8(0)

SOV/112-59-4-7343

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 4, pp 127-128 (USSR)

AUTHOR: Glaz, Ye. I.

TITLE: Instrument for Measuring Counter-EMF

PERIODICAL: Tr. Vses. n.-i. alyumin.-magn. in-ta. 1957, Nr 40, pp 399-406

ABSTRACT: An instrument for measuring and controlling the counter-EMF E_o in titanium-producing electrolyzers is described. The instrument is actually a computer solving two equations with 2 unknowns by the method of successive approximations. The equations are set up for 2 values of the current I

$$U_1 = I_1R + E_o; \qquad U_2 = I_2R + E_o ,$$

where U_1 and U_2 are voltages on the electrolyzer, R is the resistance between the points where the voltage is measured. The values of R and E_o for a short

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Instrument for Measuring Counter-EMF

time period and slight variations of I can be taken as constants. To determine U, the electrolyzer voltage is compensated by a sum of 2 voltages, one of which is dependent on, and another independent of, the current. The instrument was built by remodeling two potentiometers (EPP-09 and EPD-217). The error in measuring E_p is about 1%.

L.I.V.

TSYGODA, I.M.; KAZAKOV, V.N.; SEREGIN, Yu.I.; KORNEYEV, V.F.; Prinimali uchastiye: PECHENKIN, S.N.; GLAZACHEV, A.M.; TRAVIN, V.F.

Pilot plant testing of the sinter roasting of copper charges with a bottom blow. TSvet. met. 35 no.3:23-30 Mr '62. (MIRA 15:4)

(Sintering--Testing) (Copper ores)

GLAZACHEV, B.; [illegible]

Mechanized station. [illegible] (MIRA [illegible])

1. Zaveduyushchiy otdelom vnedreniya peredovogo opyta Ukrainskoy opytnoy stantsii tsvetochnykh i dekorativnykh rasteniy (for Glazachev). [illegible]

TSYGODA, I.M.; KAZAKOV, V.N.; KOLESNIKOV, N.A.; BRZUKHANOV, N.G.; BURBA, A.A.; SADYKOV, V.I.; PIGAREV, A.D.; Prinimali uchastiye: PECHENKIN, S.N.; GLAZACHEV, G.M.; KHVESYUK, F.I.; KODINTSEV, A.V.; YERGALIYEV, E.Ye.; YERMAKOVA, Z.S.; NOVAK, I.V.; KHIL'KO, I.Ye.; LYASHEVSKIY, R.A.; PROKHOROV, A.I.; CHERTOVA, N.G.; URUBKO, V.N.; KUGUCHEV, V.V.

Industrial testing of a flow sheet for the processing of Altai complex metal ores along the lines of the flow sheet used at the Mednogorskii Combine. TSvet. met. 36 no.12:12-15 D '63. (MIRA 17:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy gorno-metallurgicheskiy institut tsvetnykh metallov (for Pechenkin, Glazachev, Khvesyuk, Kodintsev). 2. Irtyshskiy polimetallicheskiy kombinat (for Yergaliyev, Yermakova). 3. Mednogorskiy medno-sernyy kombinat (for Novak, Khil'ko, Lyashevskiy, Prokhorov, Chertova, Urubko, Kuguchev).

DAVIDSON, A.G.; DATLIN, S.V.; KIRICHENKO, G.A.; KOROTKOVA, Ye.N.; KRAVCHENKO, D.V.; ORLOVA, A.S.; ADABUROVA, A.A.; ARKAD'YEV, V.G.; BARDINA, Yu.Ya.; BODYANSKIY, V.L.; BOYDAREV, S.N.; GLAZACHEV, M.V.; DAVYDOVA, E.A.; IVANOV, V.N.; KARPUSHINA, V.Ya.; KREKOTEN', L.P.; LANDA, R.G.; LEVITSKAYA, G.O.; LIFETS, Yu.G.; LOGINOVA, V.P.; ONAN, E.S.; PEGUSHEV, A.M.; PYKHTUNOV, N.V.; TOKAREVA, Z.I.; KHUDOLEY, V.F.; MILOVANOV, I.V., red.; MIKAELYAN, E., red.; MUKHIN, R., red.; SVANIDZE, K., red.; KLIMOVA, T., tekhn. red.

[Africa today; concise reference book on politics and economic conditions] Afrika segodnia; kratkii politiko-ekonomicheskii spravochnik. Moskva, Gos. izd-vo polit. lit-ry, 1962. 326 p.
(Africa--Politics)
(Africa--Economic conditions)

GLAZACHEV, V.V.

Atsidofil'noe moloko - luchshee sredstvo dlia vykormki molodniaka sel'skokhoziaistvennykh zhivotnykh (Acidophilus milk is the best drink for young farm animals). Moskva, Sel'khozgiz, 1954. 15 p.

SO: Monthly List of Russian Accessions, Vol 7, No 9, Dec 1954

GLAZACHEV, V.V. (Vologda)

Determination of fat in curdled milk, acidophilins, and kefir.
Vop. pit. 13 no.4:54-55 Jl-Ag '54. (MLRA 7:7)
(MILK,
*determ. of fats in milk prod.)
(FATS, determination,
*in milk prod.)

GLAZACHEV, Viktor Vasil'yevich, kand.tekhn.nauk; IVANOVA, N.N., red.; PEREDERIY, S.P., tekhn.red.

[Manufacture of sour milk products] Proizvodstvo kislomolochnykh produktov. Moskva, Pishchepromizdat, 1960. 65 p. (MIRA 14:4)

(Dairy products)

GLAZA[illegible]EV, Viktor Vasil'yevi[illegible], [illegible]; [illegible], retsenzent; [illegible], red.

[Sour milk products] Kis[illegible] pr[illegible]. Moskva, [illegible] promyshlennost', [illegible]
([illegible])

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500010016-8"

SLIVKO, V.V., otv. red.; GLAZACHEV, V.V., red.; YEMEL'YANOV, A.S., red.; ZAMORYSHEV, A.V., red.; MORDVINTSEV, P.V., red.; NIKITIN, Ye.M., red.; SHUBIN, M.Ye., red.; SOKOLOVA, S.I., tekhn. red.

[Scientific Conference on the Results of Research Work for the period from 1958 to 1959] Nauchnaia konferentsiia po itogam nauchno-issledovatel'skoi raboty za 1958-1959 gg.: tezisy dokladov. Vologda, Vologodskoe knizhnoe izd-vo, 1960. 174 p. (MIRA 16:10)

1. Molochnoye (Vologodskaya oblast') Vologodskiy molochnyy institut. 2. Kafedra ekonomiki i organizatsii proizvodstva v sotsialisticheskikh sel'skokhozyaystvennykh predpriyatiyakh i molochnoy promyshlennosti Vologodskogo molochnogo instituta (for Mordvintsev). 3. Kafedra kormleniya selskokhozyaystvennykh zhivotnykh Vologodskogo molochnogo instituta (for Yemel'yanov). 4. Kafedra chastnoy zootekhniki Vologodskogo molochnogo instituta (for Zamoryshev). 5. Kafedra tekhnologii moloka i molochnykh produktov Vologodskogo molochnogo instituta (for Glazachev, Shubin).
(Vologda Province--Farm produce--Research)

GLAZACHEVA, L.

Discharge of solid substances in Latvian rivers. Vestis Latv ak no.10:129-138 '59. (EEAI 9:10)
(Latvia--Rivers)

GLAZACHEVA, L.I.; SELYANKINA, V.V.; KURGANOVA, N.M.; GRIGOROVICH, S.I.; POPOVA, L.A.; GRIGOR'YEVA, F.P.; EYPRE, T.F.; VAYTSMAN, A.I., red.; BRAYNINA, M.I., tekhn. red.

[Hydrological yearbook] Gidrologicheskii ezhegodnik. Leningrad, Gidrometeor. izd-vo. 1957. Vol.1. [Basin of the Baltic Sea] Bassein moria. Nos.4-6. [Basin of the Western Dvina River and basins of rivers extending west and south of it as far as the state frontier] Bassein r.Zapadnoi Dviny i basseiny rek k zapadu i iugu do gosudarstvennoi granitsy. Pod red. L.I.Glazachevoi. 1961. 388 p. (MIRA 14:9)
(Baltic Sea region--Hydrology) (Kuna Valley--Hydrology)

GLAZACHEVA, L.I.

Influence of the Kegums Hydroelectric Power Station on the time of freezing and opening of the Western Dvina River. Meteor.i gidrol. no.8:38-42 Ag '63. (MIRA 16:10)

1. Geograficheskiy fakul'tet Latviyskogo universiteta.

YAROSHEVSKIY, Mikhail Grigor'yevich; GLAZAMI, M., red.; BATALOVA, M., red.; TOROPOV, S.G., tekhn. red.

[Problem of determinism in physiological psychology] Problema determinizma v psikhofiziologii XIX veka. Dushanbe, Dushanbinskii gos. pedagog. in-t, 1961. 834 p. (MIRA 16:7)
(PSYCHOLOGY, PHYSIOLOGICAL)

GLAZAMITSKAYA, S. M.

Glazamitskaya, S. M.

