S/105/63/000/002/003/003
E192/E382

AUTHOR: Gorbachev, G.N., Engineer

TITLE: Two circuits for electronic (contact-less) control of magnetic amplifiers

PERIODICAL: Elektrichestvo, no. 2, 1963, 83 - 85

TEXT: Amplifiers provided with very strong negative feedback have the useful property that their gain is inversely proportional to the "magnitude" of the feedback. Thus, if in the absence of feedback the gain of the amplifier is K_p, the feedback coefficient is β. The gain with the feedback is given by:

$$K_3 = \frac{1}{\beta + \frac{1}{K_p}} \qquad (1)$$

which becomes:

$$K_3 = 1/\beta$$

Card 1/3

Two circuits for ....

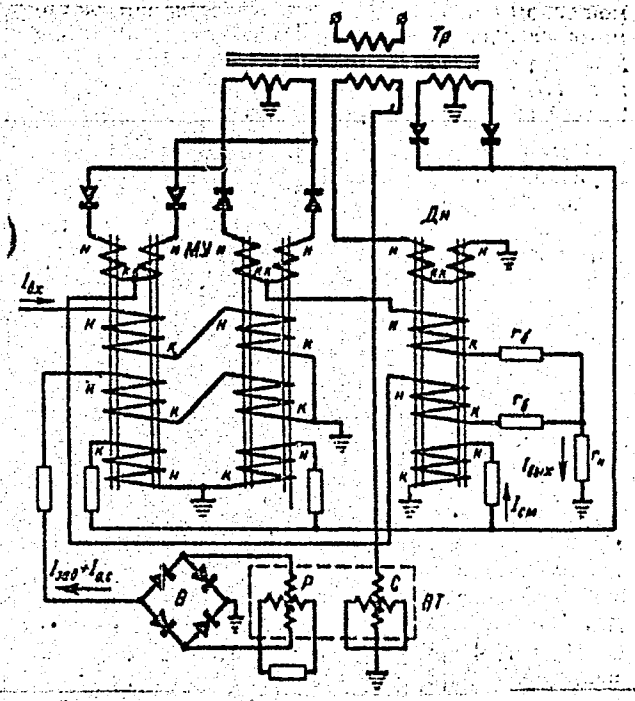
provided $\beta >> 1/K_p$. This property was employed by the author to devise a magnetic amplifier with variable gain (Author's Certificate no. 151990). The amplifier is shown in Fig. 2. The system is supplied by the transformer T_p . The compensating circuit of the amplifier includes a saturated reactor $D.H.$, a rotary transformer (reference device) BT and a rectifier B . The current of the reference device and the depth of the negative feedback are controlled by BT , which results in a corresponding change in both reference current and feedback coefficient β . A system for electronic closing of magnetic amplifiers is also given. This is based on disconnecting the supply voltage by introducing controlled reactors into the AC branches of the amplifier. However, this system is not suitable for closing the amplifiers which have no common AC paths. In a practical system based on this method the output difference current during the closure did not exceed 3% of the nominal value. There are 6 figures.

ASSOCIATION: Moskovskiy energeticheskiy institut
(Moscow Power-engineering Institute)

SUBMITTED: September 4, 1962

APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000516020018-8"

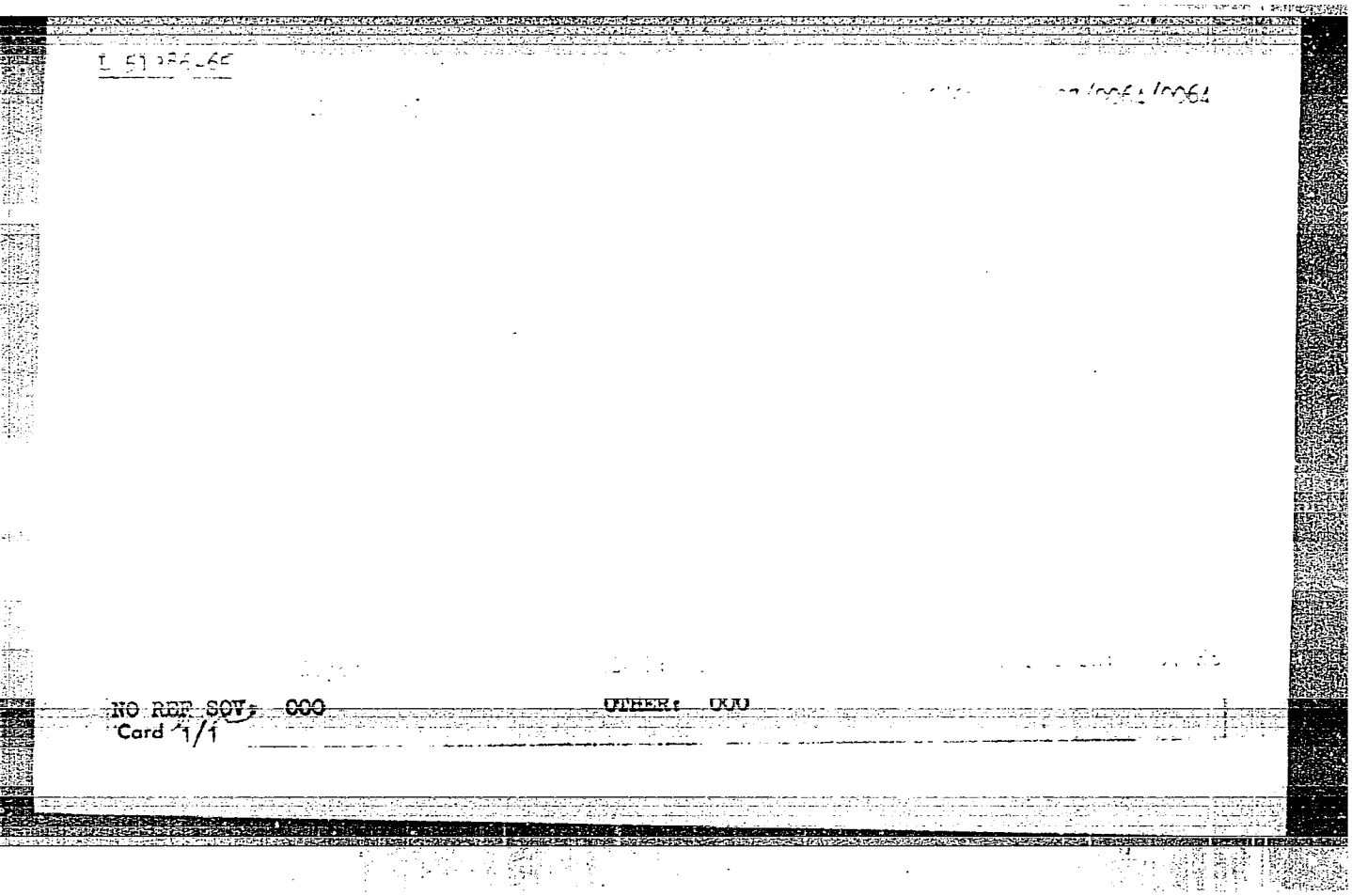
Fig. 2:



