NAYDENOV, A.A., inzh.; GAMERSHTEYN, V.A., inzh.; LITVINENKO, V.G., inzh.

Increasing the production of cold-bent shapes for the manufacture of agricultural machinery. Met. i gornorud. prom. no.1:38-41 Ja-F '62. (MIRA 16:6)

1. Zavod "Zaporozhstal'".
(Sheet-metal work)
(Agricultural machinery)

GAMERSHTEYN, V.A., inzh.

Increasing the corrosion-resistance of beam shapes. Met. i gornorud. prom. no.2:76 Mr-Ap '62. (MIRA 15:11)
(Rolling (Metalwork)) (Protective coatings)

GAMERSHTEYN, V.A.; TILIK, V.T.

Adoption and the industrial production of coiled tinned steel sheet having a thickness of 0.20 mm. Met. i gornorud. prom. no.4:74-76 Jl-Ag '62. (MIRA 15:9)

1. Zaporozhskiy staleplavil'nyy zavod.
(Rolling (Metalwork))
(Tinning)

GAMERSHTEYN, V.A., inzh.; LITVINENKO, V.G., inzh.; Prinimali uchastiye: FILONOV, V.A., inzh.; KSENDZUK, F.A., inzh.; SAMOYLOV, I.D., inzh.; VERBITSKIY, A.I., inzh.; YASHNIKOV, D.I., inzh.; LEYCHENKO, M.A., kand. tekhn. nauk; CHAMIN, I.K., tekhnik; TOKAR', P.K., inzh.; ZAYTSEV, P.P., inzh.

Mastering the production of cold-rolled sheets. Met. i gornorud. prom. no.6:72-74 N-D '62. (MIRA 17:8)

1. Zavod "Zaporozhstal'" (for Gamershteyn, Litvinenko, Filonov, Ksendzuk, Samoylov, Verbitskiy, Yashnikov). 2. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii im. Bardina (for Leychenko, Chamin, Tokar', Zaytsev).

NAYDENOV, A.A.; GAMERSHTEYN, V.A., inzh.

Expanding the production of cold-bent rolled shapes. Metallurg 8 no.11:25-27 N '63. (MIRA 16:12)

KSENZUK, F.A., inzh.; KHUDAS, A.L., inzh.; TROSHCHENKOV, N.A., inzh.; GAMERSHTEYN, V.A., inzh.; AKIMOV, E.P., inzh.; IOFFE, M.M., inzh.; VEKLICH, M.I., inzh.; ANTIPENKO, V.G., inzh.; TILIK, V.T., inzh.; FILONOV, V.A., inzh. [deceased]; BORISENKO, V.G., inzh.

At the "Zaporozhstal'" plant. Stal' 23 no.6:554, 562, 572, 575 Je '63. (MIRA 16:10)

GAMERSHTEYN, V.A.; AKIMOV, E.P.

Methods for determination of the strengthening of cold bent profiles. Zav.lab. 29 no.5:610 '63. (MIRA 16:5)

1. Zavod "Zaporozhstal'".

(Hardness)

NAYDENOV, A.A.; GAMERSHTEYN, V.A.; KALUZHSKIY, V.B.

Modernization of the roll stand of a bar-bending machine.
Met. i gornorud. prom. no.3:66-67 My-Je '64.
(MIRA 17:10)

NAYDENOV, A.A.; GAMBURGER, V.A.; SHAPOVAL, V.N.

Mastering the production of cold-bent corrugated sections of 1.8 mm. thick. Met. i gornorud. prom. no.4:79 Jl-Ag '64. (MIRA 18:7)

L 61025-65 EWT(d)/EWT(m)/EWA(d)/EWP(v)/EWP(t)/EWP(k)/EWP(h)/EWP(b)/EWP(l)/EWA(c)
Pf-4 JD/HW

ACCESSION NR: AR5017426 UR/0137/65/000/006/D009/D009

SOURCE: Ref. zh. Metallurgiya, Abs. 6D55

AUTHOR: Trishevskiy, I. S.; Klepanda, V. V.; Gamershteyn, V. A.; Naydenov, A. A.; Skokov, F. I.; Kalinichskiy, V. B.; Akimov, E. P.

TITLE: Thinning of a metal in the production of bent profiles of the corrugated sheet type

CITED SOURCE: Sb. tr. Ukr. n.-i. in-t metallov, vyp. 10, 1964, 260-263

TOPIC TAGS: sheet metal, metal rolling, metal thinning, rolling mill, 08 kp steel

TRANSLATION: A study was made of the amount of thinning of a metal in bent profiles of the corrugated sheet type shaped by three systems of roller design. Starting materials for forming were sheets of 08 kp steel 3 mm thick, 660 mm wide, and 3110 mm long. It must be noted that the amount of thinning depends on the number of molding and doubling stands. The amount of thinning increases with an increase in tension between stands of the strip being formed. Thinning of

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L 61025-65

ACCESSION NR: AR5017426

0

the metal at the forward end of the sheet is 4.6% greater than at the back end, due to the presence of a hard end and to the stress during forming of the strip. The amount of thinning depends on the distance between the supporting disks and the origin of deformation; it depends also on the length of the finished shape, and increases by 1.2 times for sheets 13 meters long compared to sheets 3.10 meters long. G. Svodtseva

SUB CODE: MM ENCL: 00

awm/
Card 2/2

GAMERSHTEYN, V.A.; KLEYUK, F.A.

Introducing the technology for rolling corrugated sections of low-alloyed steel. Biul. tekh.-ekon. inform. Gos. nauch.-issl. inst. nauch. i tekh. inform. 17 no.4:3-4 Ap '64. (MIRA 17:6)

TRISHEVSKIY, I.S.; GAMERSHTEYN, V.A.; SKOKOV, F.I.; AKIMOV, E.P.

Dependence of metal hardening on the conditions of shaping and the width of the initial ingot. Sbor.trud. UNIIM no.11:208-215 '65. (MIRA 18:11)

GAMETSKIY, A.F.

Theory of covering an n-dimensional Euclidean space with identical spheres. Dokl. AN SSSR 146 no.5:991-994 O '62. (MIRA 15:10)

1. Matematicheskiy institut im. V.A.Steklova AN SSSR. Predstavleno akademikom I.M.Vinogradovym.
(Lattice theory)

GAMETSKIY, A.F.

Optimality of Voronoi's main lattice of the first type among the first-type lattices of an arbitrary number of dimensions. Dokl. AN SSSR 151 no.3:482-484 Jl '63. (MIRA 16:9)

1. Matematicheskiy institut im. V.A.Steklova AN SSSR. Predstavleno akademikom I.M.Vinogradovym.

(Lattice theory)

KARCHAGINA, Ye.A.; STRELETS, N.M.; SHNEYDER, F.A.; GAMEYEVA, Z.S.; KRIVKO, A.N.; KOTENKO, K.I.; AGHAYEVA, R.V.; GAYVORONSKAYA, N.M.