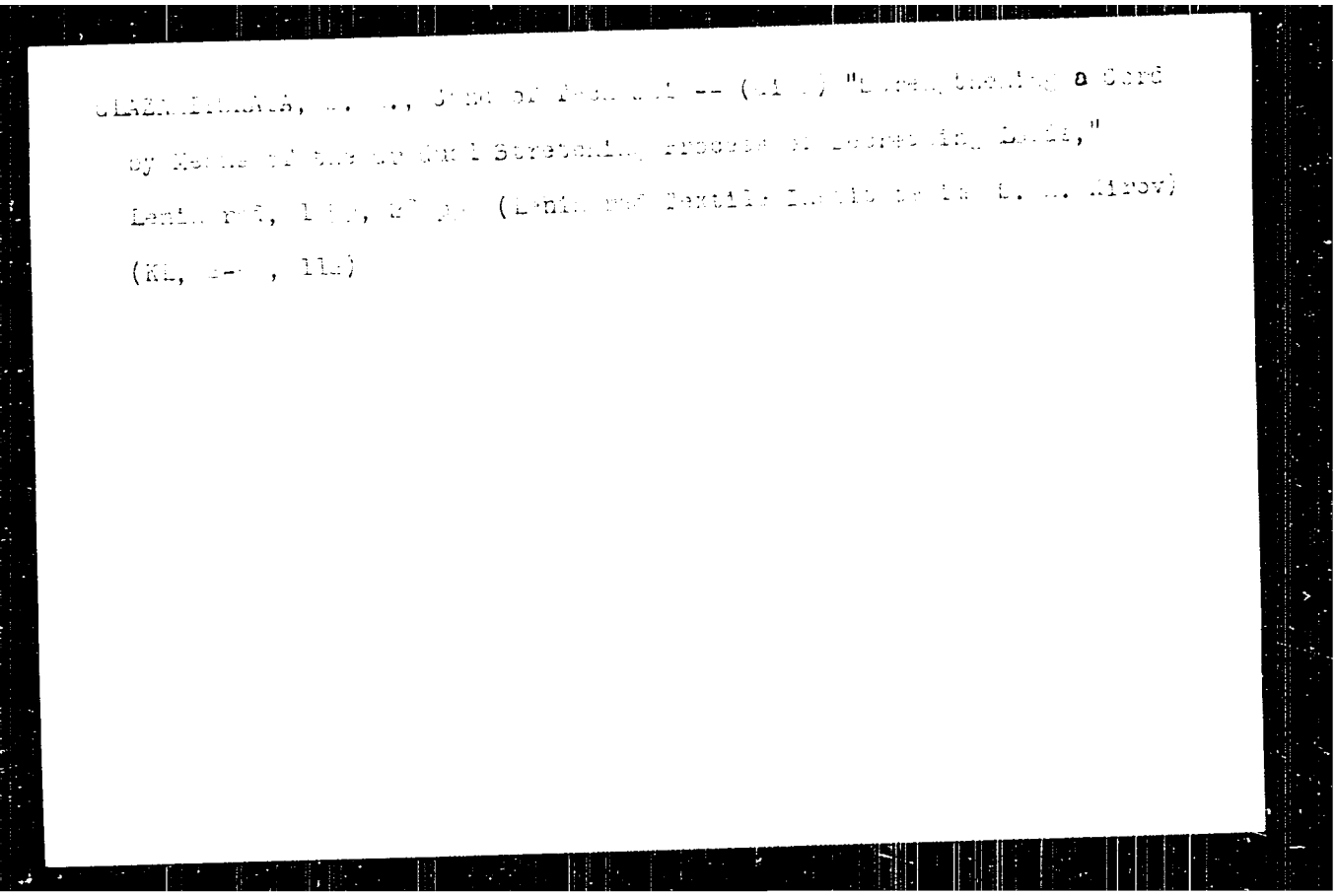
"Strengthening Cord by Graduated Extension with Diminishing Loads." Min Higher Education USSR. Leningrad Textile Inst imeni S.M. Kirov. Leningrad, 1955. (Disseration for the Degree of Candidate in Technical Science.)

Knizhnaya Letopis': No. 27, 2 July 1955.

GLAZAMITSKAYA, S.M.

Using the method of gradual stretching by decreasing loads for strengthening cord. Izv. vys. ucheb. zav.; tekh. tekst. prom. no. 3:26-33 '58. (MIRA 11:7)

1. Leningradskiy tekstil'nyy institut.
(Cotton manufacture)
(Cordage)



BAZHENOVA, V.I.; GLAZAMITSKAYA, S.M.

Density of warp winding on the weaver's beam. Tekst.prom. 20 no.7:68-69 Jl '60. (MIRA 13:7)
(Warping machines)

GLAZANOV, V. N.

Konstruktsiia linii elektroperedach v raione Bol'shoi Volgi v sviazi s nadezhnost'iu elektrosnabzheniia. / Construction of electri power transmission lines in the Greater Volga region in view of the certianty of electric power supply_/ (In Problemy Volgo-Kaspiia. Moskva, 1934, v. 2: Sektsiia energetiki, p. 111-127).
DLC: TC978.R8V6 Slav.

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

GLAZANOV, V.N.

GLAZANOV, V. N.

Glazanov, V. N. defended his Doctor's dissertation in the Leningrad Physicotechnical Institute, Academy of Sciences USSR, on 29 November 1943 for the academic degree of Doctor of Technical Sciences.

Dissertation: "Electrostatic Separation of Minerals". Resume: Glazanov's work was devoted to clarification of the physical basis for electrostatic separation of minerals and the physics of frictional electricity. On the basis of a large amount of experimental data, the author developed a type of electrostatic separator. He examined the problem of electrostatic enrichment of coal fines and cited data on enrichment of coals from different Soviet coal basins at laboratory and pilot-plant installations.

Official Opponents: Profs. L. M. Sapozhnikov and Ya. I. Frenkel',(Corrspn. Membrs., Academy of Sciences USSR; I. M. Verkhovskiy,(Doctor of Technical Sciences; D. N. Nasledov (Doctor of Physicomathematical Sciences).

SO: Elektrichestvo, No. 7, Moscow, August 1953, pp 87-92 (W/20844, 16 Apr 54)

GLAZANOV, V.M., doktor tekhnicheskikh nauk (Moskva)

"Supervoltages." A.A. Vorobiev. Reviewed by V.M. Glazanov. Elektrichestvo no.2:93-95 F '56. (MLRA 9:5)
(Particle accelerators) (Vorob'ev, A.A.)

GLAZANOV, V.N., doktor tekhnicheskikh nauk.

Great son of the Yugoslav people; on the centennial of the birth of Nikola Tesla. Elektrichestvo no.7:66-69 Jl '56. (MLRA 9:10)

1. Atomnaya elektrostantsiya Glavnogo upravleniya po ispol'zovaniyu atomnoy energii pri Sovete Ministrov SSSR.
(Tesla, Nikola, 1856-1943)

105-58-3-10/31

AUTHOR: Glazanov, V. N., Doctor of Technical Sciences, Professor (Moscow)

TITLE: Breakdown in a Vacuum (Proboy v vakuume)

PERIODICAL: Elektrichestvo, 1958, Nr 3, pp. 40 - 44 (USSR)

ABSTRACT: Here, an analysis of the existing theories and the most probable explanation of the breakdown in a vacuum are given. It is shown that in the static vacuum of from 10^{-7} mm up to 10^{-8} mm of mercury column and less at a certain form of conditioned (conditioning denotes stabilization of the ratio ov various quantities in dependence on given conditions) electrodes the breakdown in vacuum is determined by the rise of the emission current according to the equation of Fauler--Nordkheym. Therefore, the breakdon depends on the value of the gradient on the cathode. The critical value of the gradient $E_{breakdown}$ equals 5.10^7 V/cm. In non-conditioned electrodes the discharge proceeds according to the theory of N. N. Semenov-Arnal. The beginning of the discharge is de-

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Breakdown in a Vacuum

termined by the electron emission from the cathode. The latter follows the formula of Schottky with a diminished value of the work function, compared with the theoretical one, and with the introduction of the field-form-factor $\alpha = 3 - 5$ into the formula. Furtheron, the development of the breakdown is determined by the value of the applied voltage. The value of the mean breakdown gradient amounts to 3.10^6 up to 3.10^5 V/cm, according to the distance between the electrodes. There are 2 figures, 2 tables, and 26 references, 6 of which are Soviet.

SUBMITTED: August 3, 1956

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21(9)

AUTHOR: Gl[illegible]anov, V. N. [illegible]

TITLE: Electrostatic Accelerators for C[illegible] Particles (Elektrostaticheskiye uskoriteli zaryazhennykh chastits)

PERIODICAL: Atomnaya energiya, 19[illegible], Vol [illegible], Nr [illegible], pp 1[illegible] - 1[illegible] (USSR)

ABSTRACT: Th[illegible] [illegible]er gives a descriptiv[illegible] s[illegible]rv[illegible] of el[illegible]ctrostatic accelerators, based pr[illegible] [illegible]r[illegible]ly on W[illegible]st[illegible]rn pu[illegible]lic[illegible]tions. In particul[illegible]r, the problem of [illegible]rticle energy increase and the initi[illegible]l efficiency are di[illegible]cussed, and the v[illegible]ri[illegible]us te[illegible]dencies in the various countries are taken into account. Another chapter deals with the v[illegible]ri[illegible]us possibilities of obtaining a voltage stabilization of ele[illegible]tr[illegible]static [illegible]ener[illegible]t[illegible]rs. In the final chapter the principle o[illegible] [illegible] [illegible]e[illegible]e[illegible]ators is discussed, with which high efficiency can be [illegible]t[illegible]ined. The following information on Soviet m[illegible]chines is [illegible]v[illegible]il[illegible]ble: 1) The firs[illegible] Soviet electrostatic accelerator w[illegible] d[illegible]i[illegible]ed by [illegible]. [illegible]. [illegible]okh-berg (Moscow) and [illegible]. [illegible]. V[illegible]l[illegible] ([illegible]ar[illegible]kov). At present, electrostatic generators for 2.5 and 5 Mev are built at the Nauchno-issl[illegible]dovatel'skiy institut el[illegible]ktrofiziche[illegible]skoy appara-tury (Scientific Research I[illegible]stitute of Electro[illegible]ysical Apparatus).

