, A_k$, where: if $g_1, g_2 \ldots g_l$ are all generators from (2) which lie for instance in A_1, then they generate A_1.

The author introduces the notion of the isomorphism of two P-free decompositions of an algebra and states that decompositions with irreducible factors are isomorphic.

A. G. Kurosh is mentioned. The author thanks A. J. Mal'tsev and A. J. Shirshov.

There are 5 Soviet references.

[Abstracter's note: (Ref.1) concerns a paper of A. G. Kurosh in Matematicheskiy sbornik, 1947, Vol. 20, No. 2, p. 239; (Ref. 5) concerns a paper of A. G. Kurosh in Matematicheskiy sbornik, 1955, Vol. 37, No. 2, p. 251] .

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S/020/60/133/006/018/031XX
C 111/ C 333

Free Commutative and Free Anticommutative Products of Algebras

ASSOCIATION: Institut matematiki Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Mathematics of the Siberian Department of the Academy of Sciences USSR)

PRESENTED: April 14, 1960, by A. J. Mal'tsev, Academician

SUBMITTED: April 6, 1960

X

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GAYNOV, A.T.

Commutative and anticommutative free products of algebras.
Sib.mat.zhur. 3 no.6:805-833 N-D '62. (MIRA 15:11)
(Algebra, Abstract)

GAYNOV, A.T.

Binary Lie algebras of the lower ranks. Alg. i log. 2 no.1: 21-40 '63.

Alternative algebras of ranks 3 and 4. Ibid.:41-46
(MIRA 17:8)

KOZLOVSKIY, M.T.; GLADYSHEV, V.P.; GAYNRIKHS, K. Ya.; TEMBER, G.A.

Separation of bismuth from lead and some other metals by the amalgam method in perchloric acid electrolytes. Zhur. prikl. khim. 37 no.11:2402-2407 N '64 (MIRA 18:1)

Kazakhskiy gosudarstvennyy universitet.

SOV/92-58-1-5/22

AUTHOR: Gayntsev, A. F., Senior Engineer

TITLE: Drilling the Loose Devonian Argillaceous Rocks (Bureniye v osypayushchikhsya argillitakh devona)

PERIODICAL: Neftyanik, 1958, 3, Nr 1, pp. 7-8 (USSR)

ABSTRACT: The author states that serious difficulties are encountered in drilling Devonian sedimentary rocks in the Stalingrad petroliferous area. These difficulties are mostly caused by stalled tools, sudden pump pressure increases, and even by the loss of circulation. All these troubles begin when loose Devonian argillaceous rocks, 800-1,000 meters thick, are reached. Of the total number of oil wells drilled during the last five years only two were drilled there to the depth of 2882-2936 meters, although it was planned to reach the depth of 3000 meters. Various drilling fluids and reagents were tested during this period of time. Among other reagents the alkali

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Drilling the Loose Devonian Argillaceous Rocks

carbonate solution (UShChR) was used in various combinations with liquid glass and soda ash. The successful drilling of the No. 205 oil well proved that the UShChR content may be raised to 35-40 percent without increasing the looseness of the formation drilled. The following specifications of the drilling mud may be recommended as a result of numerous tests: viscosity at least 50 seconds, shear stress, after one minute, not less than 70-100 milligrams per cu. centimeter, specific gravity not less than 1.30, and water filtration at the borehole bottom 6 cu. centimeters. The problem of cleaning boreholes under existing conditions should also be taken into consideration because the pollution of the drilling fluid increases with the deepening of perforation. When viscous solutions with UShChR are used, it is necessary to decrease their adhesiveness and to increase their fluidity in order to prevent clogging in the formation. Oil-emulsions with an admixture of petroleum in the amount of 10-12 percent and lime-starch solutions mixed with petroleum may serve the purpose. These recommendations are based on observations made in the course of operations when drill tools were lowered and lifted without difficulty, turbo-drills worked satisfactorily and operating pressure was normal. Properly treated drilling fluids having the

Drilling the Loose Devonian Argillaceous Rocks

required properties may be useful for drilling Devonian sedimentary rocks in the Stalingrad region or in any other region where similar drilling conditions prevail.

ASSOCIATION: TsNIL tresta Stalingradneftegazrazvedka (TsNIL of the Stalingradneftegazrazvedka Trust)

1. Petroleum industry 2. Drilling machines—Operation
3. Drilling fluids—Performance 4. Drilling fluids—Properties

Card 3/3

LIPKES, MI.I.; GAYNTSEV, A.F.; DUKHON, P.Yu.; ANAN'YEV, A.N.

Industrial tests of chlorolignin a new viscosity reducing reagent for drilling muds. Trudy VNIING no.2:20-26 '63. (MIRA 17:5)

GAYNTSEV, F.M.

Possible main source of diamonds in the Southern Chunya Basin. Mat. po geol. i pol.iskop.Kras.kraia no.3:237-239 '62. (MIRA 17:2)

GAYNUSH, M., Mag. Elec.