Effectiveness of the compound treatment of chronic dystrophic polyarthritis in miners at Sochi-Matsesta Health Resort at various seasons of the year. Vop. kur., fizioter. i lech. fiz. kul't. 24 no.6:503-506 N-D '59. (MIRA 15:1)

1. Iz sanatoriya imeni S. Ordzhonididze v Sochi (dir. D.A.Bershadskiy) nauchnyy rukovoditel' - prof. M.M.Shikhov).
(ARTHRITIS) (MINERS--DISEASES AND HYGIENE)

GAMEZO, M.V.

GAMEZO, M.V., polkovnik; GOVORUKHIN, A.M., inzhener-polkovnik; DUKACHEV, M.P., podpolkovnik, red.; SOROKIN, V.V., tekhn.red.

[Officer's manual on military topography] Spravochnik ofitsera po voennoi topografii. Moskva, Voen.izd-vo M-va obor. SSSR, 1957. 277 p. (MIRA 11:2)
(Military topography)

GAMEZO, M.V., polkovnik zapasa; GOVORUKHIN, A.M., inzh.-polkovnik; DUKACHEV, M.P., red.; KALACHEV, S.G., tekhn. red.

[Officer's handbook on military topography] Spravochnik ofitsera po voennoi topografii. Izd.2., perer. i dop. Moskva, Voenizdat, 1963. 291 p. (MIRA 16:7)
(Military topography)

KUMARITASHVILI, M. Z.; RAZDOL'SKIY, S. M.; GAMGEBELI, V. K.; ZALIYEVA, A. Z.

Multilayer nonwoven fabrics. Izv. vys. ucheb. zav.; tekh. tekst. prom. no.4:73-75 '62. (MIRA 15:10)

1. Nauchno-issledovatel'skiy institut tekstil'noy promyshlennosti Gruzinskoy SSR.

(Nonwoven fabrics)

GAMCIK, P.; NEMES, D.; Veterinary Faculty, College of Agriculture (Veterinarska Fakulta, VSP), Kosice.

"Practical Experience with the Use of Certain Field Diagnostic Tests and Laboratory Methods in Diagnosis of Cow Mastitis."

Prague, Veterinarni Medicina, Vol 11, No 6, Jun 66, pp 353-360

Abstract [Author's English summary modified]: The California Mastitis Test (CMT) is the most sensitive, followed by the NK test, Duba test, Whiteside's Test, and bromothymole paper strips. The bromothymole paper strip test does not give reliable results. By bacteriological examination the following germs were isolated from milk: Streptococcus agalactiae in 15.2% of samples, Staphylococcus pyogenes 13.8%; Escherichia coli 3.0%, Pseudomonas aeruginosa 2.8%, Streptococcus dysgalactiae 2.5%, and S. uberis 0.8%. Non-specific findings were made in 36.8% of the samples examined. 2 Figures, 2 Tables, 17 Western, 5 Czech, 1 Polish, 2 Hungarian references. (Manuscript received 1 Nov 65).

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CZECHOSLOVAKIA

GAMCIK, P.; Chair of Gynecology and Artificial Insemination, Veterinary Faculty, College of Agriculture (VSP, Veterinarska Fakulta, Katedra Porodnictva, Gynekologie a Umelej Inseminacie), Kosice.

"Study of Morphological Changes of Spermatozoa of Bulls with Impaired and Intact Fertility."

Prague, Veterinarni Medicina, Vol 11, No 7, Jul 66, pp 431 - 436

Abstract [Author's English summary modified]: In bulls with impaired fertility an average of 31.6% of morphologically changed spermatozoa were found (11.4% changes in acrosome, 8.3% in the caput, 6.1% immature, anomalies in the flagellium 5.5%, nucleoplasma structure 1.7%, connecting part 0.5%.) In bulls with intact fertility an average of 13.5% of morphologically changed spermatozoa was found (3.0% changes in acrosome, 2.9% immature, 4.7% shape change of the caput, nucleoplasma structure 0.7%, flagellium anomalies 0.7%, connecting part 0.6%). 22 Figures, 8 Western, 3 Czech, 1 Russian, 1 Hungarian reference. (Manuscript received 11 Feb 66).

1/1

GAMID-ZADE, G.A., Cand Tech Sci -- (diss) "Study of the relation between the catalytic properties of alumosilicate catalysts and their porous structure." Baku, Pub House of the Acad Sci AzSSR, 1959 20 pp (Acad Sci AzSSR. Inst of Petrochemical Processes) 150 copies (KL, 36-59, 115)

GAMIDOV, A.A.

Simultaneous approximation of functions and their directional derivatives in n-dimensional Euclidean space. Izv. AN Azerb. SSR. Ser. fiz.-mat. i tekh. nauk no.4:13-19 '63. (MIRA 16:12)

L 34052-66 EWT(d)/T IJP(c)

ACC NR: AP6025469 SOURCE CODE: UR/0233/65/000/005/0013/0022

AUTHOR: Ibragimov, I. I.; Gamidov, A. A.

ORG: none

TITLE: Mixed approximations of the functions of a complex variable in opposite angles by means of integral functions [This paper was presented at the 7th All-Union Conference on the Theory of the Functions of Complex Variables, held in Rostov-on-Don in September 1963.]

SOURCE: AN AzerbSSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk, no. 5, 1965, 13-22

TOPIC TAGS: complex number, integral function, approximation, mathematic conference, polygonometry, mathematic space

ABSTRACT: The regions of the opposite angles are designated and defined as are the set of functions, the best mixed approximation of the set of functions, and the mixed continuity modulus of the set of functions. The relationship between the approximation and modulus is established in the form of an inequality. Direct approximation theorems are proved for the set of functions by means of integral functions in terms of the metrics of the angle spaces. Orig. art. has: 30 formulas. [JPRS: 35,884]

SUB CODE: 12, 05 / SUBM DATE: none / ORIG REF: 005 / OTH REF: 001

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GAMIDOV, A.A.

Approximation of functions by integral functions in a complex domain. Izv. AN Azerb.SSR.Ser.fiz.-tekh. i mat. nauk no.4:3-10 '64. (MIRA 18:3)

IBRAGIMOV, I.I.; GAMIDOV, A.A.

Mixed approximations of functions of complex variables in opposite angles by means of integral functions. Dokl. AN SSSR 166 no.1:23-25 Ja '66. (MIRA 19:1)

1. Institut matematiki i mekhaniki AN Azerbaydzhanskoy SSR. Submitted May 4, 1965.

GAMIDOV, R.S., kand.geol.min.nauk

Mineralogy of the Agdarinskoye deposit. Trudy Azerb. ind. inst. no.18:123-134 '57. (MIRA 11:7)
(Ordubad District--Mineralogy)

GAMIDOV, R.S.

Oxidation zones in certain Ordubad sulfide deposits. Trudy Azerb. ind. inst. no.19:43-47 '57. (MIRA 11:9)
(Ordubad district--Sulfides)

ABDULLAYEV, G.K.; GAMIDOV, M.S.