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The series production of these apparatus has already begun.
2) The most important Soviet generators have the following parameters:

Building Year	Operational Voltage (Mev)	Gas	Pressure (atm)	Height of the Accelerating Tube Element (cm)	Gradient kv/cm in the Gas Space	Gradient kv/cm in the [illegible]
1956	4 - 5	N_2+CO_2	[illegible]	[illegible]	[illegible]	12
1953	3.0	N_2+CO_2	8.0	3	120	[illegible]
1953	1.7	$N_2+CO_2+SF_6$	8.0	3	140	14

3) In a French paper it was stated that the application of [illegible]

porcelain insulators brings about an increase in the overvoltage. A. A. Tsyplikin checked the above act, yet he did not confirm it. There are 11 figures, 1 table, and 23 references, 6 of which are Soviet.

SUBMITTED: September 4, 1958

GLAZANOV, V.N.; RUDENKO, A.D.

Electrostatic separation of minerals. Izv. vys. ucheb. zav.; tsvet. met. no.4:33-38 '60. (MIRA 13:9)

1. Moskovskiy inzhenerno-fizicheskiy institut.
(Ore dressing) (Metals—Electric properties)

GLAZAR, R.; ROUSEK, V.

Folding doors. p. 153. (Nova Technika, Vol. 2, No. 5, May 195[illegible], Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

GLAZAR, R.

Information on housing construction acquired during a trip to the Netherlands. p.272. (Pozemni Stavby, Vol. 5, No. 5, May 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAI) LC, Vol. 6, No. 9, Sept. 1957. Uncl.

POYARKOV, Mikhail Fedorovich; POYARKOVA, Tat'yana Mikhaylovna; GLAZATOV, N.N., red.; CHERNYAK, L.Ya., red.; GOR'KOVA, Z.D., tekhn.red.; PEVZNER, V.I., tekhn.red.

[Laboratory and practical studies on rural electric stations and substations] Laboratorno-prakticheskie zaniatiia po sel'skim elektricheskim stantsiiam i podstantsiiam. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1958. 212 p. (MIRA 11:6)
(Electric power plants) (Electric substations)

GLAZEK, J.

The geologic structure of the Koszysta Massif in the Tatra Mountains. p,281.

ACTA GEOLOGICA POLONICA. Warszawa, Poland. Vol. 9, no.2, 1959.

Monthly List of East European Accessions Index (EEAI), LC. Vol. 8, No. 9, Sept. 1959
Uncl.

(16)

Warsaw, *Przeglad Geologiczny*, Vol 10, No 2 (107), February 1961 (continued)

11. "Wells with Reversed Gravel Filters," Zdzislaw KLANOWSKI and Mieczyslaw [illegible] of Hydrogeo; pp 101-103.

12. "Graduates of the Chair of Engineering Geology (Katedra Geologii Inzynierskiej) at the University of Warsaw," Jan KOSTECKI; pp 103-104.

13. "Preliminary Results of the Bore-Hole 'Wielun' 1 K.V." Zbigniew [illegible] and [illegible] of the Geological Institute; pp 105-107. (English summary).

14. "Preliminary Report on the Occurrence of Trilobite Fauna in the Cambrian Deposits of Eastern Poland," Kazimiera [illegible] of the Geological Institute; pp 108-109.

15. "On the Palaeomorphology of the Vicinity of Pieskowa Gora near Walbrzych," Edmund JOKCA of the Geological Institute; pp 109-110.

15. "Sediments in the Goldapa Valley," Genowefa KOCISZEWSKA-MUSIAL of the University of Warsaw (Uniwersytet Warszawski); p 111.

17. "Fifth Congress of the Carpathian-Balkans Association," Stanislaw [illegible] of the Geological Institute; pp 111-118.

18. "Age of Crystalline Cores of the Alps," Jerzy GLAZEK of the University of Warsaw; pp 119-120.

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— 2/2 —

GLAZEK, Jerzy

Age of the crystalline cores of the Alps. Przegl geolog 10 no.2F:118-121 '62

1. Uniwetsytet, Warszawa.

GLAZEK, Jerzy

A new location of mine Ophiuroidea in Poland. Przegl geol 10 no. 4/5:218-219. Ap-My '62

1. Uniwersytet, Warszawa.

GLAZEK, J.

On the absolute age of Strzegom granitic Massif. Przegl geol 10 no 4/5:255. Ap-My '62.

GLAZEV, J.

"A contribution to studies on Mesozoic and Cenozoic Tertiary Dinoflagellata and Hystrichosphaeridae of North and Central Germany and some other European territories" by Gerhards Albertiego. Reviewed by J. Glazek Przegl geol 10 no. 4/5:257. Ap-My '62.

GLAZEK, Jerzy

New minerals. Przegl geol 10 no.6:311-312 Je '62.

GLAZEK, J.

"Descriptive palaeoclimatology" edited by A.E.M. Nairna. Reviewed by J. Glazek. Przegl geol 10 no.9:475 S '62.

GLAZEK, Jerzy

Rhaetic substratum of Woloszyna in the Tatra Mountains.
Przegl geol 10 no.11:598 N '62.

1. Uniwersytet, Warszawa.

GLAZEK, Jerzy; RADWANSKI, Andrzej

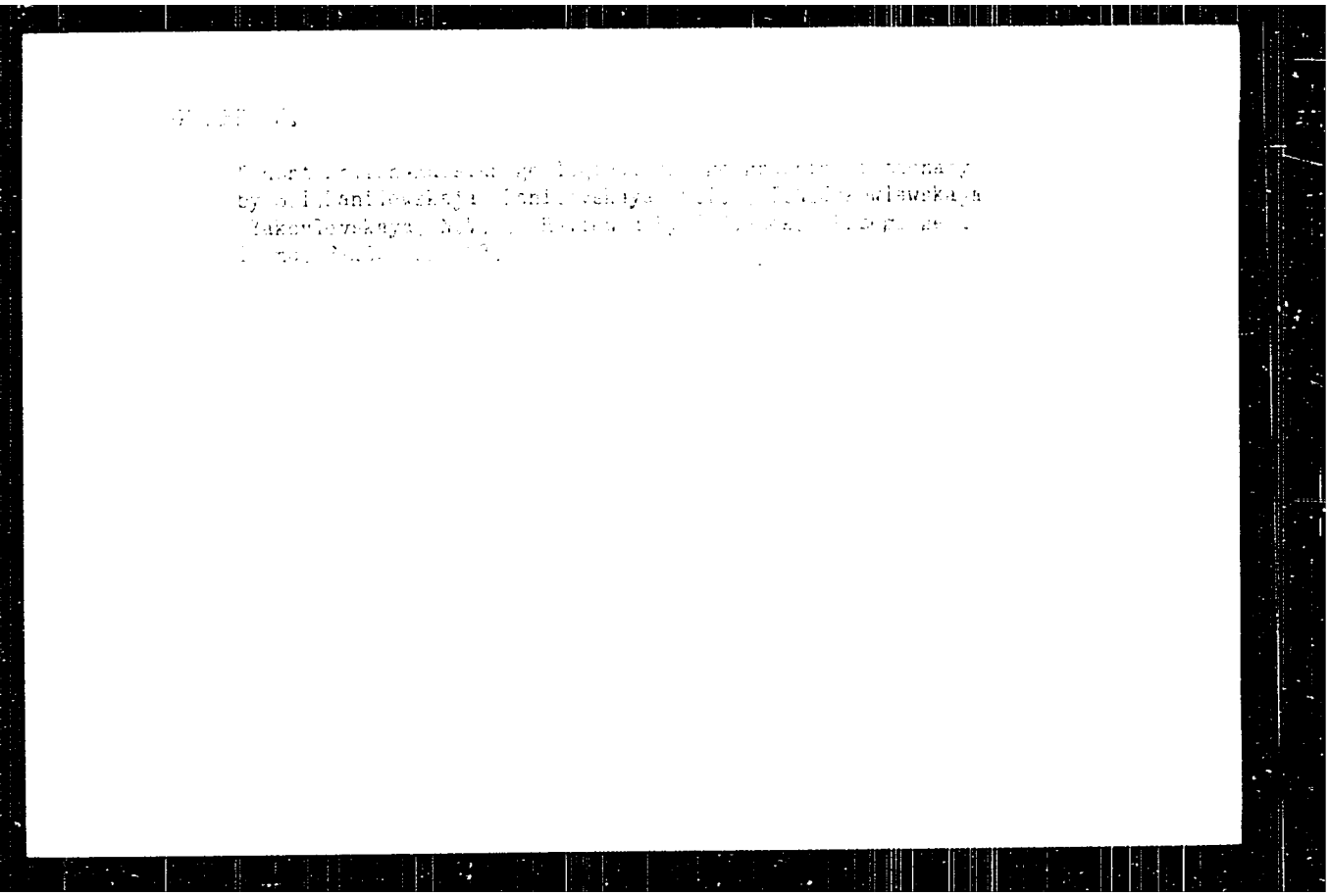
Armored mud balls in the Podmachocice Ravine (Gory Swietokrzyskie Mountains). Acta geol Pol 12 no.3:367-376 '62.