Card 3/3.

S/105/63/000/002/003/003
E192/E382

Two circuits..



LABUNTSOV, V.A., kand. tekhn. nauk, dotsent; GORBACHEV, G.N., aspirant

Transistorized control networks of multiphase autonomous inverters.
Trudy MEI 55:65-72 '65. (MIRA 18:10)

LABUNTSOV, V.A., kand. tekhn. nauk, dotsent; GORBACHEV, G.N., aspirant; SAVEL'YEVA, A.A., inzh.

Transistorized frequency converter for the power supply of fluorescent lamps. Trudy MEI 55:73-80 '65. (MIRA 18:10)

L 9663-66 EWT(d)/EWP(1) LJP(c) BB/GG

ACC NR: AP5026506 SOURCE CODE: UR/0286/65/000/019/0036/0036

AUTHORS: Gorbachev, G. N.; Labuntsov, V. A. 44

36
B

ORG: none

TITLE: Ring shift register. Class 21, No. 175118

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 19, 1965, 36

TOPIC TAGS: shift register, transistorized circuit

ABSTRACT: This Author Certificate presents a ring shift register of thyristors with capacitor switching, which produces scaling an even number of times. To increase the reliability and to decrease the required power, the load is connected in series with the capacitor between the anodes of thyristors operating in phase-opposition (see Fig. 1). Diodes are connected antiparallel to the thyristors.

Card 1/2 UDC: 621.314.572.07

L 9663-66

ACC NR: AP5026506

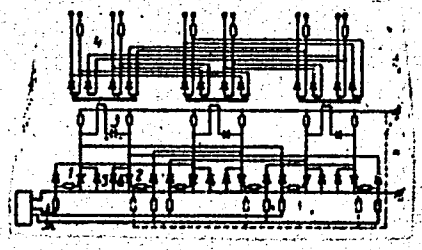


Fig. 1. 1 and 2 - Thyristors; 3 - switching capacitor; 4 - load; 5 and 6 - diodes.

Orig. art. has: 1 diagram.

SUB CODE: 09/ SUBM DATE: 06Jan64

Card 2/2

1. GORBACHEV, G. T. and MASLENNIKOV, K. V.

2. USSR (60_0)

4. Paper-Making Machinery

7. Automatic regulator of the beating of pulp in hollanders. Bum.prom.27no. 10, 1952.

9. MOnthly List of Ruasian Accessions, Library of Congress, February 1953, Unclassified.

V'YUNOV, V.; SHIMANOVA, Z.; GORBACHEV, I.

Leather substites made of nitrocellulose. Pozh.delo 5 no.4: 11:12 Ap '59. (MIRA 12:5)
(Nitrocellulose)
(Leather substitutes)

GORBACHEV, L., inzh.; KUZNETSOV, V., inzh.

The K-36 carburetor. Za rul. 19 no.12:10-11 D '61. (MIRA 14:12)

1. Leningradskiy karbyuratornyy zavod.
(Motocycles—Motors—Carburetors)

GORBACHEV, I.

Patrons give aid. NTO 4 no.5:35 My '62. (MIRA 15:5)

1. Zamestitel' predsedatelya Altayskogo krayevogo soveta Nauchno-tekhnicheskikh obshchestv.
(Altai Territory--Farm mechanization)

GORBACHEV, I.

After the report. NTO 6 no.2:25-26 F '64. (MIRA 17:4)

1. Zamestitel' predsedatelya Altayskogo krayevogo soveta nauchno-tekhnicheskikh obshchestv.

GORBACHEV, I., D.,

USSR/Biology - Fertilizers Oct 50
Plants, Nutrition

"Results of Testing a New Phosphorous Fertilizer - 'Thermophosphate,'" I. D. Gorbachev, All-Union Sci Res Inst of Plant Studies

"Dok V-s Ak Selkhoz Nauk" No 10, pp 35-38

Shows by series of tests conducted 1946 - 1949 that "thermophosphate" is fertilizer equal to superphosphate on mineral podsol and superior on peat bog soils. On mineral soils it should be added before tilling to be more accessible to plants. Use of "thermophosphate" permits high yields on acid-surface bog soil without use of special neutralizers. Submitted 31 Mar 50.