Pyrites in sulfide deposits of Ordubad District. Izv.AN Azerb.SSR. Ser.geol.-geog.nauk no.3:57-66 '57. (MIRA 12:11)
(Ordubad District--Pyrites)

GAMIDOV, R.S.

Mineralogy of the Kovurmadar deposit. Izv. AN Azerb. SSR. Ser. geol.-geog. nauk no.5:17-23 '59 (MIRA 13:3)
(Kovurmadar region (Nakhichevan A.S.S.R.)--Mineralogy)

GAMIDOV, R.S.; MAMEDOV, Kh.S.

Structure of vivianite and its derivatives. Azerb.khim.zhur. no.4:121-125 '60. (MIRA 14:8)
(Vivianite)

GAMIDOV, R.S.; MAMEDOV, Kh.S.

Crystalline structure of biphenyl ether of ethylene glycol.
Azerb.khim.zhur. no.5:125-131 '61. (MIRA 15:5)
(Ethylene glycol) (Ethers) (Crystallography)

GAMIDOV, R.S.; GOLOVACHEV, V.P.; MAMEDOV, Kh.S.; BELOV, N.V., akademik

Crystalline structure of hopeite $Zn_3[PO_4]_2 \cdot 4H_2O$.
Dokl. AN SSSR 150 no.2:381-384 My '63. (MIRA 16:5)
(Hopeite)

MEKHTIYEV, K.M.; GAMIDOV, R.S.; MAMEDOV, Kh.S.; BELOV, N.V., akademik

Crystalline structure of the Bi-molybdate $Bi_2[MoO_4]_3$. Dokl. AN SSSR 162 no.3:563-564 My '65. (MIRA 18:5)

1. Institut khimii AN AzerbSSR.

GAMIDOV, Sh.G.

Investigating the heat capacity of toluene at constant volume near a boundary curve including a critical region. Dokl. An Azerb. SSR 16 no. 12:1161-1164 '60. (MIRA 14:2)

1. Kafedra eksperimental'noy fiziki Azerbaydzhanskogo gosudarstvennogo universiteta im.S.M.Kirova. Predstavleno akademikom AN AzerSSR Kh.I.Amirkhanovym.
(Toluene) (Heat capactiy)

GANIDOVA, A.; KULIYEV, A.N., akademik, red.; GUSEYNOV, M.M., red.; KYAZIMOV, R.A., red.

[IU G.Mamedaliev, 1905-1961; a bibliography] IU.G.Mamedaliev 1905 - 1961; bibliografiia. Baku, Izd-vo Akad. nauk Azerbaidzhanskoi SSR, 1965. 87 p. (MIRA 18:12)

1. Akademiya nauk Azerbaydzhanskoy SSR, Baku. Fundamental'naya biblioteka.

DALIN, M.A.; SEREBRYAKOV, B.R.; LOBKINA, V.V.; GAMIDOVA, E.B.

Mechanism underlying the reactions taking place in the pr[redacted] of oxidizing ammonolysis of propylene. Azerb.khim.zhur. no.4:99-102 '63. (MIRA 17:2)

ABDURAGIMOVA, L.A.; Prinimala uchastiye: GAMIDOVA, A.M.

Effect of Na salts of fatty acids on the viscosity of ultimately broken down clay suspension structures. Koll.zhur. 25 no.6:633-638 N-D '63. (MIRA 17:1)

1. Institut khimii AN AzerbSSR, Baku.

KUTYUMOV, P.S.; GAMIDZADE, G.A.; MIL'MAN, V.M.

Industrial production of "Azolate-A." Izv. vys. ucheb. zav.; neft' i gaz 3 no.12:121-123 '60. (MIRA 14:10)
(Benzenesulfonic acid)

S/081/62/000/004/064/087
B150/B138

11 0130

AUTHORS: Gamid-Zade, G. A., Shul'gina, Ye. M.

TITLE: Optimum conditions for the catalytic cracking of kerosine and gas oil fractions of petroleums of the Kyurovdag and Siazan deposits

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1962, 475, abstract 4M119 (Novosti neft. i gaz. tekhn. Neftepererabotka i neftekhimiya, no. 4, 1961, 3-5)

TEXT: Kerosine and gas oil fractions of petroleums of the Kyurovdag and Siazan' deposits, with an evaporation of 92% up to 350°C, were subjected to catalytic cracking in a laboratory plant over an alumo-silicate ball catalyzer at temperatures of 440, 450 and 460°C, with a volumetric speed of 0.7-0.8 hrs^{-1}. It was found that the optimum cracking conditions for the indicated fractions of Siazan petroleum are a temperature of 440°C with

Card 1/2

Optimum conditions for the...

volumetric speed 0.7-0.8 hrs^{-1}. With these conditions the resultant yield of gasoline with octane number 77.8 is 30%, and 6.6% gas, in which number propane-propylene is 1.61% and isobutane 2.05%. The optimum cracking conditions of a similar fraction of Kyurovdag petroleum are - temperature 460°C and volumetric speed also 0.7-0.8. The yield of gasoline with octane number 77.6 is in this case 30%, and of gas 10.4%, in this number propane-propylene is 2.68% and isobutane 2.75%. [Abstracter's note: Complete translation.]

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40198
S/081/62/000/013/045/054
B156/B101

11.0122

AUTHORS: Mamedov, M. A., Gamid-Zade, G. A., Mil'man, V. M.

TITLE: Alkylation of toluene with the propane-propylene fraction of catalytic cracking gas

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 13, 1962, 534, abstract 13M216 (Novosti neft. i gaz. tekhn. Neftepererabotka i neftekhimiya, no. 10, 1961, 7-10)

TEXT: Experiments on the alkylation of coal-tar toluene, using the propane-propylene fraction of catalytic cracking gas in the presence of dehydrated $AlCl_3$ as catalyst, were carried out at atmospheric pressure in a laboratory apparatus in order to determine the ideal yield of the alkylate produced, and its anti-detonation properties. It was established that the ideal conditions for formation of the required 120-180°C fraction are: temperature 75°C, toluene: propylene: $AlCl_3$ molecular ratio 1:0.5:0.035, contact period 0.64 min. Under these conditions the yield of the fraction was: 206.3 % with respect to propylene, 106.4 % with respect

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S/081/62/000/013/045/054
B156/B101

Alkylation of toluene with the...

to reacted toluene. The octane number of the 120-180°C fraction was 99.8, and with 3.3 g of tetraethyl lead it was 105.2. The fraction obtained can be used as a high-octane component of gasoline, also as a raw material for petrochemical synthesis. [Abstracter's note: Complete translation.]

Card 2/2

GAMID-ZADE, G.A.; YEFIMOVA, S.A.

Selecting an optimum structure of aluminosilicate catalysts for cracking the crude of different hydrocarbon composition. Sbor. trud.Az NII NP no.4:69-80 '59. (MIRA 15:5)
(Cracking process) (Aluminosilicates)

GAMIDZADE, G.A.