1. Laboratory of Dynamic Geology, University, Warsaw.

GLAZEK, Jerzy; WOJCIK, Zbigniew

Karst phenomena in the eastern part of the Polish Tatra Mountains. Acta geol Pol 8 no.1:91-124 '63.

1, Laboratory of Dynamic Geology, University, Warsaw, and Museum of the Earth, Polish Academy of Sciences, Warsaw.



GLAZEK, Jerzy

Conference on the geology of North Vietnam. Przegl geol 11 n [illegible] 494-496 N '63.

1. Uniwersytet, Warszawa.

GLAZEK, Jerzy

Sedimentary series of the northern slopes of Wołoszyn (Eastern Tatra). Acta geol. Pol. 13 no. [illegible]

1. Zakład Geologii Dynamicznej, Uniwersytet, Warszawa.

Glazek, Jerzy

Submorainic karst from the Pańszczyca Valley in the High Tatra.
Kwartalnik geol 8 no.1[illegible]-170 '64.

1. Zaklad Geologii Dynamicznej, Uniwersytet, Warszawa.

GLAZEK, J.; JUSKOWIAK, O.

On the stratigraphy and metamorphosis of the rocks of the Baohe, Yenbay zone, Vietnam. Bul geolog PAN 12 no.3:195-204 '64.

1. Institute of Dynamic Geology of the University, Warsaw, and Department of Petrography of the Institute of Geology, Warsaw. Presented by E. Passendorfer.

SWIDZINSKI, H.; KOSTECKI, J.; WOJCIK, Zb.; NOJSKI, J.; GLAZEF, J.

Review of publications. Przegl geol 12 n.[illegible] G '64.

CLIMEK, Tadeusz

Plant succession on the Zukowo peat bog near Stargard Szczecinski. Biologia Poznan no.5:73-89 '64.

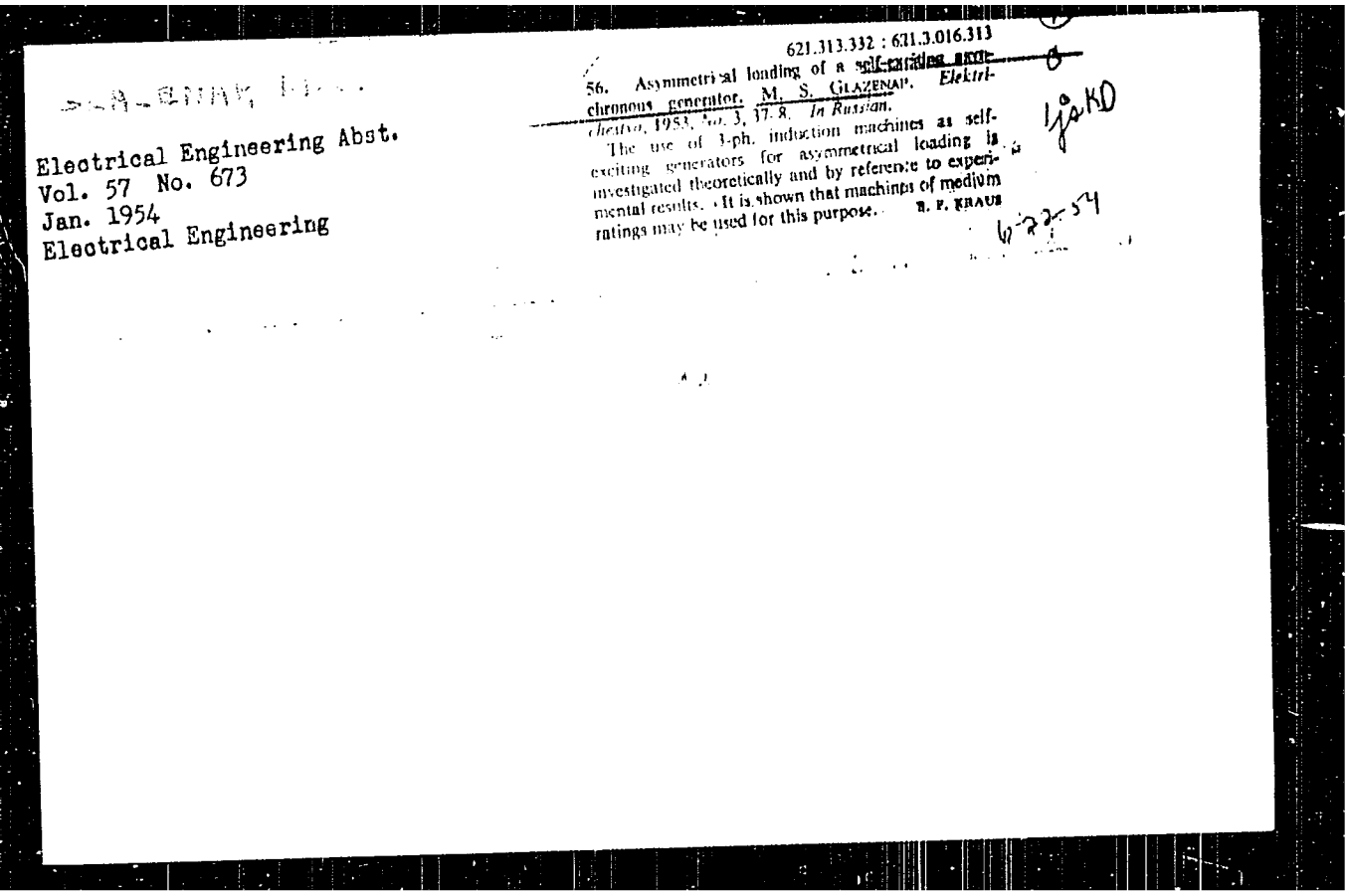
Distribution of the stands of Cerasus fruticosa (Pall.) Woronow and Stipa capillata L. in the Opatowka River basin of the Sandomierz Highland. Ibid.:155-165

1. Department of Plant Taxonomy and Geography of the A. Mickiewicz University, Poznan.

AVERSHIN, S.G., prof., doktor tekhn. nauk, red.; BLOKHA, Ye.Ye., gornyy inzh., red.; BUKEVICH, T.V., gornyy inzh., red.; ERIKUNOV, L.A., gornyy inzh., red.; LISHUTIN, B.G., gornyy inzh., red.; OGLOBLIN, D.N., prof., doktor tekhn. nauk, red.; OMEL'CHENKO, A.N., kand. tekhn. nauk, red.; RYZHOV, P.A., prof., doktor tekhn. nauk,; GLAZENAP, K.K., inzh., red.; KONSTANTINOVA, L.F., inzh., red.; NIKITINA, M.M., inzh., red.; NOVOSELOVA, Yu. A., inzh., red.; SHUL'GO, Ye. I., inzh., red.; YAKOVLEV, M.G., inzh., red.; RASHKOVSKIY, Ya.Z., inzh., red.; STEL'MAKH, A.N., red. izd-va,; BERLOV, A.P., tekhn. red.; NADEINSKAYA, A.A., tekhn. red.

[Transactions of the All-Union Scientific and Technical Conference on Mine Surveying July 17-23, 1956] Trudy vsesoiuznogo nauchno-tekhnicheskogo soveshchaniia po markscheiderskomu delu 17-23 iulia 1956 g. Moskva, Ugletekhizdat, 1958. 743 p. (MIRA 11:12)

1. Vsesoyuznoye nauchno-tekhnicheskoye soveshchaniye po markscheyderskomu delu. 1956.
(Mine surveying)



Electrical Engineering Abst.
Vol. 57 No. 673
Jan. 1954
Electrical Engineering

621.313.332 : 621.3.016.313

56. Asymmetrical loading of a self-excited asynchronous generator. M. S. GLAZENAP. *Elektrichestvo*, 1953, No. 3, 17–8. *In Russian.*

The use of 3-ph. induction machines as self-exciting generators for asymmetrical loading is investigated theoretically and by reference to experimental results. It is shown that machines of medium ratings may be used for this purpose. B. P. KRAUS

GLAZENAP, M.S.

MANOYLOV, V.Ye., kandidat tekhnicheskikh nauk; GLAZENAP, M.S., kandidat tekhnicheskikh nauk; GRIGOR'YEV, V.T., inzhener.