173T22

GORBACHEV, Ivan Fedorovich; DROBYSHEV, D.V., prof.red.; CHIZHOV, A.A., vedushchiy red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Key wells of the U.S.S.R.; Rybinskoye key well (Krasnoyarsk Territory)] Opornye skvazhiny SSSR; Rybinskaia opornaia skvazhina (Krasnoiarskii krai). Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry. Leningr. otd-nie. 1961. 117 p. (Leningrad. Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologorazvedochnyi institut. Trudy, no.175). (MIRA 14:12)

(Rybinskoye region (Krasnoyarsk Territory)--Petroleum geology)
(Rybinskoye region (Krasnoyarsk Territory)--Gas, Natural--Geology)

GORBACHEV, I.F.; PETUKHOV, A.V.; TIMOFEYEV, A.A.

Geology of the Zeya-Bureya Plain. Neftegaz. geol. i geof. no.5: 21 '65. (MIRA 18:7)

1. Trest "Vostsibneftegeofizika".

L 10398-63 EWP(q)/EWT(m)/BDS--AFFTC/ASD--JD
ACCESSION NR: AP3002249 S/0128/63/000/006/0010/0012

AUTHOR: Yazovskikh, I. M.; Gorbachev, I. M.; Bukin, Yu. A.

TITLE: Heat-resistant Cr-Mn steel for cast furnace parts

SOURCE: Liteynoye proizvodstvo, no. 6, 1963, 10-12

TOPIC TAGS: Cr-Mn steel, heat-resistant steel, fluidity, hot cracking susceptibility, oxidation resistance, mechanical properties, applications

ABSTRACT: The Chelyabinsk NIPTIAMMASh has developed a nickelfree heat- and oxidation-resistant Cr-Mn steel for cast parts of furnaces working at 800--1100C. The best combination of mechanical properties was obtained in as-cast (not heat-treated) steel containing 0.55--0.65% C, 2.0--2.5% Si, 15--17% Mn, 15--17% Cr, and 0.30--0.60% Ti, deoxidized in a ladle with 0.2% Al and poured at 1500C. Mechanical properties of Cr-Mn steel at 20, 800, and 950C compared with those of Cr-Ni steels Kh18N9L [cast AISI-302] and Kh18N20S2I [cast, 18% Cr, 20% Ni, 2% Si] are shown in Table 1 of Enclosure. Oxidation resistance of Cr-Mn steel up to 800C is lower than Cr-Ni and Cr-Ni-Si steels, but with temperature increased to 950C the difference diminishes. Castability of the new steel is better and susceptibility to hot cracking lower than those of Cr-Ni and Cr-Ni-Si steels.

Card 1/2

YAZOVSKIKH, I.M.; BUKIN, Yu.A.; GORBACHEV, I.M.

Effect of deoxidizers on the mechanical properties of low-alloy steel. Lit. proizv. no.10:3-4 O '63. (MIRA 16:12)

L 23063-65 EWT(m)/EWA(d)/EWP(t)/EWP(b) MJW/JD

ACCESSION NR: AR4039998 S/0277/64/000/004/0007/0007

SOURCE: Ref. zh. Mashinostr. mat. konstr. i raschet detal. mash. Otd. vyp., 20
Abs. 4.48.48

AUTHOR: Yazovskikh, I. M.; Gorbachev, I. M.; Bukin, Yu. A.

TITLE: Chromium-manganese heat resistant steel for furnace accessory castings

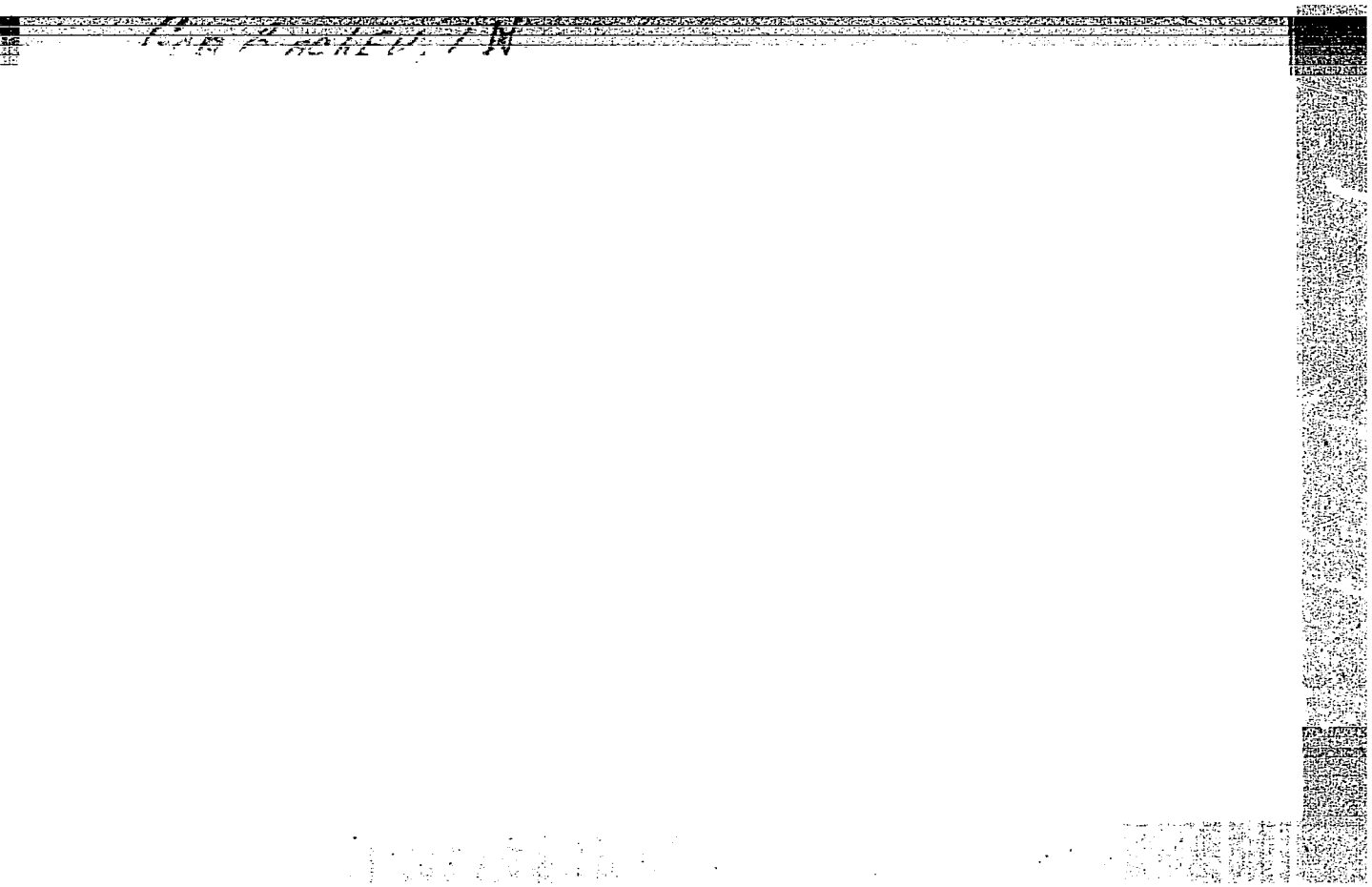
CITED SOURCE: Sb. Novoye v liteyn. proiz-ve. Gor'kiy, 1963, 136-144