Electric Motors

Increasing the stability of an electric motor when working in two phases. Prom. energ., 9, No.7, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952, UNCLASSIFIED

GAYNTSEV, Yu. V.

621.313.322 : 621.316.719

1393. AUTOMATIC EXCITATION REGULATOR FOR SMALL HIGH-SPEED ALTERNATORS. Yu V Gaintsev. Energetik (Moscow), 1956, No. 8, 7-9. In Russian.

See also Abstr. 2838-9 (1956). The regulator described may be applied for medium and small 100-500 kVA high-speed alternators. A simplified regulator has a compounding system applied to two phases and a single phase corrector. The latter consists either of a [illegible] nonlinear impedance, or of a measuring bridge. At nominal voltage the corrector current is zero. Any unbalance produces a restoring [illegible] No stabilizing transformers are required. For a 125 kVA, 750 V, 3000 rev/min alternator the corrector consumes 240 W, 1400 VA. Its time constant is 0.017 sec. The characteristics of a regulated alternator and of a corrector are shown. W. Nitzsche

GAYNTSL', G.

Diaphysial fractures of the bones of the forearm and their treatment. Ortop., travm. i protez. no.1:15-23 '63. (MIRA 16:10)

1. Iz khirurgicheskogo otdela bol'nitsy dlya gornorabochikh (glavnyy vrach - doktor meditsiny G.Gayntsl') v Eyslebene, Germanskaya Demokraticheskaya Respublika.

*

GAYNUDINOVA, F.Kh.; KRUGLOVA, Ye.K.

Copper and its forms in irrigated Fergana Valley soils. Uzb. khim.zhur. 6 no.6:23-27 '62. (MIRA 16:2)

1. Institut pochvovedeniya AN UzSSR.
(Fergana--Soil chemistry) (Copper--Analysis)

GAYNULIN, G.A. (Leningrad)

Heating of the sewing machine needle during sewing. Shvien. prom. no.6:14-15 N-D '61. (MIRA 14:12)
(Sewing machines)

GAYNULIN, G.A. (Leningrad)

Effect of the speed rate of the sewing machine operation on the heating of the needle. Shvein. prom. no.3:16-19 My-Je '63. (MIRA 16:8)

GAYNULIN, G.A., inzh.

Study of the beating of a sewing machine needle depending on its shape. Izv. vys. ucheb. zav.; tekh. leg. prom. no.4: 140-144 '63. (MIRA 16:10)

1. Leningradskiy tekstil'nyy institut imeni S.M. Kirova. Rekomendovana kafedroy tekhnologii shveynogo proizvodstva.

ACCESSION NR: AT4033371 S/2950/63/000/002/0087/0112

AUTHOR: Kondrat'yev, K. Ya.; Burgova, M. P.; Gaynulin, I. F.; Totunova, G. F.

TITLE: Infrared spectrum of absorption by water vapor

SOURCE: Leningrad. Universitet. Problemy* fiziki atmosfery*, no. 2, 1963, 87-112

TOPIC TAGS: meteorology, atmospheric physics, infrared absorption spectrum, atmospheric liquid water content, water vapor absorption spectrum

ABSTRACT: In numerous studies of the spectra of liquid water the principal attention has been given to the absorption bands, their structure, position in the frequency scale and influence of impurities; little is known concerning the spectral absorption coefficients in intermediary regions between the bands and in certain cases data are contradictory. The authors therefore decided to determine the values of absorption by liquid water in a broad spectral range. IKS-14 and IKS-12 infrared spectrometers were used. Figures 1-7 of the Enclosure represent experimental results of the authors, constituting the principal contribution of the paper; a 10-page table in the original gives the averaged values of the coefficients. "The authors thank laboratory specialist R. I. Smirnova who did much work in connection with this project." Orig. art. has: 15 figures and 6 tables.

Card 1/9

ACCESSION NR: AT4033371

ASSOCIATION: Leningradskiy universitet (Leningrad University)

SUBMITTED: 00 DATE ACQ: 23Apr64 ENCL: 07

SUB CODE: ES NO REF SOV: 013 OTHER: 014

Card 2/9

GAYNULLIN, T. R.

Materials on epizootiology of paratuberculous enteritis of cattle in the Bashkir ASSR. Veterinariia, 29, No 6, 1952.

GAYNULLIN, T.R., kandidat veterinarnykh nauk.

Treatment of cattle in paratuberculous enteritis. Veterinariia 32 no.11:27-29 N '55. (MLRA 8:12)

1.Vashkirskaya nauchno-issledovatel'skaya veterinarnaya opytnaya stantsiya.
(JOHNE'S DISEASE)

GAYNULLIN T.R.

USSR/Diseases of Farm Animals - Diseases Caused by Bacteria and R.
Fungi.

Abs Jour : Ref Zhur - Biol., No 6, 1958, 26299

Author : Gaynullin, T.R.