Increasing the resources of raw stocks for catalytic cracking by utilizing industrial wastes. Sbor. nauch.-tekh. inform. Azerb. inst. nauch.-tekh. inform. Ser. Neftepер. i khim. prom. no.2:26-30 '62. (MIRA 18:9)

S/081/62/000/023/079/120
B144/B186

AUTHOR: Gamid-Zade, G. A.

TITLE: Production of the high-octane component of vehicle-motor gasoline

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1962, 588, abstract 23M151 (Novosti neft. i gaz. tekhn. Neftepererabotka i neftekhimiya, no. 5, 1962, 3 - 8)

TEXT: Laboratory and industrial investigations were carried out to verify the possibility of obtaining the high-octane component of vehicle-motor gasoline from the waste-products of the alkylation process by cracking the polymer residue (polyalkyl benzenes). To reduce coke formation the polymer residue was cracked in a mixture with low-octane ligroin and kerosene obtained by thermal cracking, over pulverized or bead aluminum silicate catalyst. For comparison, the physico-chemical properties of gasoline obtained by catalytic cracking from different crudes are indicated together with the operating conditions and the material balance of the process. It was found that the cracking of a polymer residue mixed with ligroin

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in the ratio 1:1 using a pulverized aluminum silicate catalyst yields 49 - 51% gasoline (octane number 78), 16 - 17% gas (containing 8.5% of the propane-propylene and 4.2% of the butane-butylene fractions in relation to the crude), and 4 - 4.6% coke. Under optimum conditions (temperature 460°C, weight flow rate 0.7 hr^{-1}) and with a bead aluminum silicate catalyst, the yield from the same crude can reach 59% gasoline (octane number 78), 19% gas containing 66% of the propane-propylene fraction and 4.2% of the butane-butylene fraction (in relation to the crude), and 5.4% coke. The operating conditions of a typical catalytic-cracking plant are maintained in full for processing the crude mentioned. [Abstracter's note: Complete translation.]

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GAMID-ZADE, G.A.

Catalytic cracking of heavy motor alkylate. Neftepер. i neftekhim. no. 11:11-13 '63. (MIRA 17:5)

1. Bakinskiy universitet.

GAMID-ZADE, G.A.

Polymers as raw materials for catalytic cracking. Neftepер. i neftekhim. [illegible]

1. Azerbaydzhanskiy gosudarstvennyy universitet imeni Kirova.

GAMLESHKO, Kh.P.

Data on the study of intestinal microflora in dysentery in infants. Report No.1:Aerobic microflora of the intestines in children not contracting dysentery. Zhur. mikrobiol., epid. i immun. 40 no.1:147-151'63. (MIRA 16:10)

1. Iz Chitinskogo meditsinskogo instituta.

GAMILOV, M. A.

Flotation of magnetite and hematite from Olenegorsk tailings. F. N. Belash and M. A. Gamilov. *Gornyi Zhur.* 1956, No. 10, 49–53.—The tailing from magnetic and gravity concn. of the ore contain 10–14% Fe. Flotation recovers a concentrate contg. 53–61% Fe and the final tailings contain only 3–4% Fe. Tall-oil soap or fish-oil soap are used as collectors up to ~750 g./ton. The H_2SO_4 can be reduced from the commonly used quantities to 1 kg./ton. Tannin, 150–200 g./ton, increased the Fe content of the concentrate to 62%. Tannin acted as a depressor for gang.
M. Hosch

Kol'skiy filial im. S. M. Kirova AS USSR

SOV/137-59-1-268

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 33 (USSR)

AUTHORS: Belash, F. N., Gamilov, M. A.

TITLE: Flotation of Magnetite and Hematite From Olenegorsk Ferrous Quartzites (Flotatsiya magnetita i gematita iz Olenegorskikh zhelezistykh kvartsitov)

PERIODICAL: V sb.: Obogashcheniye polezn. iskopayemykh. Nr 1. Moscow, Metallurgizdat, 1958, pp 81-112

ABSTRACT: Gravitational-concentration tailings contain up to 11-14% Fe. By means of flotation, a concentrate containing 62% Fe may be obtained while the Fe content in the tailings may be reduced to 4-5%. The extraction of the Fe at the plant may be increased to 85-91% by means of flotation of Fe minerals contained in jigging tailings and in the overflow of the dewatering classifiers. Basic flotation is carried out in a neutral medium, whereas the purification of the froth products is conducted in a weakly acidic medium. The following flotation reagents are employed: Sodium oleate or distilled tallol in quantities of 150-200 g/ton; 100 g/ton of H_2SO_4 are used for purposes of additional refining. Under shop conditions the process of basic flotation

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Flotation of Magnetite and Hematite From Olenegorsk Ferrous Quartzites

requires 6 minutes, that of control flotation 4 minutes. Four stages, each of a duration of three minutes, are employed in the refining of concentrate.

M. M.

BELASH, F.N., prof., doktor tekhn. nauk; GAMILOV, M.A.

Flotation of perovskite in weakly acidic media. Sbor. nauch. trud. KGRI no.13:156-168 '62. (MIRA 16:8)

(Perovskite) (Flotation)

OSMOLOVSKIY, V.V., dotsent; GAMILOVA, E.Z., inzh.

Improving the quality and the cost of iron concentrates in Krivoy Rog ore dressing combines. Izv.vys.ucheb.zav.; gor.zhur. 8 no.11:45-49 '65. (MIRA 19:1)

1. Krivorozhskiy gornorudnyy institut. Rekomendovana kafedroy ekonomiki. Submitted March 3, 1965.

GAMILOVSKIY, L., instruktor-aviamodelist 1-go klassa g. Klaypeda.

Training in operating guideline controlled plane models. Kryl.rod. 4 no.7: 15 Jl '53. (MLRA 6:7)
(Airplanes--Models)

GAMILOVSKIY, L., instruktor-aviamodelist (g.Leninsk-Kuznetskiy)

Airplane model "Kuzbass." Kryl.rod. 13 no.2:25 F '62.
(MIRA 15:1)

(Airplanes--Models)

GAMIKOV, V.I., inzh.; KRUTIKHOVSKIY, V.G., inzh.; MIKHAYLOV, S.I., kand. tekhn.nauk; SOKOLOV, P.S., kand.tekhn.nauk; TARLINSKIY, I.V., kand.tekhn.nauk

Use of aluminum alloys in the construction of freight cars. Zhel. dor.transp. 45 no.10:47 O '63. (MIRA 16:11)

GAMIROV, V.I., inzh.

Effect of the side roll of gondola cars on the strength of the pin connected joint. Vest. TSNII MPS 24 no.2:35-38 '65.
(MIRA 18:5)

GAMIY, V.A.; ZIN'KOVSKIY, Yu.F.

Cathode follower with small output resistance. Radiotekhnika 20 no.10:50-51 O '65. (MIRA 18:11)

1. Deystvitel'nyye chleny Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi.

MARUASHVILI, T.; CAMMERTASHVILI, I.; BERATVE, M.