TOPIC TAGS: furnace accessory casting, chromium manganese steel, heat resistant

TRANSLATION: Chromium-manganese steel containing 15-17% Cr and 15-17% Mn has a [illegible] approaching that of the Cr-Ni steels Kh18N9 and Kh18N25S2, and can be [illegible] as a substitute material in the manufacture of heat resistant furnace acces-[illegible]gs operating at 600-1000 C.

SUB CODE: MM, IE ENCL: 00

Card 1/1



ZOLOTNITSKIY, N.D., kandidat tekhnicheskikh nauk, dotsent; YAICHKOV, K.M., kandidat tekhnicheskikh nauk, dotsent; SOLOV'YEV, N.V., kandidat tekhnicheskikh nauk, dotsent, retsenzent; TARASOV-AGALAKOV, N.A., kandidat tekhnicheskikh nauk, retsenzent; DUVANKOV, G.S., inzhener, retsenzent; ARDANSKIY, A.S., inzhener, retsenzent; LAVROV, D.P., inzhener, retsenzent; KUPRIYANOV, Ye.M., kandidat tekhnicheskikh nauk, redaktor; GORBACHEV, I.N., inzhener, redaktor.

[redacted]

[Safety techniques and fire-prevention techniques in construction] Tekhnika bezopasnosti i protivopozharnaia tekhnika v stroitel'stve. Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1952. 350 p. (MLRA 7:6)

(Building--Safety measures) (Fire prevention)

ARKHIPOV, K.N.; BELOUS, A.A.; YAICHKOV, K.M., kandidat tekhnicheskikh nauk, retsenzent; GORBACHEV, I.N., inzhener-polkovnik, redaktor; SHPAYER, A.L., redaktor; LYUDKOVSKAYA, N.I., tekhnicheskiy redaktor.

[Fire prevention in enterprises of the building materials industry] Protivopozharnaia tekhnika na predpriiatiiakh promyshlennosti stroitel'nykh materialov. Izd. 3-e, dop.i ispr. Moskva, Gos.izd-vo lit-ry po stroit.materialam, 1955.254 p. (MLRA 9:5)
(Building material industry) (Fire prevention)

GOMBACHEV, Ivan Nikolayevich; VERESKUNOV, V.K., redaktor; VINOKUROVA, Ye.B., redaktor izdatel'stva; KONYASHINA, A.D., tekhnicheskiy redaktor

[Manual for district fire inspectors] Posobie dlia raionnykh pozharnykh inspektorov. Moskva, Izd-vo M-va kommun.khoz. RSFSR, 1957. 211 p. (MLRA 10:9)
(Fire prevention--Inspection)

GORBACHEV, I. N. (Moskva); SOLDATOV, V (Serpukhov); MALYKHIN, M. (Kemerovo).

Evaluating the work of State Fire Inspection agencies. Pozh.delo 3 no.8:9 Ag '57. (MLRA 10:8)
(Fire prevention--Inspection)

NIKITIN, Lev Ivanovich; PROKOF'YEV, Petr Sergeyevich; VINOGRADOV, Yevgeniy Grigor'yevich; GORBACHEV, I.N., inzh.-polkovnik, retsenzent; PITER-MAN, Ye.P., red. izd-va; PARAKHINA, N.L., tekhn. red.

[Fundamentals of fire prevention] Osnovy protivopozharnoi tekhniki. Moskva, Goslesbumizdat, 1960. 310 p. (MIRA 14:6)
(Fire prevention)

GORBACHEV, I.N.; BALAKIN, V.M., red.; SHESHNEVA, E.A., tekhn. red.