Connection of the transformer neutral in a low-tension network. Prom.energ. 12 no.2:20-24 F '57. (MLRA 10:3)

1. Leningradskiy elektrotekhnicheskiy institut imeni V.I. Ul'yanova (Lenin).
(Electric currents---Grounding)

RUMYANTSEV, A.S., kand.tekhn.nauk; DUBOVIK, Ye.P., starshiy tekhnik; GLAZENAP, M.S., dots.; GRIGOR'YEV, I.T., starshiy prepodavatel'

Differential method for determining leakage currents during electrolysis. Izv.vys.ucheb.zav.; prib. no.3:26-29 '58. (MIRA 12:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im. D.I.Mendeleyeva (for Rumyantsev, Dubovik). 2. Leningradskiy elektrotekhnicheskiy institut im. V.I.Ul'yanova (Lenina) (for Glazenap, Grigor'yev).
(Electrolysis) (Electric currents, Leakage)

GLAZENAP, M.S., kand.tekhn.nauk; MANOYLOV, V.Ye., kand.tekhn.nauk

Design and industrial accidents. Prom.energ. 16 no.9:37-40 S '61. (MIRA 14:8)
(Electric engineering--Safety measures)

MANOYLOV, V. Ye., kand. tekhn. nauk, dotsent; GLAZENAP, M. S., kand. tekhn. nauk, dotsent

Transient electrical processes in living tissue. Izv. LETI 59 no.46:169-178 '62. (MIRA 15:10)

(Transients(Electricity))
(Electricity, Injuries from)

MANOYLOV, V.Ye., doktor tekhn.nauk; GLAZENAP, M.S., kand.tekhn.nauk;
TENTER, Yu.K., inzh.

Investigation of injuries from electricity. Prom. energ. 18 no.9:
7-11 S '63. (MIRA 16:10)

Glazenko, T. A.

Subject : USSR/Electricity AID P - 1210

Card 1/1 Pub. 27 - 5/34

Author : Glazenko, T. A., Kand. of Tech. Sci., Leningrad

Title : Transients in an electric drive system equipped with an electromagnetic clutch with a ferromagnetic filler

Periodical : Elektrichestvo, 12, 23-28, D 1954

Abstract : The author considers this type of clutch more advantageous in automatic control systems than the one commonly known as the "friction-type" magnetic clutch. He experimented with a type of filler consisting of a mixture of carbonyl iron and graphite. He attempts to determine the dependence of the tangential force upon the relative speed of shifting of the clutch surfaces and upon the induction of its magnetic field. He develops basic dynamic equations of the electric drive with the clutch and solves them for the conditions of starting the controlled mechanism. A method of regulating the rotation speed of that mechanism through the clutch is presented. Six diagrams, 5 Russian references (1, 1938, 4, 1941-1952).

Institution : Leningrad Agricultural Institute

Submitted : Je 22, 1954

8(4) SOV/112-58-3-3595

Translation from: Referativnyy zhurnal Elektrotekhnika, 1958, Nr 3, p 8 (USSR)

AUTHOR: Glazenko, T A

TITLE: On the Design of a Three-Phase Heater With Angle Electrodes (K raschetu trekhfaznogo podogrevatelya s ugloobraznymi elektrodami)

PERIODICAL: Zap Leningr. s.-kh. in-ta, 1956, Vol 12, pp 199-208

ABSTRACT: Bibliographic entry.

Card 1/1

AUTHOR: [illegible] 105-58-4-8/37

TITLE: [illegible]

PERIODICAL: Elektrichestvo, 1958, Nr 4, pp. 39-43 (USSR)

ABSTRACT: An arrangement of two powder clutches in combination with a mechanical reversing gear is investigated. First the transition process in the electric drive is reversing the switching mechanism are dealt with. The analysis of the reversing process is carried out according to the method given in reference 1 and taking into account the assumptions made there. The process is divided into 4 periods (sections): 1) Stopping, 2) Reversing-braking, 3) Starting of the driving part in the reverse direction, 4) Reversing starting of the driving and the driven part till a stabilized velocity with slip absent is obtained. It is shown that by changing the excitation current the new velocity of the driving shaft of the plant can be stabilized by means of decreasing

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the adjusted clutch-element. The regulation of the plants' velocity is carried out by means of magnetic amplifiers (connected with the exciter circuit of the clutches). In order to obtain a stable control of the velocity of the mechanism in the case of a constant reversing period back-feeds must be provided in a system with changing resistance moment of the load. In the second chapter the heat balance of the clutch is investigated and an exact order of calculation is given. In the third chapter some recommendations are given for the design of powder clutches. It is useful to use powder clutches of cylindrical shape. In order to reduce the weights and the measurements high-speed clutches (n = = 1000-2000 rev./min) with 2 slots are recommended. The relative rotational speed of the clutch operating parts should not exceed 10-12 m/sec in the case of high-speed clutches in order to reduce the moment of idle operation. Dry mixtures of carbonyl P-8 with silicon dioxide with a volume filling factor (filling with ferromagnetic material) of $\approx$ 0,34-0,4 are recommended as filler for the clutch slot. The magnitudes of the specific tangential force τ (transferred by the dry fillers) does not depend on the relative

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Using Electromagnetic Powder Clutches When Frequently Reversing 105-58-4-8/37
an Actuating Mechanism

velocity of the clutch operating surfaces within the range of induction of from 0,2-1,2 V.sec/m^2 in the case of powdery mixtures and on conditions of slip.
There are 7 figures and 4 references, 3 Soviet references.

SUBMITTED: June 13, 1957

AVAILABLE: Library of Congress

1. Electric motors-Operation 2. Electromagnetic powder clutches-Application

Card 3/3

AUTHOR: Glazenko, T. A. (Leningrad) 105-59-6-9/11

TITLE: Some Problems Arising in the Design of an Induction Clutch With a One-Piece Rotor (Nekotoryye voprosy proyektirovaniya induktsionnykh mufit s monolitnym yakorem)

PERIODICAL: [illegible] 1958, [illegible] Nr 6, [illegible] (USSR)

ABSTRACT: A relative estimation of the operational properties of induction clutches (IC) with induction rotors, of various types is given. Formulae for the maximum moment and the critical slip are proposed. The influence of a number of constructional factors on the magnitude of the moment and the shape of the mechanical characteristics is clarified. Formulae for the determination of the optimum number of pairs of poles in induction clutches are given. In a summary the following is stated: The maximum moment of an IC with a type of induction rotor with salient poles and alternating polarity is greater than that of clutches with slotted (pal'chikovyy) rotors without salient poles. The smallest possible ratio of a/D must be chosen to ensure an increase of the moment, where a is the pole patch and D the external

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Some Problems Arising in the Design of an Induction Clutch With a Two-Piece Rotor

diameter of the rotor. The mechanical characteristics of clutches without salient poles have a pronounced maximum. The rigid mechanical characteristics of an IC with a slotted (zubchatyy) rotor with alternating poles increase the efficiency of clutches in the transmission of the nominal moment. It is useful to employ clutches of this type where great moments must be transmitted. In clutches with $b \leqslant (10 \div 20)$ cm the housing of the necessary exciter windings in a slotted rotor with alternating poles causes difficulties and often leads to the necessity of increasing the dimensions of the clutch. In such a case a (pal'chikovyy) slotted-rotor clutch very uncomplicated as to its construction with relatively soft mechanical characteristics should be used. It is expedient to use such clutches in plants with a wide range of velocity variation, where the external dimensions of the clutch are not determined by the magnitude of the transmitted moment, but by the surface necessary for heat transfer. If an IC is used in systems for automatic control of the speed of revolution of an actuating mechanism by a variation of the exciter current, the IC must contain

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Some Problems Arising in the Design of an Induction Clutch With a One-Piece Rotor

a back feeding with respect to the velocity. There are 6 figures and 4 references, 3 of which are Soviet.

Submitted: June 27, 1957

1. Electromagnetic clutches--Design 2. Clutches--Equipment
3. Clutches--Properties 4. Clutches--Control

GLAZENKO, T.A., inzh. (Leningrad)

Reversing automatic speed control system with electromagnetic powder couplings. Elektrichestvo no.4:21-26 Ap '60. (MIRA 14:4)
(Automatic control) (Couplings)

GLAZENKA T A

03

S/105/60/000/05/24/028
B007/B008

AUTHOR: Sud, I.I., Engineer

TITLE: In the Komissiya po elektroprivodu i nizkovol'tnoy apparature GNTK Soveta Ministrov SSSR (Commission for Electric Drives and Low-voltage Apparatus of the State Scientific and Technical Committee at the Council of Ministers of the USSR)

PERIODICAL: Elektrichestvo, 1960, No. 5, pp. 86-88

TEXT: The meeting of the Kommissiya po elektroprivodu i nizkovol'tnoy apparature GNTK SSSR (Commission for Electric Drives and Low Voltage Apparatus of the State Scientific and Technical Committee of the USSR) was held under the chairmanship of I.I. Petrov, Professor, Doctor of Technical Sciences, from December 21-22, 1959. The meeting dealt with the state and coordination of the studies in the field of electric drives, as well as with problems of the development of a centralized production of electromagnetic clutches. Delegates from works, scientific research- and planning institutions and schools of higher learning participated in the work of the Commission. The main problems of the scientific research work in the field of electric drives were outlined in the

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In the Komissiya po elektroprivodu i nizkovol'tnoy apparature GNTK Soveta Ministrov SSSR (Commission for Electric Drives and Low-voltage Apparatus of the State Scientific and Technical Committee at the Council of Ministersof the USSR)