Use of electric models in solving nonlinear equations. Trudy Vych. tsentr. AN Gruz. SSR 4:175-182 '64 (MIRA 17:6)

GAMKHITASHVILI, L.G.; KANDELAKI, N.P.; MARUASHVILI, T.I.; OKROASHVILI, G.G.; KHARATISHVILI, G.L.; KVAVILASHVILI, A.M.

Solution of some problems by new methods, using electric models with d.c. amplifiers. Trudy Vych.tsentra AN Gruz.SSR 2:319-334 '62. (MIRA 16:1)
(Electromechanical analogies) (Electronic calculating machines)

KAUKHCHISVILI, M.S.; GAMKRELIDZE, Al., redaktor; DZHAPARIDZE, N., tekhnicheskiy redaktor

[Strabo's "Geography"; information about Georgia] Geografiia Strabona; svedeniia o Gruzii. [Tbilisi] Izd-vo Akad.nauk Gruzinskoi SSR, 1957. 301 p. [Parallel texts in Georgian and Greek] (MLRA 10:7)
(Georgia) (Strabo ca 63 B.C. - ca 24 A.D.)

Def. at
Tbilisi State U.

GAMKRELIDZE, A.I.

A specific feature of Vakidzhvari pegmatite veins. Soob. AN Gruz. SSR 20 no.1:51-55 Ja '58. (MIRA 11:6)

1.Goriyskiy pedagogicheskiy institut im. N. Baratashvili. Predstavleno akademikom G.S. Dzotsenidze.
(Vakidzhvari--Pegmatites)

GAMKRELIDZE, A.I.

Influence of Vakidzhavar pegmatite veins on surrounding rocks.
Trudy Tbil.GU 72:229-233 '59. (MIRA 15:5)
(Georgia--Pegmatite)

GAMKRELIDZE, E.P.

Folds in volcanic lavas of the northeastern slope of the Kechut Range. Soob.AN Gruz.SSR 22 no.5:541-546 My '59. (MIRA 12:11)

1. Akademiya nauk Gruzinskoy SSR, Geologicheskiy institut, Tbilisi.
(Kechut Range--Lava)

GAMKRELIDZE, I.P.

Lower Carboniferous stratigraphy in the northern wing of the Rachim-Lechkhumi syncline. Soob. AN Gruz. SSR 28 no.2:187-194 F '62. (MIRA 15:3)

1. AN GruzSSR, Geologicheskiy institut, Tbilisi. Predstavleno akademikom A.I.Dzhanelidze.

(Rachim Range--Geology, Stratigraphic)
(Lechkhumi Range--Geology, Stratigraphic)

GAMKRELIDZE, L.V.

Soil formation on the red erosion surface [with summary in English]
Pochvovedenie no.5:48-53 My '57. (MLRA 10:9)

1. Institut vinogradarstva i vinodeliya Akademii nauk Gruzinskoy SSR.
(Soil formation)

GAMKRELIDZE, N.G.

Carbohydrate metabolism in patients with thyreotoxicosis as related to treatment with radioactive iodine. Soob.AN Gruz.SSR 23 no.5:619-626 N '59. (MIRA 13:6)

1. Tbilisskiy gosudarstvennyy meditsinskiy institut. Predstavleno akademikom K.D.Eristavi.
(CARBOHYDRATE METABOLISM)
(THYROID GLAND--DISEASES)

GAMKRELIDZE, N.G. (Tbilisi - Moscow)

Local limit theorem for lattice distribution of random variables.
Teor. veroiat. i ee prim. 9 no.4:733-736 '64. (MIRA 17:12)

L 45448-66 EWT(1)/T IJP(c) GG

ACC NR: AP6021955 SOURCE CODE: UR/0052/66/011/001/0129/0140

AUTHOR: Gamkrelidze, N. G. (Tbilisi, Moscow)

ORG: Institute of Mathematics im. V. A. Steklov, Academy of Sciences, SSSR (Matematicheskiy institut Akademii nauk SSSR)

TITLE: Speed of convergence in the local limit theorem for lattice distributions

SOURCE: Teoriya veroyatnostey i yeye primeneniya, v. 11, no. 1, 1966, 129-140

TOPIC TAGS: convergence, random variable, lattice distribution

ABSTRACT: The article deals with the speed of convergence in the local limit theorem for lattice distributions. Numerical calculations are carried out for an example of random variables taking on values of 3, 0, and 7 with a 1/3 probability each. The results show that the behavior of the probabilities Pn(k) is much less regular than one might have expected. Their smoothing, which should follow the local limit theorem, occurs when n is very large. An estimate is given of the number of summands necessary for achieving the prescribed accuracy of the normal approxima-

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L 45448-66

ACC NR: AP6021955

tion Pn(k). The author thanks Yuriy Vasil' yevich Prokhorov for supervising the study. Orig. art. has: 4 figures and 43 formulas. [Based on author' s abstract] [NT]

SUB CODE: 12/ SUBM DATE: 12Nov65/ ORIG REF: 008/ OTH REF: 001/

Card 2/2

GAMKRELIDZE, P. D.

GAMKRELIDZE, P. D. - "On the stratigraphy of the lower Paleogenic deposits of the Adzhar-Trialet fold-formation system," A commemorative collection of transactions dedicated to the 25th anniversary of the Inatitute, (Gruz. politekhn. in-t im. Kirova, No 17), Tbilisi, 1948, p. 316-28, (In Georgian, resume in Russian).- Bibliog: 14 items

SO: U-5240, 17, Dec. 53, (Letopis 'Zhurnal 'nykh Statey, No. 25, 1949).

GAMKRELIDZE, P.D.; DZHANELIDZE, A.I., redaktor; TODUA, A.R., tekhnicheskiy redaktor.

[Geological structure of the Adzhar-Trialet fold system] Geologicheskoe stroenie Adzharotrialetskoi skladchatoi sistemy. Tiflis, Izd-vo Akademii nauk Gruzinskoi SSR, 1949. 508 p. (Akademiia nauk Gruzinskoi SSR, Institut geologii i mineralogii. Monografii, no.2) (MLRA 9:7)

1. Deystvitel'nyy chlen AN GSSR (for Dzhanelidze)
(Trialet Range--Folds (Geology)
(Adzhar-Imeretian Range--Folds (Geology)
(Caucasus--Geology, Stratigraphic)

1. GAMKRELIDZE, P. D.

2. USSR (600)

4. Kvaysa Region - Geology, Structural

7. New data on the tectonics of Kvaysa District. Soob AN Gruz SSR No. 2 1950

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

KACHAROVA, I.V., otvetstvennyy redaktor; GAMKRELIDZE, P.D., redaktor

[Collection of papers] Sbornik trudov. Tbilisi, 1951. 495 p.
(MLRA 10:9)

1. Akademiya nauk Gruzinskoy SSR, Tiflis. Institut geologii i mineralogii
(Georgia--Geology)

15-57-3-3796

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 3, p 188 (USSR)

AUTHOR: Gamkrelidze, P. D.