[Voluntary fire control societies]Dobrovol'nye pozharnye obshchestva; iz opyta raboty. Moskva, Izd-vo M-va sel'.khoz. RSFSR, 1962. 43 p. (MIRA 15:12)
(Fire prevention)

SHIMANOVA, Zinaida Yegorovna; BELKIN, R.S., doktor yurid. nauk, red.; GORBACHEV, I.N., red.; ZLOBINA, Z.P., red.izd-va; MAYOROV, V.V., tekhn. red.

[Technical expert examination of the causes of fires] Pozharno-tekhnicheskaia ekspertiza. Moskva, Izd-vo kommun. khoz.RSFSR, 1963. 85 p. (MIRA 16:12)
(Fire investigation)

BORISOV, Vasiliy Matveyevich; GORBACHEV, I.N., red.; MYAKUSHKO, V.P., red.izd-va; KARLOVA, G.L., tekhn. red.

[Fire prevention at enterprises of the woodworking industry] Pozharnaia okhrana na predpriiatiiakh derevo-obrabatyvaiushchei promyshlennosti. Moskva, Goslesbum-izdat, 1963. 101 p. (MIRA 17:2)

KUTUKOV, A.I.,red.; GARKALENKO, K.I.,red.;GORBACHEV, I.V.,red.; YERMAKOV, P.I.,red.;OVSYANNIKOV, Yu.N.,red.;PILYUGIN, B.A.,red.;RODIONOV, I.S.,red.;RODIONOV, A.N.,red.;SERKEBRIN, I.Ya.,red.; GUSEV, M.S., red. izd-va.;PROZOROVSKAYA, V.L.,tekhn. red.; SABITOV, A.,teknn.red.

[Uniform safety rules for geological surveying; compulsory for all ministries, economic councils,departments, organizations, and enterprises conducting geological studies] Edinye pravila bezopasnosti pri geologorazvedochnykh rabotakh; obiazatel'ny dlia vsekh ministerstv, sovnarkhozov, vedomstv, organizatsii i predpriiatii, vedushchikh geologicheskie raboty. Moskva, Ugletekhizdat, 1958. 102 p.(MIRA 11:12)

1. Russia(1923- U.S.S.R.) Komitet po nadzoru za bezopasnym vedeniyem rabot v promyshlennosti i gornomu nadzoru.
(Geological surveys)

GORBACHEV, I. V.

USSR/Engineering - Steel brittleness

Card 1/1 Pub. 128 - 26/32

Authors : Gorbachev, I. V.

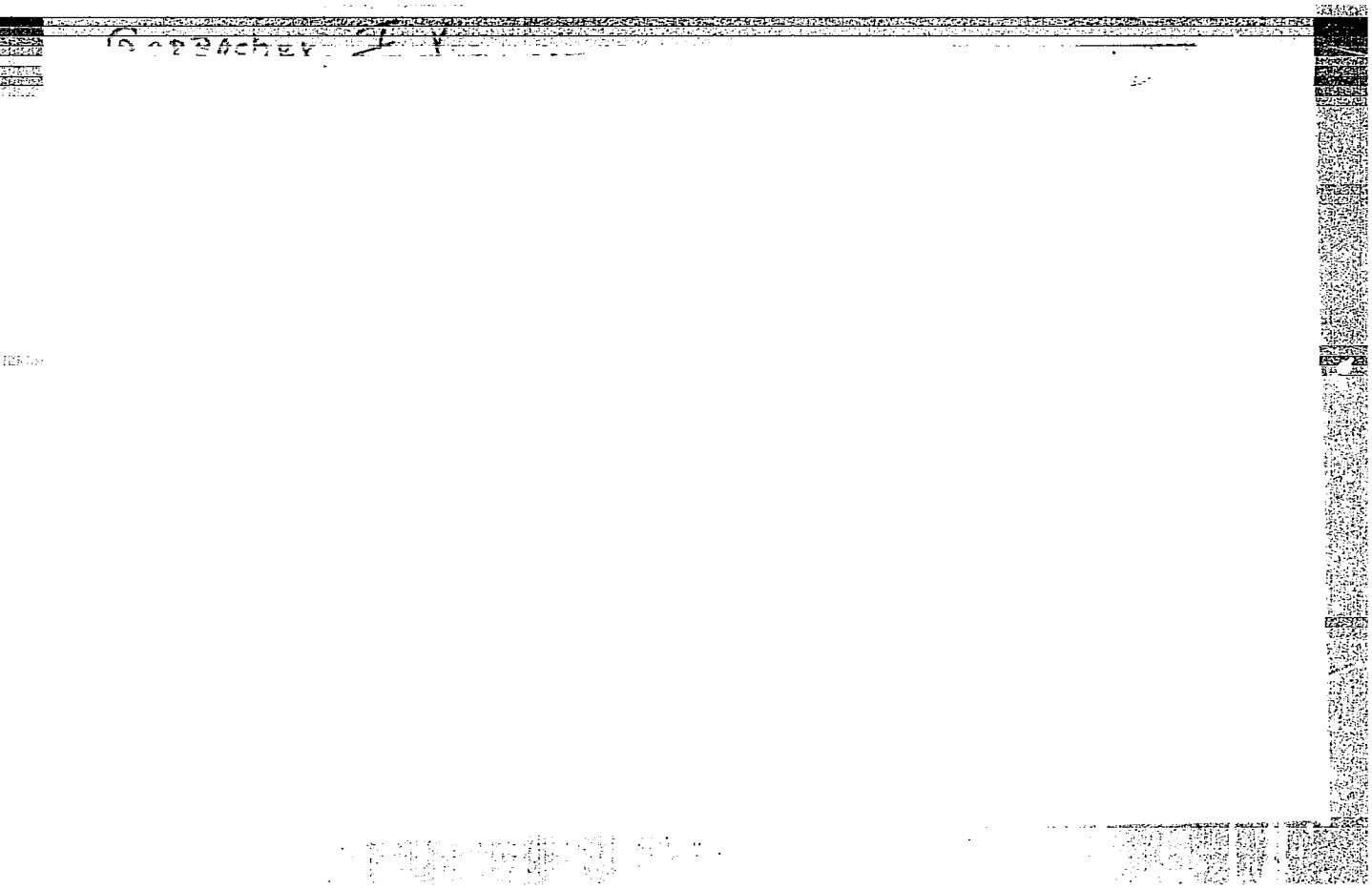
Title : The first investigation of the blue brittleness of the steel