Inst : Kazan' Scientific Research Veterinary Institute.

Title : Hidden Bacillus Transmission in Paratuberculosis of Large Horned Cattle (The Author's Own Report).

Orig Pub : Byul. nauchno-tekhn. inform. Kazansk. n.-i. vet. in-ta, 1957, No 1, 20-21

Abstract : Microscopic examination of bacteria in biopsy specimens of intestinal mucosa of the rectum of four clinically healthy heads of cattle from farms where paratuberculosis was present, uncovered paratubercullar bacteria. When allergen was applied these animals showed a

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GAYNULLIN, T. R. Cand. Vet. Sci -

"Therapy by means of sulfanilamide praparations in the case of paratuberculosis."

Veterinariya, Vol. 37, No. 8, 1960, p. 27

Sci-Res. Vet-Bacteriol. Lab., M S Kh, Bashkir ASSR

GAYNULLIN, T.R., kand.veterinarnykh nauk

Sulfanilamide therapy in paratuberculosis. Veterinariia 37 no.8:27-30 Ag '60. (MIRA 15:4)

1. Nauchno-issledovatel'skaya veterinarno-bakteriologicheskaya laboratoriya Ministerstva sel'skogo khozyaystva Bashkirskoy ASSR.
(Johne's disease) (Sulfanilamide)

GAYNULLIN, T.R., kand.veterinarnykh nauk

Complement fixation reaction in the diagnosis of paratuberculosis. Veterinariia 39 no.1:30 Ja '62. (MIRA 15:2)

1. Bashkirskaya nauchno-issledovatel'skaya veterinarno-bakteriologicheskaya laboratoriya.
(Johne's disease)
(Complement fixation)

GAYNULLIN, T.R., kand. veterin. nauk

Raising healthy calves from cows infected with paratuberculosis.
Veterinariia 41 no.4:39 Ap '64. (MIRA 17:8)

1. Bashkirskaya nauchno-proizvodstvennaya veterinarnaya laboratoriya.

GAYNULLINA, A. YA.

20023 GAYNULLINA, A. YA. Pazvitiye angorskogo kozoudstva. Sel. khoz-vo tadzhikistana, 1949, No. 3, s. 54-55.

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SO: LETOPIS ZHURNAL STATEY, Vol. 27, Moskva, 1949.

GAYNULLINA, Kh.G., veterinarnyy vrach.

Modified method of diagnosing rabies. Veterinariia 31 no.2:32 F '54. (MLRA 7:2)

1. Bashkirskaya respublikanskaya veterinarnaya bakteriologicheskaya laboratoriya.
(Veterinary medicine--Diagnosis) (Hydrophobia)

GUMEROVA, M.Kh.; ARISTOVA, T.V.; GIL'MANOVA, R.G.; L'VOV, F.V.; BUKCHANTAYEVA, M.S.; MUKHAMETSHINA, M.A.; GAYNULLINA, N.M.; KHRAMOVA, N.P.; KOBRANOVA, I.N., red.; LABUDIN, N.T., red.; IBROGIMOVA, Z.A., tekhn.red.

[Forty years of the Tatar A.S.S.R.; statistical collection] Tatarskaia ASSR za 40 let; statisticheskii sbornik. Kazan', Tatarskoe knizhnoe izd-vo, 1960. 171 p. (MIRA 14:3)

1. Tatar A.S.S.R. Statisticheskoye upravleniye. 2. Nachal'nik Statisticheskogo upravleniya Tatarskoy ASSR (for Kobranova). (Tatar A.S.S.R.--Statistics)

KHABIBULLIN, Sh.T.; GAYNULLINA, R.Kh.

Analysis of visual and photographic star counts in the direction of the nebula "North America". Uch.zap.Kaz.un. 116 no.5:63-68 '56.
(MLRA 10:4)

1. Kafedra astronomii.
(Stars--Distribution)

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A001/A001

31810

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1961, No. 1, p. 58, # 1A413

AUTHOR: Gaynullina, R.Kh.

TITLE: Spectrophotometry of Red Portion of the Spectrum of Low-Latitude Aurora of September 29-30, 1957

PERIODICAL: "Izv.Astrofiz.in-ta AN KazSSR", 1959, Vol.8, pp.79-81 (Engl.summary)

TEXT: The author presents results of determining intensity of red lines λ 6300 and 6364 (OI) during the aurora of September 29-30, 1957, on the Kamensk plateau near Alma-Ata with a (SP-48) spectrograph. The absolute values of intensities were obtained by comparing with the Sun. The intensities of lines λ 6300 and 6364 turned out to be 108×10^{-3} and 41×10^{-3} erg/cm^{2}sec sterad respectively at 17^h52^m UT and 38×10^{-3} and 12×10^{-3} erg/cm^{2}sec sterad at 21^h55^m UT. There are 7 references.

N. D.

Translator's note: This is the full translation of the original Russian abstract.

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