TITLE: New Data on the Geological Structure of the Akhalkalaki Upland and the Southern Slope of the Trialetskiy Range (Novyye dannyye o geologicheskom stroyenii Akhalkalakskogo nagor'ya i yuzhnogo sklona Trialetskogo khrebta)

PERIODICAL: Tr. Gruz. politekhn. in-ta, 1954, Nr 32, pp 17-28

ABSTRACT: The author presents a stratigraphic section of the southern slope of the Trialetskiy Range. It contains the following series. 1) A Middle and Upper Cretaceous volcanic series at least 300 m thick, which is predominantly amygdaloidal tuff-breccia, with layers of limestone in the upper part. 2) An Upper Cretaceous carbonate series approximately 150 m thick, containing limestones, thin-bedded argillaceous limestones, and marls. It exhibits rapid changes in facies, the lower

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New Data on the Geological Structure of the Akhalkalaki (Cont.)

limestones giving way to volcanic formations. Inoceramus salisburgensis Fugg and Kastu is characteristic of the limestones. 3) Paleocene and Eocene flysch, 80 to 150 m thick, which consists of carbonatic mudstones, quartz sandstones, and rare conglomerates. 4) A thick sequence of middle Eocene volcanic rocks, falling into three units 300, 500, and 2000 m thick. The lower unit is tuffaceous; the middle is a tuff-breccia; and the upper unit is again tuffaceous. Sandstones at the base of the entire sequence contain Nummulites lucasi di Archiac, N. globulus Leym., and N. distans Desh. 5) Argillaceous and sandy deposits of the upper Eocene. All the above series are overlain with angular unconformity by various continental volcanic formations, among which the following are distinguished: a) the lower Pliocene Kisatibi series; b) the upper Pliocene Tsalka-Akhalkalaki series; c) the upper Pliocene and, in part, lower Quaternary Abul-Samsarskaya series; and d) the Kurinskiy basaltic flow. The Kisatibi series, in its lower part, consists of dolerites, basalts, and the pyroclastic equivalents of these; in the upper part it is andesite and andesite-dacite. Overlying these vol-

New Data on the Geological Structure of the Akhalkalaki (Cont.)

canics there occur lacustrine conglomerates, sandstones, and clays, alternating with layers of dolerites, basalts, and andesites, which lie unconformably on the lavas of the Kisatibi series. These rocks are called the Tsalka series, and they contain teeth of Elephas (Archidiscodon) planifrons Fale and Caut. and teeth of Equus stenonis Coechi (Akchagyl). The Akhalkalaki series is composed chiefly of dolerites and basalts, which form the Akhalkalaki plateau. To the north of the plateau, basalt flows are crumpled into folds oriented in an approximately easterly direction. Stratigraphically the lavas of the Akhalkalaki series correspond to the deposits of the Tsalka series. The author has therefore combined them into one, the Tsalka-Akhalkalaki series. Younger upper Pliocene deposits are andesite-dacite lavas and tuff-breccias of the Abul-Samsarskaya series, which occur in the Kechutskiy and Abul-Samsarskiy Ranges. Finally, flows of doleritic lava occur in the Kura Valley, overlying alluvium on the 100 meter terrace of the Kura River.

Card 3/3 D. A. T.

GAMKRELIDZE, P. D., professor, SHIKHELIBEYLI, E.

"On the Tectonic Structure of Azerbaydzhan and Georgia." Report presented at the Interdepartmental Conference on the Problems of the Metallogeny of the Caucasus, Tbilisi 8-13 May 1957.

Sum 1582

BOGDANOV, A.A.; GAMKRELIDZE, P.D.; GORSKIY, I.I.; ZARIDZE, G.M.; KRASHENINNIKOV, G.F.; MURATOV, M.V.; RADKEVICH, Ye.A.; SOBOLEV, V.S.; KHAIN, V.Ye.; SHATALOV, Ye.T.

Visiting Czechoslovakian geologists. Vest.Mosk.un.Ser.biol., pochv., geol., geog. 12 no.2:3-27 '57. (MIRA 10:10)
(Czechoslovakia--Geology)

GAMKRELIDZE, P.D

AUTHOR: Tvalcheridze, G.A. 11-58-3-13/14

TITLE: Conference on Metallogeny of the Caucasus (Soveshchaniye po metallogenii Kavkaza)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, 1958, # 3, pp 124-127 (USSR)

ABSTRACT: An inter-departmental conference on metallogeny of the Caucasus, with representatives of geological organizations of the Transcaucasian republics, of Northern Caucasus, Moscow and Leningrad participating, was held by the Caucasian Institute of Raw Materials (KIMS) in May 1957. It was convened in connection with the work being done by a commission headed by Academician N.S. Shatskiy on the problem of "The Regularity of the Distribution of Valuable Minerals", as well as the compilation of a metallogenic map of the Caucasus of the scale 1:500,000. O.D. Levitskiy, Member-Correspondent of the USSR Academy of Sciences, and V.G. Grushevoy, Doctor of Geological-Mineralogical Sciences (VSEGEI), took part in the discussion. Three lectures were given on tectonics of the Caucasus: 1. by P.D. Gamkrelidze, the Member-Correspondent of the Academy of Sciences of the Georgian SSR, on the tectonic structure of Georgia; 2. by E.Sh. Shikhalibeyli, Candidate

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of Geological-Mineralogical Sciences (Academy of Sciences of the Azerbaydzhan SSR) on the geological structure of Azerbaydzhan, and 3. by A.T. Aslanyan, Candidate of Geological-Mineralogical Sciences (Geological Administration of the Armenian SSR) - on the tectonic structure and metallogeny of Armenia.

G.D. Afanas'yev, Member-Correspondent of the USSR Academy of Sciences, Professor G.M. Zaridze (Georgian Polytechnical Institute); and Academician Sh.A. Azizbekov (Academy of Sciences of the Azerbaydzhan SSR); presented data on the magmatic rocks of different parts of the Caucasus.

Lectures on the metallogeny of different parts of the Caucasus were given by: G.A. Tvalchrelidze, Candidate of Geological-Mineralogical Sciences (KIMS), I.G. Magak'yan and S.S. Mkrtchyan, Academicians of the Academy of Sciences of the Armenian SSR, A.E. Bendeliani, Professor of the Georgian Polytechnical Institute, M.A. Kashkay, Academician of the Academy of Sciences of the Azerbaydzhan SSR; and L.P. Kharchuk, Candidate of Geological-Mineralogical Sciences (KIMS)

Lectures on separate questions of metallogeny of the Caucasus were given by: Professor G.D. Azhgirey (MGU) - on results of works of a Caucasian expedition of the MGU; Professor V.I. Smirnov (MGU) criticized the basic hypothesis of G. Shney-

derkhen on regenerated deposits; Candidate of Geological-Mineralogical Sciences I.A. Shirvanzade (Academy of Sciences of the Azerbaydzhan SSSR) and E.T. Bayramalibeyli (Aztsvetmetrazvedka) reported on iron ore-bearing deposits of the Caucasus; Doctor of Geological-Mineralogical Sciences A.D. Kalandadze (KIMS), reported on problems of mercury and on deposits of cinnabar on the southern slopes of the Great Caucasus; Candidate of Geological-Mineralogical Sciences, P.S. Saakyan (VIMS) presented a classification of the sheet-like polymetallic deposits of the Caucasus; Candidate of Geological-Mineralogical Sciences G.I. Kerimov reported on deposits of pyrites in Azerbaydzhan; Academician S.S. Mkrtchyan of the Academy of Sciences of the Armenian SSR lectured on the results of research in the Alaverd mining region.