Periodical : Vest. mash. 11, 93-94, Nov 1954

Abstract : An account is given of a Polish language article written by A. A. Rzeszotarski, in 1880, confirming the first investigation of the blue brittleness of steel by Russian metallurgist D. K. Chernov, in 1877 at the Obukhovskiy Metallurgical Factory. Three references: 1-USSR and 2-Polish (1878-1887).

Institution : ...

Submitted : ...



GORBACHEV, I.V.

AUTHOR: Gorbachev, I.V., Candidate of Technical Sciences 128-58-5-14/16

TITLE: A.S. Lavrov's Work on Copper Alloys (Raboty A.S. Lavrova po mednym splavam)

PERIODICAL: Liteynoye Proizvodstvo, 1958, Nr 5, pp 28-30 (USSR)

ABSTRACT: The article is written on the occasion of the 120th anniversary of the birth of A.S. Lavrov, an outstanding Russian metallurgist whose work on non-ferrous alloys are less widely known than his work on the structure and properties of steel ingots. There are 15 references, 13 of which are Russian and 2 French.

AVAILABLE: Library of Congress

Card 1/1

GORBACHEV, I.V., kand.tekhn.nauk, dots.; PODSUSHNYY, A.M., red.

[Analysing the graphitisation process] K analizu protsessa grafitizatsii. Vladivostok, 1959. 8 p. (Vladivostok. Dal'nevostochnyi politekhnicheskii institut. Trudy, vol.52, no.7) (MIRA 14:4)
(Steel—Metallography) (Diffusion hardening)

GORBACHEV, I.V., kand. tekhn. nauk, dotsent; DEMENT'YEVA, L.Ya., starshiy prepodavatel'

Eutectoid interval of some engineering cast irons. Trudy DVPI 56 no.1:107-110 '62. (MIRA 17:6)

ACC NR: AP6035941 SOURCE CODE: UR/0413/66/000/020/0199/0199

INVENTOR: Adler, M. V.; Gorbachev, L. M.; Lapavok, V. S.; Lovchev, S. V.; Sokolov, G. I.; Frenk, M. Ts.; Churikov, Ye. P.

ORG: none

TITLE: Ventilating unit for aircraft. Class 62, No. 187540

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 199

TOPIC TAGS: aircraft cabin environment, aircraft cabin equipment, centrifugal blower, air conditioning equipment

ABSTRACT: An Author Certificate has been issued for a ventilating unit for aircraft which contains a fan with a drive. To assure the unit's efficient operation in ground-based and airborne applications, the fan is mounted on a separate shaft and is operated by an electric drive through an axial over-riding clutch; a centrifugal clutch is used for operation on turbine drive. [WA-98]

SUB CODE: 01, 13/ SUBM DATE: 10Feb64

Card 1/1 UDC: 629.13.01/06

ACC NR: AP6035839 (A,N) SOURCE CODE: UR/0413/66/000/020/0044/0044

INVENTOR: Baranov, N. V.; Gorbachev, L. M.; Orlov, I. Ye.; Sokolov, G. I.; Solov'yeva, G. S.

ORG: None

TITLE: A turborefrigerator. Class 17, No. 187050

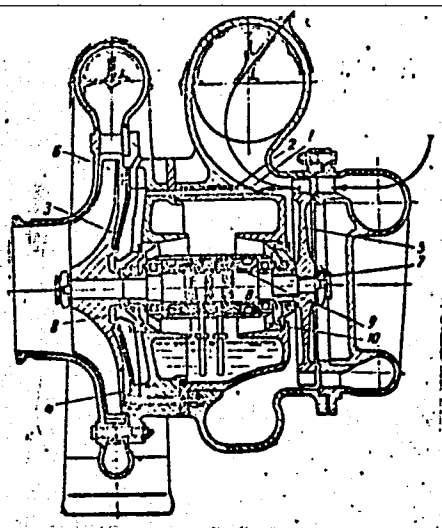
SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 20, 1966, 44

TOPIC TAGS: refrigeration equipment, turbine, ventilation fan

ABSTRACT: This Author's Certificate introduces a turborefrigerator for pressurized cabins and instrument sections of aircraft. The installation contains a housing, turbine and blower all mounted on a shaft set in air-cooled ball bearings. The unit is designed for improved cooling and reduced weight. Longitudinal cooled air supply channels are made in the housing at the level of the turbine blade base. These channels communicate with the cavity between the screen and the cover. The shaft bearings are mounted on the ends of a thin walled housing with reinforced flanges which have sloping holes for coolant circulation.

Card 1/2 UDC: 621.565.94 629.13.01/06

ACC NR: AP6035839



1—housing; 2—channels; 3—screen; 4—cover; 5—turbine; 6—blower; 7—shaft; 8—ball bearings; 9—tube with reinforced flanges; 10—holes

SUB CODE: 01,13,10 SUBM DATE: 21Nov64

Card 2/2

GORBACHEV, L.N.