S/105/60/000/05/24/028
B007/B008

data submitted by I.I. Petrov, Professor, Doctor of Technical Sciences, A.V. Basharin, Professor, Doctor of Technical Sciences (LETI (Leningrad Electrotechnical Institute)) and A.B. Chelyustkin, Candidate of Technical Sciences (IAT AN SSSR (Institute of Automation and Telemechanics of the AS USSR)). The Commission stated that the fact that research work is not comprehensive is one of the main deficiencies reflected in publications on electric drives. The Commission recommended the following measures: new electrotechnical products must be developed as unit assemblies and series. Controllable economic a.c. drives with frequency control must be built. A variation of motors with heat-resisting insulation for inoreased switching-on frequency must be developed on the basis of the standard series of induction motors with squirrel-cage rotor. The system controlled mercury-arc rectifier - motor is to be worked out for reversible electric drives. Comprehensive installations must be developed for contactless control of electric drives, large semiconductor rectifiers, semi-conductor rectifier - motor systems, series of symmetrical and asymmetrical

Card 2/4

In the Komissiya po elektroprivodu i nizkovol'tnoy apparature GNTK Soveta Ministrov SSSR (Commission for Electric Drives and Low-voltage Apparatus of the State Scientific and Technical Committee at the Council of Ministers of the USSR)

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B007/B008

nonlinear semiconductor resistors for control circuits of electric drives, primary pickups for the control of the position of machined workpieces and the working organs of machine tools, pickups for electric and nonelectric quantities et al. The VNIIEM (All-Union Scientific Research Institute of Electromechanics) takes over the role of leading organization and is responsible for the coordination of investigations in the field of the electric drive. Engineer O.N. Tatur (ENIMS (Experimental Scientific Research Institute of Metal-cutting Lathes)) reported on "Prospects for the Development of a Centralized Production of Electromagnetic Clutches." Engineer T.A. Glazenko reported on "Ferromagnetic Powder Clutches and Their Application to Automatic Electric Drive Systems." The series of multiplate ferromagnetic powder clutches manufactured by the "Elektrostanok" Works does not satisfy the demand of machine tool construction. A heavy multiplate clutch with contactless current feed for a torsional moment of 630 kgm was developed in 1959 and a series of quick-acting multiplate clutches for 2 5 - 40 kgm is being developed at present. Ferromagnetic powder clutches are being tested in automobile construction,

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In the Komissiya po elektroprivodu i nizkovol'tnoy apparature GNTK Soveta Ministrov SSSR (Commission for Electric Drives and Low-voltage Apparatus of the State Scientific and Technical Committee at the Council of Ministers of the USSR)

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experimental specimens of such clutches are being developed for excavators. The Commission recommended to organize an industrial base for a centralized production of ferromagnetic powder clutches Such clutches for moments of from 0.5 to 1600 kgm are to be developed. The EMIMS was ordered to work out the relevant standard designs. The Institut elektromekhaniki AN SSSR (Institute of Electromechanics of the AS USSR), the VEI, the TsINTI, the NAMI and the VNIIstroydormash are mentioned in addition to the above Institutes.

Card 4/4

97956

S/146/60/003/006/[illegible]
B012/B060

(also 1143, 1160)

AUTHOR: Glazenko, T. A.

TITLE: Pulsed System of the Speed Regulation of a D.C. Motor With a Semiconductor Key in the Armature Circuit for Automatic Instruments and Devices

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, 1960, Vol. 3, No. 6, pp. 3 - 14

TEXT: This is the first part of a study of an electrical drive system with semiconductor devices for circuits and instruments in automation. With power transistors in the armature circuit of the motor it is possible to construct irreversible and reversible systems for speed regulation by means of pulses. The mode of operation of such systems is as follows: The width-modulated pulse shaper 1 (Fig. 1) produces commutating square pulses of a constant pulse frequency. The relative duration $\gamma = t_1/T$ of these pulses may be varied from 0 to 1 by means of the control voltage V_y or the control current I_y. Several width-modulation

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87866

Pulsed System of the Speed Regulation of a D.C. Motor With a Semiconductor Key in the Armature Circuit for Automatic Instruments and Devices

S/146/60/003/006/001/013
B012/B060

circuits have been described in Refs. 1-8. The commutating square pulses control the transistors connected to the armature circuit of the motor. The use of transistors enables one to select sufficiently high commutating frequencies (up to some kilocycles). Two modes of operation are examined here: one with intermittent current and the other with a continuous current. It is noted that the second mode of operation ensures the smallest pulsation of the torque and of the speed of the shaft, as well as the most rigid mechanical characteristics of the system. Basic equations are set up, and formulas are then derived for the calculation of the mechanical characteristics of the drive, the amplitude of armature-current pulsation, as well as the motor speed and the power losses in the open diode and triode. Summing up: 1) The use of transistors as keys offers the possibility of working out systems of little inertia for the speed regulation of D.C. motors. These systems exhibit a high efficiency. 2) The commutating frequency in the systems considered here should be selected such that the motor operates with continuous currents, where β' and $\beta'' < 0.3$. β' is the relative time constant of the

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Pulsed System of the Speed Regulation of a D.C. Motor With a Semiconductor Key in the Armature Circuit for Automatic Instruments and Devices

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B012/B060

armature current in the time in which the triode is open. β" is the relative time constant of the armature circuit in the time in which the triode is closed. The mechanical characteristics of such a regulation system are similar to those of the generator-motor system. 4) Dimensions and weight of the drive under consideration are smaller than in usual speed regulation systems, while its dependability is considerably greater. 5) Tests showed that in open systems the possible speed-regulation range lies within 1/10 and 1/15, and in closed systems (without elastic feedbacks), within 1/100 and 1/150. The publication of this article was recommended by the kafedra elektricheskikh mashin (Department for Electrical Machines). There are 7 figures and 6 references: 4 Soviet and 2 German.

ASSOCIATION: Leningradskiy institut tochnoy mekhaniki i optiki (Leningrad Institute of Precision Mechanics and Optics)

SUBMITTED: April 19, 1960

Card 3/5

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500010016-8"

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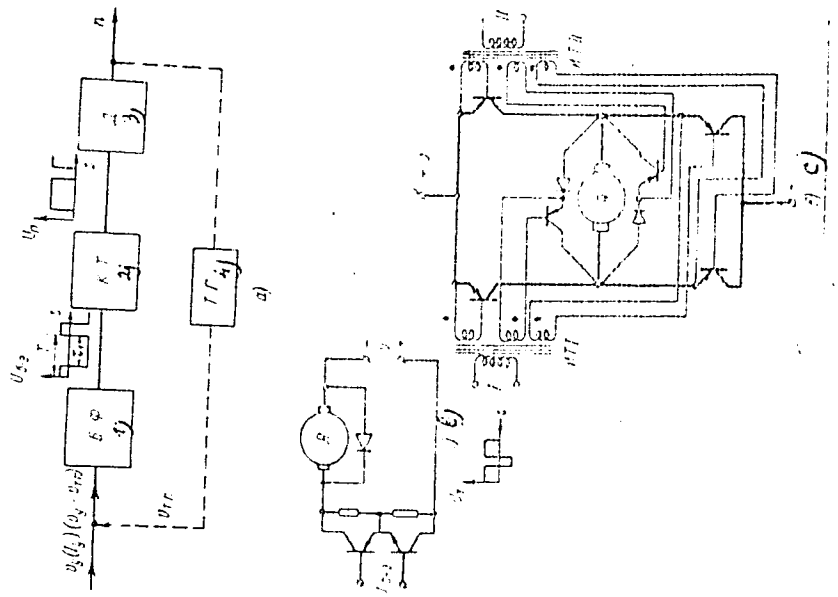
B012/B060



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Legend to Fig.1: Speed regulation system with a semiconductor key in the armature circuit: a) block diagram of the system: 1) width-modulated pulse shaper; 2) diagram of transistors in the armature circuit; 3) D.C. motor; 4) tachogenerator. b) Diagram of output cascade of an irreversible system for a 110-volt feed voltage. c) Bridge circuit diagram of output cascade of a reversible system for 27 + 50 volts

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S/144/60/000/012/004/005
E194/E255

16,9500 (1031, 1121, 1132)

AUTHORS: Glazenko, T. A., Candidate of Technical Sciences, Senior Instructor and Vinogradov, A. L., Candidate of Technical Sciences, Docent

TITLE: Speed Control of Electric Drives with Powder Couplings

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, 1960, No. 12, pp. 72-79

TEXT: Magnetic-powder couplings are now widely used in electrical drives. As the torque of a powder coupling does not depend on the relative speeds of the operating surfaces, the couplings cannot be used for controlling the speed of mechanisms with open control systems. For stable speed control it is necessary to introduce firm negative feed back according to the speed of the output shaft. Losses in the coupling are then proportional to the degree of speed control. Simple expressions are given for the power loss in the coupling and the speed of the output shaft. When speed control with reversing is required, two powder couplings may be used. In such systems additional

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Speed Control of Electric Drives with Powder Couplings

difficulties arise because of the need to separate the signal and direct it to the field winding of the appropriate coupling. Control circuits may be classified according to the kind of signal and type of amplifier. The control voltage may be applied over a three-wire circuit, using the yes-no principle, or over a two-wire circuit, using variable sign. The first method is not recommended because with any type of amplifier there is a slight retardation when the signal is removed. When the control is by voltage of variable sign, two methods of separating the signal are possible: the signal may be separated after amplification, using a balancing amplifier whose output voltage polarity depends on change in the sign of signal; or alternatively the signal may be separated before amplification, using two amplifiers. The first of these methods has the advantage that there is no amplifier output current during quiescence, so that coupling design is simplified; but as the amplifier is of low efficiency it cannot be used at appreciable outputs and the action is not very rapid. With the second method the amplifier efficiency is