After discussions on all these subjects, the conference recommended the continuation of work on all unsolved problems pertaining to the stratigraphy, paleogeography, tectonics, magmatic cycles and metallogeny of the Caucasus; an improvement in the technique of determining the age of rocks and ores; a compilation of the schemes of structural division in the geological development and the magmatic cycles of the Caucasus;

 the working out of the first variant of a metallogenic map of

the scale 1 : 1,000,000 and its use in VSEGEI for the compilation of a map of the whole Soviet Union on the scale 1 : 2,500,000; that the Caucasian geologic organizations be given the responsibility of preparing large scale metallogenic maps of separate mining regions. A commission of 13 members was elected to direct this work.

AVAILABLE: Library of Congress

Card 4/4

GAMKRELIDZE, P.D., otv.red.; GVAKHARIYA, G.V., red.; DZOTSENIDZE, G.S., red.; ZARIDZE, G.M., red.; KACHARAVA, I.V., red.; RUBINSHTEYN, M.M., red.; TSAGARELI, A.L., red.; CHKHLIDZE, G.F., red.; CHIKHELIDZE, S.S., red.

[Collection of papers in honor of Aleksandr Illarionovich Dzhanelidze] Sbornik trudov; Akademiku Akademii nauk Gruzinskoi SSR Aleksandru Illarionovichu Dzhanelidze k semidesiatiletiiu so dnia rozhdeniia i piatidesiatiletiiu nauchno-pedagogicheskoi i obshchestvennoi deiatel'nosti. Tbilisi, 1959. 490 p.
(MIRA 12:12)

1. Akademiya nauk Gruzinskoy SSR, Tiflis. Geologicheskiy institut.
(Geology--Collections)
(Dzhanelidze, Aleksandr Illarionovich)

PAFFENGOL'TS, Konstantin Nikolayevich. Prinimali uchastiye: GAMKRELIDZE, P.D.; YEFREMOVA, G.M.; MIKLUKHO-MAKLAY, K.V.; RODZYANKO, G.N.; SAFRONOVA, I.N.; ARAKELYAN, R.A., otv.red.; SHTIBEN, B.A., red.izd-va; MINASYAN, M.A., tekhn.red.

[Outline geology of the Caucasus] Geologicheskii ocherk Kavkaza. Sost. P.D.Gamkrelidze i dr. Erevan, Izd-vo Akad.nauk Armianskoi SSR, 1959. 505 p. (MIRA 12:8)
(Caucasus--Geology)

KAKHADZE, I.R., prof. [deceased]; TSAGARELI, A.L., prof.; NUTSUBIDZE, K.Sh., kand.nauk; ZESASHVILI, V.I., kand.nauk; GAMKRELIDZE, P.D., red.; BATIASHVILI, E.V., red.izd-va; TODUA, A.R., tekhred.

[Monographs] Monografii. Tbilisi. No.9. [Geology of the coal-bearing band in the Baksan-Urup interfluve] Geologicheskoe stroenie polosy uglenosnykh otlozhenii mezhdu basseinami rr. Baksana i Urupa. 1960. 139 p. (MIRA 13:12)

1. Akademiya nauk Gruzinskoy SSR, Tiflis. Geologicheskiy institut.
(Baksan Valley--Coal geology)
(Urup Valley--Coal geology)

GAMKRELIDZE, P.D., akademik

New data on the tectonics of the central part of the Greater Caucasus ( ) the boundaries of Svanetiya). Soob. AN Gruz. SSR 31 no. 3:605-612 S '63. (MIRA 17:7)

1. Geologicheskiy institut AN GruzSSR.

GAMKRELIDZE, P.D., akademik; ADAMIYA, Sh.A.; CHIKHRADZE, G.A.; DZHAVAKHISHVILI, Sh.I.

New data on the stratigraphy of Pre-Jurassic sediments in Svanetiya. Dokl. AN SSSR 153 no.2:424-426 N '63. (MIRA 16:12)

1. Geologicheskiy institut AN GruzSSR. 2. AN GruzSSR (for Gamkrelidze).

SIDORENKO, A.V., glav. red.; GAMKRELIDZE, P.D., red.; DZOTSENIDZE, G.S., red.; ZARIDZE, G.M., red.; KACHAROVA, I.V., red.; RUBINSHTEYN, M.M., red.; TSAGARELI, A.L., red.; CHELIDZE, G.F., red.

[Geology of the U.S.S.R.] Geologiia SSSR. Glav. red. A.V. Sidorenko. Moskva, Nedra. Vol.10. Pt.1. 1964. 654 p. (MIRA 17:12)

MURATOV, M.V., otv. red.; BELYAYEV, N.A., red.; GERASIMOV, I.P., red.; MILANOVSKIY, Ye.Ye., red.; [illegible], V.M., red.; TSEYSLER, V.M., red.

[Himalayan and Alpine orogenesis] Gimalaiskii i Al'piiskii orogenez. Moskva, Nedra, 1964. 331 p. (Mezhdunarodnyi geologicheskii kongress, 22d sessiia. Doklady sovetskikh geologov, problema 11) (MIRA 17:8)

1. Natsional'nyy komitet geologov Sovetskogo Soyuza.

TSAGARELI, A.I., akademik, glav. red.; [illegible], B.A., red.; DUMBADZE, A.I., akademik, red.; DAVITASHVILI, G.S., akademik red.; ZARIDZE, G.M., red.; ZESASHVILI, V.I., red.; KUBLISHTEYN, K.M., red.; GAMKRELIDZE, P.D., akademik, red.

[Problems of the geology of Georgia; for the 22d session of the International Geological Congress] Voprosy geologii Gruzii; k XXII sessii Mezhdunarodnogo geologicheskogo kongressa. Tbilisi, Izd-vo "Metsniereba," 1964. 477 p. (MIRA 18:3)

1. Akademiya nauk Gruzinskoy SSR, Tiflis. 2. Akademiya nauk Gruzinskoy SSR, Tiflis (for Gamkrelidze, Dumbadze, Kvantaliani, TSagarel).

GAMKRELIDZE, R.V.