Methods of reducing sugar production costs used in the Livny sugar refinery. Sakh.prom. 37 no.2:51(131)-52(132) F '63. (MIRA 16:5)

1. Livenskiy sakharnyy zavod.
(Livny--Sugar industry--Costs)

GORBACHEV, L.N.

Some problems in the planning of gross production. Sakh.prom. 37 no.6:53-54 Je '63. (MIRA 16:5)

1. Livenskiy sakharnyy zavod.
(Sugar industry--Management)

DVORKIN, G.A.; GOLUB, Ye.I.; GORBACHEV, L.P.; KORENEVA, L.G.; MEKSHENKOV, M.I.

Dispersion of the optic rotation of deoxyribonucleic acid isolated from T-2 bacteriophages. Dokl. AN SSSR 151 no.5:1211-1214 Ag '63. (MIRA 16:9)

1. Institut biologicheskoy fiziki AN SSSR. Predstavleno akademikom A.N.Belozerskim.

(Bacteriophage) (Nucleic acids)

GORBACHEV, M.

Not only uncover, but prevent shortcomings and violations as well. Fin. SSSR 23 no.10:62-66 O '62. (MIRA 15:10)

1. Chlen Kollegii Ministerstva finansov Belorusskoy SSR.
(White Russia—Auditing and inspection)

31018. CORBACHEV, M. G.

Gematogennyy osteomie lit pozvonochika. Khirurgiya, 1949, No. 9, s. 71-77

GORBACHEV, M. P.

GORBACHEV, M.P.; KUDRIAVTSEVA, V.S.; FROLOVA, T.A.

Remarks on N.I.Truevtsev's book "Mechanical technology of fiber materials". M.P.Gorbachev, V.S.Kudriavtseva, T.A.Frolova. Tekst. prom. 14 no.5:52-54 My '54. (MLRA 7:6)
(Truevtsev, N.I.) (Textile industry)

GORBACHEV, Mikhail Sergeyevich

GORBACHEV, Mikhail Sergeyevich (Ukranian Sci Res Psychoneurological Inst), Academic degree of Doctor of Medical Sciences, based on his defense, 16 June 1955, in the Council of the Khar'kov State Med Inst, of his dissertation entitled: "Unjuries of the spinal column and the spinal cord caused by explosions, in the late stage."

For the Academic Degree of Doctor of Med. Sciences.

Byulleten' Ministerstva Vysshego Obrazovaniya SSSR, List No.7, 31 March 1956
Decision of Higher Certification Commission Concerning Academic Degrees and Titles.

JPRS 512

GORBACHEV, M.S., doktor med.nauk, BONDAR', V.P.

Use of neocide in treating brain tumors. Vrach.delo no.3 235-237 Mr'58 (MIRA 11:5)

1. Neyrokhirurgicheskaya klinika Ukrainskogo nauchno-issledovatel'skogo psikhonervologicheskogo instituta i Khar'kovskaya psikhonevrologicheskaya bol'nitsa.
(ANTIBIOTICS)
(BRAIN--TUMORS)

CHIBUKMAKHER, Naum Borisovich, prof.; GORBACHEV, Mikhail Sergeyevich, prof.; SHAMOV, V.N., zas. deyatel' nauki, prof., red.[deceased]; LITVAK, L.B., zas. deyatel' nauki prof., red.; PANCHENKO, D.I., red.

[Atlas of surgery on the spinal cord] Atlas operatsii na spinnom mozgu. Kiev, Zdorov'ia, 1965. 147 p.
(MIRA 18:4)

GORBACHEV, M.T.

Inspection of the organization of production.
Mashinostroitel' no.6:46 Je '60. (MIRA 13:8)
(Klimovsk--Machinery industry)

GORBACHEV, N.

SMOTRITSKIY, Ye.; GORBACHEV, N.; GULEVICH, I.D., redaktor; DMITRIYEV, P., tekhnicheskiy redaktor.

[Antiaircraft machine gun] Zenitnyi pulemet. Moskva, Izd-vo DOSAAF, 1950. 75 p. [Microfilm] (MLRA 7:11)
(Antiaircraft guns) (Machine guns)

GORBACHEV, N.A. (Saratov)

Mysticism instead of the truth. Nauka i shizn' 28 no.1:30-36 Ja '61. (MIRA 14:1)
(Religion) (Mathematics—Phylosophy)

GORBACHEV, N.I.

FEYERMARK, M.M., inzhener; YERMAKOV, A.S.; STOLYAREVSKIY, N.A., inzhener; GOL'DENBLAT, B.I., inzhener; GURGENIDZE, D.P., inzhener; KOZLOV, A.P., tekhnik; GORBACHEV, N.I., tekhnik; GRINBERG, B.V., inzhener.

Protection of substation power transformers in industrial plants. Prom.energ. 12 no.10:29-33 O '57. (MIRA 10:10)

1. Khar'kovskoye otdeleniye Gosudarstvennogo Proyektnogo Instituta Tyazhpromelektroproyekt (for Feyermark). 2. Sverdlovskiy podshipnikovyy zavod (for Yermakov). 3. Proyektnyy institut, Odessa (for Gol'denblat). 4. Ust'-Kamenogorskiy svintsovo-tsinkovyy kombinat (for Stolyarevskiy). 5. Tbilisskiy dryadil'no-trikotazhnyy kombinat (for Gurgenidze). 6. Kamvol'nyy kombinat, Minsk (for Grinberg).
(Electric transformers)

GORBACHEV, N.M.; KOMISSAROV, N.S.; SOLOV'YEV, G.M., red.; GRIGOR'YEVA, A.I., red.; KOROLEV, A.V., tekhn. red.