Speed Control of Electric Drives with Powder Couplings

high and the system as a whole operates more quickly. However, a no-load current flows through the coupling winds during quiescence. This increases the no-load losses of the drive or necessitates an additional demagnetizing winding on the coupling with a third slip-ring. The circuit of a reversing electric drive with powder couplings for a wide range of speed control is then considered. The motor was of 75 W and the maximum coupling torque was 20 kg/cm. The input speed was 1500 r.p.m. A sectional drawing of the coupling is shown in Fig. 5. The tacho-generator is connected to the output drive through a step-up gear. The coupling has two gaps; the driving part consists of a hollow vessel with a small moment of inertia. The coupling has two windings connected to three slip-rings, the auxiliary winding of 100 turns equalizes the e.m.f. set up by the amplifier no-load current. An electrical circuit diagram of the equipment with a magnetic amplifier having internal negative feed-back controlled by a signal of alternating sign is shown in Fig. 6. In this circuit the time-constant of the magnetic amplifier is of the order of 0,02 seconds, which improves the speed and stability of

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E194/E255

Speed Control of Electric Drives with Powder Couplings

the system. The use of a circuit with two magnetic amplifiers, shown in Fig. 8 reduces the size and weight of the equipment and increases its speed. This circuit uses magnetic amplifiers with negative feed-back. The control winding circuit contains separating diodes B_1 and B_2 which rectify the even harmonics in the control windings which are induced from the working circuit, which could cause self-excitation of the magnetic amplifiers. To prevent this effect the control winding W_y is shunted with resistance and capacitance. With this circuit very intense retardation can be obtained, reducing the transient process time. The statements about the performance of the two circuits are confirmed by oscillograph records. The output speed is a linear function of the control voltage. The power required to excite the powder couplings is very small and so for small couplings the magnetic amplifiers may be replaced by valve or transistor devices. Simple circuit diagrams are given for these two cases. It is concluded that powder couplings can provide smooth speed control over a wide range (0 to 1400 r.p.m. is mentioned). The

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Speed Control of Electric Drives with Powder Couplings

equipment is small and light, being less than half the weight of the equipment normally used for reversing. There are 12 figures and 5 Soviet references.

ASSOCIATION: Kafedra elektricheskikh mashin Leningradskogo instituta tochnoy mekhaniki i optiki
(Department of Electrical Machines, Leningrad Institute of Precision Mechanics and Optics)

SUBMITTED: March 8, 1960

Card 5/7

GLAZENKO, Tat'yana Anatol'yevna, kand.tekhn.nauk, starshiy prepodavatel';
VINOGRADOV, Andrey Leonidovich, kand.tekhn.nauk, dotsent

Use of powder metal clutches to regulate the speed of electric drives. Izv. vys. ucheb. zav.; elektromekh. 3 no.12:72-79 '60. (MIRA 14:5)

1. Kafedra elektricheskikh mashin Leningradskogo instituta tochnoy mekhaniki i optiki.

(Electric driving)
(Clutches (Machinery))

GLAZENKO, T.A., dotsent, kand.tekhn.nauk (leningrad); GAL'BERTON, G.A., kand. tekhn.nauk (Leningrad)

Speed regulation of a d.c. motor with a semiconductor key in its armature circuit. Elektrichestvo no.2:49-54 F '61. (MIRA 14:3)
(Electric motors, Direct current)

GLAZENKO, T.A.

Choice of commutation frequency and control network of the triodes of an impulse reversive system with d.c. motors. Elektrichestvo no.9:45-53 S '62. (MIRA 15:9)

1. Leningradskiy institut tochnoy mekhaniki i optiki.
(Electric driving) (Automatic control)

S/146/62/005/001/007/011
D201/D301

AUTHOR: Glazenko, T.A.

TITLE: A reversible system of d.c. motor speed control with semiconductor switches

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 5, no. 1, 1962, 62-75

TEXT: The author considers the replacement of amplidynes and magnetic amplifiers in the servo and automatic control systems by contactless transistor amplifiers with switched output stages. These amplifiers operate in class D, i.e. consist of a pre-amplifier, pulse-length modulator, pulse amplifier and an output stage operating as a switch. Such amplifiers have a high efficiency and reliability. Two types of reversible bridge configuration control are considered. Both types have the motor in the diagonal arm of the bridge. In the first type the balance is achieved when the relative duration of the commutated pulse (γ) is equal to zero. For a given polarity of input signal, the switching pulses are

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D201/D301

A reversible system of d.c. ...

applied to one pair of transistors only, the transistors being inserted into the opposite arms of the bridge. One of the transistors shunting the load is made to saturate by a d.c. voltage and the switching-off of the subsidiary circuit is made automatic at the instant when the conducting transistors in the bridge arms are made cut-off. The circuit has a phase sensitive rectifier, two channels of control of output transistors or a switch reacting to the polarity of input signal, which applies the voltage to the corresponding pair of transistors. In the second type of bridge circuit, the balance corresponds to $\gamma = 0.5$, the mean value of current in the armature and speed of motor being zero. A saturated choke is inserted in the bridge diagonal arm. Its core has a rectangular hysteresis loop and results in a decrease of the effective value of load current. The subsidiary load shunting circuits are not required since with one pair of transistors being cut off, the other pair becomes saturated and the load circuit remains unbroken. The commutating pulse shaping circuit must have two outputs with voltages in anti-phase. Analysis of the electric drive circuit shows that from the point of view of overloading of brushes and collectors, the commutation frequency must be

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A reversible system of d.c. ...

high and the s.c. current repetition frequency low. In this system the current becomes pulsating; this effect results in increased copper and iron losses and in deterioration of the switching conditions. The following conclusions are made: 1) The reversible system modulators should have a maximum possible duration of switching pulse t_{max} i. 2) In reversible systems having a wide range of speed control of medium and large power motors, the switching period $t_{per} = (0.1\text{-}0.3)\, t_{arm}$, where T is the armature circuit time constant. 3) In servos and velocity control systems of small power motors the commutation frequency must be chosen from the condition of permissible max. amplitude revolution pulsations. 4) The suggested expressions and graphs make it possible to determine the parameters of switched reversible systems in quasi-stationary states. There are 6 figures and 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: H.W. Collins, Transactions AIEE. 1956, v. 75, p.1.

ASSOCIATION: Leningradskiy institut tochnoy mekhaniki i optiki (Leningrad Institute of Precision Mechanics and Optics)

SUBMITTED: April 20, 1961

Card 3/3

S/146/62/005/005/005/016
D201/D308

AUTHOR: Glazenko, T. A.

TITLE: Determining the switching frequency of triodes in on-off d.c. motor supply systems

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 5, no. 5, 1962, 33-45

TEXT: The author considers the method of determining the switching frequency of transistor diodes, operating in class D amplifiers, in on-off controlled d.c. motor supply systems. It is shown that in nonreversible systems the switching frequency should be rather high (1.5 to 3.0 Kc/s), in which case the control accuracy becomes near to that of continuous systems and has the advantage of smaller capacitors and transformers used. Since, however, the transistor losses increase with frequency, the use of special pulse duration modulators, in conjunction with a saturated transformer, is recommended, the arrangement making it possible to ad-

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S/146/62/005/005/005/016
D201/D308

Determining the switching ...

just the switching frequency for the best possible efficiency of transistor operation. The power transistors normally used are twin type П202-П4 (P202-P4) or P202-P210 with large current amplification (β = 200 to 800). In reversible systems the switching frequency should be adjusted individually, depending on the allowed utilization factor of the receiver and maximum allowable dissipation of the transistor. Two cases of reversible system control are considered: 1. Systems with a wide range of speed control and follow-up systems with output stages having power of hundreds of watts. In this case the switching frequency should be adjusted so as to obtain a maximum of the system's efficiency. 2. Lower power systems, for which the efficiency is immaterial. In this case the switching frequency should be determined from the conditions of maximum allowable overloading of the motor. There are 5 figures.

ASSOCIATION: Leningradskiy institut tochnoy mekhaniki i optiki (Leningrad Institute of Precision Mechanics and Optics)

SUBMITTED: December 13, 1961

Card 2/2

GLAZENKO, T.A.

Designing triode control circuits of pulse amplifiers for automatic control systems of electric machinery. Izv.vys.ucheb.zav.; prib. 5 no.6:43-54 '62. (MIRA 15:12)

1. Leningradskiy institut tochnoy mekhaniki i optiki. Rekomendovana kafedroy elektricheskikh mashin.
(Electric machinery) (Electronic control)

GLAZENKO, Tat'yana Anatol'yevna; ZILITINKEVICH, S.I., red.; TELYASHOV, R.Kh., red. izd-va; BELOGUROVA, I.A., tekhn. red.

[Class D transistor amplifiers for d.c. amplidyne control systems] Poluprovodnikovye usiliteli klassa D dlia sistem elektromashinnoi avtomatiki na postoiannom toke; stenogramma lektsii. Leningrad, 1963. 59 p. (MIRA 16:8)
(Rotating amplifiers) (Transistor amplifiers)
(Automatic control)

L 11198-63 EDS
ACCESSION NR: AP3001625 S/0105/63/000/005/0023/0029

50
49

AUTHOR: Glazenko, T. A.; Piskarev, A. N.; Prokof'yev, Yu. I.