1/2

4

Gamkrelidze, R. V. Computation of the Chern cycles of algebraic manifolds. Doklady Akad. Nauk SSSR (N.S.) 90, 719–722 (1953). (Russian)

The following theorem is stated: Let M^n be an algebraic manifold in complex projective n-space, P^n; let $Q = P^{n-k-s+1}$ and $P^{n-s+1} \supset Q$ be two fixed subspaces of P^n; denote the intersection $M^k \cap P^{n-s+1}$ by M^{k-s+1}. The points $x \in M^{k-s+1}$, for which there exists a P^{n-s+1}, containing x and Q, the dimension of whose intersection with the tangent space to M^{k-s+1} at x is $\geq t$, form a $2(k-s)$-cycle Π_t^{k-s} on M^k. Then the Chern cycle Γ^{k-s} of dimension $2(k-s)$ of M^k is given by

$$\Gamma^{k-s} = \sum_{t=0}^{s} (-1)^t \binom{k-t+1}{k-s+1} \Pi_t^{k-s}.$$

For $s = k$ this specializes to a formula for the characteristic:

$$\chi(M^k) = \sum_{t=0}^{k} (-1)^t (k-t+1) \operatorname{Ind}(\Pi_t^0);$$

here $\operatorname{Ind}(\Pi_t^0)$ is the class of the intersection M^n of M^k and P^{n-k+t}. It is stated that the formula for Γ^{k-s}, given by E. Kundert [Proc. Nat. Acad. Sci. U. S. A. 38, 893–895 (1952); these Rev. 14, 682] is in error, since it omits all terms with $t > 0$ of the above formula.

Mathematical Reviews
May 1954
Topology

Ann. Mathematics, N.Y.

The proof is not given, but material necessary for it is discussed: Let $P^n_{k,t}$ be the space of pairs (z, P^k), where z is a point of P^n, P^k a k-subspace of P^n, $z \in P^k$, and moreover z lies in a fixed P^t. The homology of $P^n_{k,s}$ is described in terms of the homology of the Grassmann manifold $H(k, n-k) = P^n_{k,0}$ (following Ehresmann); there is no torsion, and vanishing homology in all odd dimensions. For every $z \in P^n$ let E_z^n be the complex affine space, obtained by removing the polar P^{n-1} of z from P^n. One constructs a fiber bundle $T = T(E^k, P^n_{k,s})$ over $P^n_{k,s}$ by taking as fiber over the point (z, P^k) of $P^n_{k,s}$ the space $P^k \cap E_z^n$, which is an affine E^k. The imbedding of M^k into P^n defines a map f of M^k into $P^n_{k,s}$ by sending z into the pair (z, tangent plane to M^k at z). The bundle induced by f and T is the tangent bundle of M^k; the Chern classes of T determine therefore those of M^k. The determination of the Chern classes of T is given in outline; the idea is to construct explicitly certain systems of vector fields in T (or rather in the part of T corresponding to any given cycle of $P^n_{k,s}$) and to consider their cycles of singularities.

H. Samelson.

Gamkrelidze, R. V.

Call Nr: AF 1108825

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
Section of Mathematical Problems in Physics 217-227

Reports by the following personalities are included:

Card 73/80

Gamkrelidze, R. V.

44-1-267

TRANSLATION FROM: Referativnyy zhurnal, Matematika, 1957, Nr 1, p 39 (USSR)

AUTHOR: Gamkrelidze, R.V.

TITLE: Characteristic Classes of Complex Algebraic Manifolds (Kharakteristicheskiye klassy kompleksnykh algebraicheskikh mnogoobraziy)

PERIODICAL: Tr. 3-go Vses. matem. s"yezda, 2, Moscow, AN SSSR, 1956, p. 53

ABSTRACT: The results of V.I. Burdinoy (R. Zh. Mat., 1955, 2606) and the author (R. Zh. Mat., 1954, 2061) are presented.

Card 1/1

GAMKRELIDZE R.V.

SUBJECT USSR/MATHEMATICS/Topology CARD 1/1 PG - 761
AUTHOR GAMKRELIDZE R.V.
TITLE Chern's cycles of the complex algebraic manifolds.
PERIODICAL Izvestija Akad.Nauk 20, 685-706 (1956)
reviewed 5/1957

The present paper is a detailed representation of the results which have been announced in Doklady Akad.Nauk 90, 719-722 (1953).

SUBJECT USSR/MATHEMATICS/Differential equations CARD 1/3 PG - 707
AUTHOR BOLTJANSKIJ V.G., GAMKRELIDZE R.V., PONTRJAGIN L.S.
TITLE On the theory of optimal processes.
PERIODICAL Doklady Akad.Nauk 110, 7-10 (1956)
reviewed 4/1957

The problem of the quality of control being actual in the theory of automatic control is represented in general form and is considered.

Let be given the system $\dot{x}^i = f^i(x^1,\ldots,x^n; u^1,\ldots,u^r) = f^i(x,u)$, $(i=1,\ldots,n)$, where $x = (x^1,\ldots,x^n)$ is the image point in the n-dimensional phase space and $u = (u^1,\ldots,u^r)$ is the "controlling vector". If $u(t)$ is piecewise smooth and continuous and if it belongs to a fixed closed region $\overline{\Omega}$ of the variables $u^1,\ldots,u^r$, where Ω has a piecewise smooth $(n-1)$-dimensional boundary, then $u(t)$ is called permissible.

Formulation of the problem: In the phase space $x^1,\ldots,x^n$ two points ξ_0 and ξ_1 are given. A permissible control vector $u(t)$ is to be chosen in such a way that the point of the phase space comes from the position ξ_0 to the position ξ_1 in minimal time. Assuming the existence of a solution and if $u(t)$ is the optimal vector and $x(t)$ the corresponding optimal path, then to the somewhat deviating vector $u(t)+\delta u(t)$ there corresponds the path $x+\delta x$. In linear approximation we have

Doklady Akad.Nauk 110, 7-10 (1956) CARD 2/3 PG - 707

(1) $$\delta\dot{x}^i = \frac{\partial f^i}{\partial x^\alpha}\,\delta x^\alpha + \frac{\partial f^i}{\partial u^\beta}\,\delta u^\beta \,, \qquad \delta x(t_0) = 0 \qquad (i=1,\ldots,n).$$

If $\|\varphi_j^i(t)\|$ is the fundamental matrix of the solution of a homogeneous system which corresponds to (1) and $\|\psi_j^i(t)\|$ is the corresponding inverse matrix, then the optimal control u(t) must satisfy the following necessary conditions:

$$\dot{x}^i = f^i(x,u)\,, \qquad \dot{\psi}_i = -\frac{\partial f^\alpha}{\partial x^i}\,\psi_\alpha \qquad i=1,\ldots,n$$

$$\psi_\alpha \frac{\partial f^\alpha}{\partial u^j} = 0 \qquad t_0 \leq t \leq t_1 \qquad j=1,\ldots,r,$$

where t_0 and t_1 correspond to the points ξ_0 and ξ_1. Furthermore it is stated that if the quadratic form $\psi_\alpha \frac{\partial^2 f^\alpha}{\partial u^i\,\partial u^k}\,\delta u^i\,\delta u^k$ in the point $(x(t_0),u(t_0),t_0)$ is negative definite, then the corresponding u(t) and x(t) are locally optimal. The following maximum principle is conjectured by the authors: for fixed x and ψ let $H(x,\psi,u) = \psi_\alpha f^\alpha(x,u)$ have a maximum $M(x,\psi)$ in u if u changes in $\overline{\Omega}$.