TITLE: A nonreversible speed-regulating system with a pulse-type semiconductor amplifier for d-c motors 10

SOURCE: Elektrichestvo, no. 5, 1963, 23-29

TOPIC TAGS: automatic motor speed control, transistorized adjustable-speed drive, adjustable-speed d-c motor, grinding-machine drive

ABSTRACT: A transistorized speed-adjusting system is described as applied to a grinding-machine drive motor (110v dc, 0.76 kw, 8.2 amp, 2,600 rpm). Its speed range is 1 : 20 and speed regulation 10 per cent at the lower speed limit. The 60-volt collector voltage limitation is overcome by an original rectifying bridge circuit fed from a number of secondaries of the supply transformer. The power transistors are controlled by a duration modulator with a variable pulse-repetition rate. A comparison scheme, the modulator, and the pulse-controlled rectifier constitute the speed-adjusting system; it is supplied at 220/380 v, 50 cps. Fundamental equations describing the system are presented, as well as the results of tests, that include oscillograms of operating conditions, acceleration, and throwing on a load.

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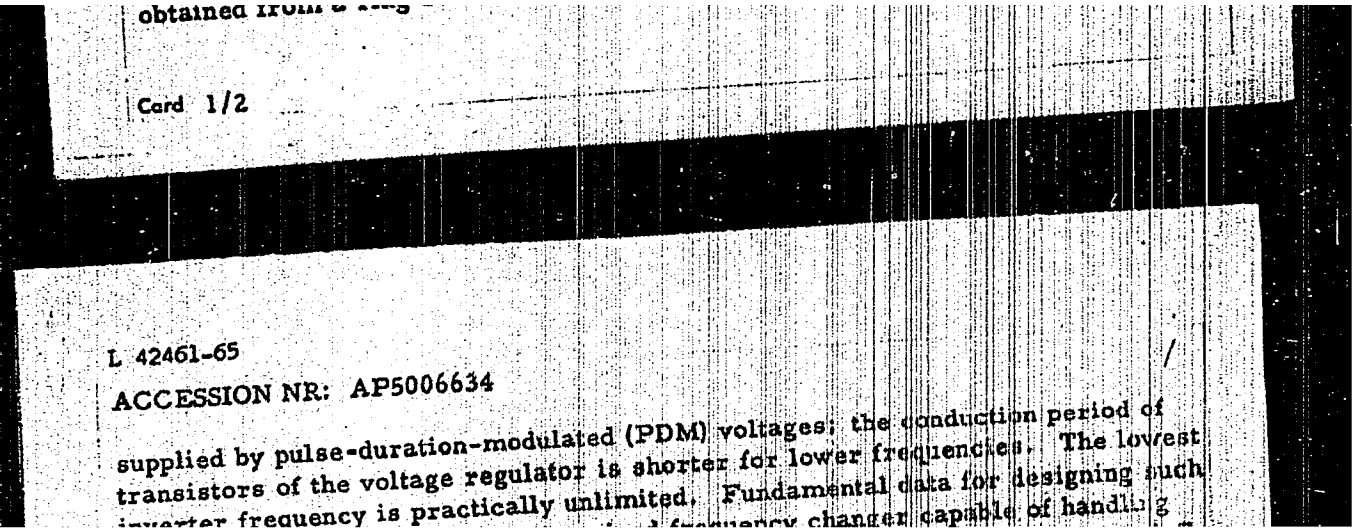
Leningrad Inst. of Precision Mech. & Optics



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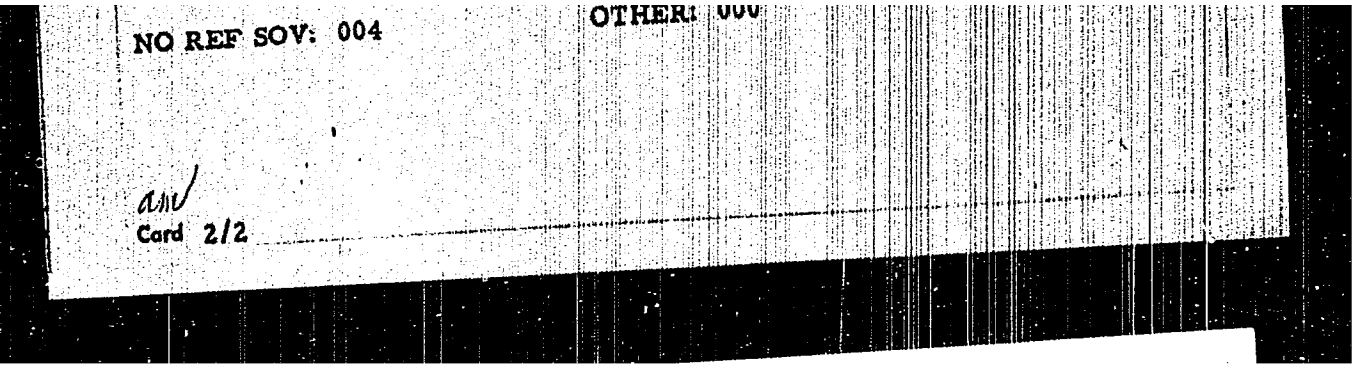
supplied by pulse-duration-modulated (PDM) voltages; the conduction period of transistors of the voltage regulator is shorter for lower frequencies. The lowest inverter frequency is practically unlimited. Fundamental data for designing such frequency changer capable of handling



type semiconductor inverter are found, and final formulas for the transistor-switching loss, for both above circuits, are developed. Another formula describing loss in the induction motor due to inverter-caused higher harmonics is developed. Total-loss minimum conditions determined from the above two formulas are used for recommending the optimal frequency of inversion. The PDM voltage-regulation method, at $f_{max} < 200$ cps, has an efficiency not lower than that of the continuous-regulation method. Orig. art. has: 3 figures and 23 formulas.

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GLAZENTSOV, B.V.

Making pressing dies for circular rubber rings. Tekh. i instr. 36 no.10:37 O '65. (MIRA 18:11)

Chem.Abst

AUTHORS: Shur, Ya. S., and Glazer, A. A. 126-2-21/35

TITLE: Thermomagnetic treatment and processes of ordering. (Termomagnitnaya obrabotka i protsessy uporyadocheniya.) Part. I. On the relation between the effect of thermomagnetic treatment and the processes of ordering. (I. O svyazi effekta termomagnitnoy obrabotki s protsessami uporyadocheniya).

PERIODICAL: Fizika Metallov i Metallovedeniye, 1957, Vol.3, No.2, pp. 355-360 (USSR)

ABSTRACT: A number of assumptions have been expressed on the existence of an inter-relation between the effect of thermomagnetic treatment and the phenomenon of ordering. However, there are no experimental data confirming that such a relation does exist. Therefore, from the point of view of thermomagnetic treatment it is of great interest to study the effect in ordering alloys for the purpose of establishing a relation between the mechanism of thermomagnetic treatment and the phenomenon of ordering. For solving this problem the temperature range was determined for several ferromagnetic alloys in which thermomagnetic treatment is effective and also the influence of this treatment on the temperature dependence

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of the saturation magnetization. The selection of these problems was governed by the following considerations: if the ordering processes play an important role in the mechanism of thermomagnetic treatment, this treatment should be effective only at temperatures below the critical ordering temperature T_c; literary data on this problem are scarce and contradictory. If thermomagnetic treatment does lead to a new structural effect, it can be anticipated that this would lead to a change in the temperature characteristic of the saturation magnetization. The authors investigated the following ferromagnetics: 66-permalloy (66% Ni, 34% Fe) and perminvar (34% Ni, 29% Co, 34% Fe, 3% Mo), which are most intensively affected by thermomagnetic treatment; 78-permalloy for which the processes of ordering have been most fully studied. Furthermore, the permendur (49% Co, 49% Fe, 2% V) was studied, an alloy characterized by a high Curie point and a high critical ordering temperature and also an iron-aluminum alloy containing 13% Al. For judging the effectiveness of the thermo-

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magnetic treatment the saturation magnetostriction λ_s and the coercive force H_c were measured, on the basis of which it is possible to evaluate the magnetic texture. The specimens were in the form of strips of 60 x 4 x 0.2 mm^2. The ordering was effected by annealing for 100 hours at a temperature slightly below T_c, whereby the temperature was maintained constant with an accuracy of $\pm$ 1°C. The disordered state of the specimens was produced by hardening from 700 to 800°C. The thermomagnetic treatment consisted of slow cooling from a temperature above the Curie point inside a magnetic field of 50 to 200 Oe whereby a possibility was provided of hardening the specimens during the magnetic treatment from any temperature. On the basis of the obtained results it is concluded that the phenomenon of ordering does not play an important role in the mechanism of thermomagnetic treatment. This is obvious from the fact that the thermomagnetic treatment can be effected at temperatures above T_c. Furthermore, measurement of the temperature dependence of the saturation magnetization indicates that in thermo-

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magnetically treated alloys there is no appreciable ordering of the phases. Apparently ordering plays a secondary role during thermomagnetic treatment which consists in establishing a barrier to the formation of a magnetic texture, as can be seen from the results obtained for the alloy of iron with 12% Al.
There are 5 figures, 2 tables and 13 references, 2 of which are Slavic.

SUBMITTED: March 21, 1957.

ASSOCIATION: Institute of Metal Physics, Ural Branch of the Ac.Sc. USSR.
(Institut Fiziki Metallov Ural'skogo Filiala AN SSSR)

AVAILABLE: Library of Congress.

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