[Training in car driving] Obuchenie voshdeniiu avtomobilia. Moskva, Izd-vo DOSAAF, 1962. 155 p. (MIRA 16:6)
(Automobile drivers--Education and training)

GORBACHEV, N. V.

"Application of Luminescence in Architecture," Iz. Ak. Nauk SSSR, Ser. fiz., 13, No.2, 1949

All-Union Elec. Eng. Inst.

1. GORBACHEV, N. V.

2. USSR (600)

4. Electric Lighting, Fluorescent

7. Fluorescent lights and materials in units of architectural lighting. Izv. AN SSSR, Ser.fiz. 15 No. 6, 1951.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

S.A. GORBACHEV, N. V. Optics, Spectra

Sect. A

535.371 : 621.327.43

7103. Influence of temperature on the colour properties of the type TB fluorescent lamp. N. V. Gorbachev and N. S. Ivanova. Zh. Tekh. Fiz., 21, 1029-34 (No. 9, 1951) In Russian.

An experimental investigation of a change of colour in the direction pink to yellow of the type TB ("warm white") fluorescent lamp, over the ambient temperature range 25-60°C, showed the cause of the change to be a change in the emission of the $ZnBe(SiO_3)$ phosphor, combined with a relative intensification of emission of the Hg vapour. P. QUELLON

1. GORBACHEV, N. V.

2. USSR (600)

4. Lighting, Architectural and Decorative

7. Lighting the facades of tall buildings. Izv AN SSSR Otd tekh nauk. No. 11 1952.

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

GORBACHEV, N.V., kandidat tekhnicheskikh nauk; TSAR'KOV, V.M., inzhener.

Principles of lighting athletic installations in the Lenin Central Stadium. Svetotekhnika 2 no.6:1-8 N '56. (MLRA 9:12)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Stadiums) (Electric lighting)

GORBACHEV, N.V.

GORBACHEV, N.V., kand. tekhn. nauk; YUROV, S.G., kand. tekhn. nauk.

The 1957 A.F.E. congress. Svetotekhnika 3 no.12:25-27 D '57.
(MIRA 11:1)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Lyons, France--Lighting--Congresses)

Gorbachev, N.V.

SUBJECT: USSR/Luminescence 48-4-47/48

AUTHOR: Gorbachev N.V.

TITLE: Devices for Ultraviolet Irradiation of Luminescent Dyes and Materials (Pribory dlya ul'trafioletovogo obluchenlya svetyashchikhsya krasok i materialov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1957, Vol 21, #4, pp 632-635 (USSR).

ABSTRACT: The VNISI, All-Union Scientific Research Lighting-Engineering Institute, has developed new types of devices for ultraviolet irradiation with quarts mercury vapor lamps and luminescent tubes of special types.

One of these devices named PUF-2 applies a quarts mercury lamp of the PRK-2 type having a power of 375 w. Its weight is 2.5 kg. At a distance of 1 m this device creates illumination of 100 to 120 μ w/sq cm.

The VNISI has developed two new types for the USSR Academy of Sciences: one of the desk type and the other of the suspended type.

Card 1/2

48-4-47/48

TITLE: Devices for Ultraviolet Irradiation of Luminescent Dyes and Materials (Pribory dlya ul'trafioletovogo obluchenlya svetyashchikhsya krasok i materialov)

The desk-type device, named PUF-5, contains 3 luminescent tubes with L-33 luminophore, 15 w each. Its weight is 9.5 kg. The intensity of ultraviolet irradiation at a distance of 300 mm from this device amounts to 220 μw/sq cm.

The suspended-type device, named PUF-6, has a body with three 15-w luminescent tubes, a black uviol glass and a reflector.

A portable device of the PUF-7 type was designed for some investigations on luminescent substances and luminescent analysis under expedition conditions. It uses luminescent tube of a special UFO-4A type. Its weight is 1.9 kg together with a power supplying battery. The intensity of ultraviolet irradiation at a distance of 30 cm amounts to 8 μw/sq cm.
The article contains 3 photos and 1 figure. The bibliography lists 2 Slavic (Russian) references. The report was followed by a short discussion.

INSTITUTION: All-Union Lighting-Engineering Institute
PRESENTED BY:
SUBMITTED: No date indicated.
AVAILABLE: At the Library of Congress.
Card 2/2

GORBACHEV, N.V.

48-5-50/56

SUBJECT: USSR/Luminescence

AUTHORS: Agranyan M.I. and Gorbachev N.V.

TITLE: Manufacture of Luminescent Multiplication Paints and Their Application for Luminescent Filming (Izgotovleniye svetyashchikhsya mul'tiplikatsionnykh krasok i primeneniye ikh pri lyuminestsentnykh kinos"yemkakh)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1957, Vol 21, #5, pp 763-770 (USSR)

ABSTRACT: Experimental research for the manufacture of luminescent paints was carried out and methods of their application in multiplication of movies were developed.

The basic raw material for the manufacture of luminescent paints are: zinc-sulfide and cadmium-sulfide luminophores produced by the "Krasnyy Khimik" plant, and lumogen produced by the Khar'kov Plant of Chemical Reagents.

As a result of experimentation, 24 paints were produced. They can well be photographed on the 3-layer color cinema-film. Ten of them are mixtures of luminophores and pigments, and

Card 1/3

48-5-50/56

TITLE: Manufacture of Luminescent Multiplication Paints and Their Application for Luminescent Filming (Izgotovleniye svetyashchikhsya mul'tiplikatsionnykh krasok i primeniye ikh pri lyuminestsentnykh kinos'yemkakh)

were devised to contain saturated colors for filming in mixed light. Ten others were produced without pigments, and were devised for filming under ultraviolet illumination alone. The two-year experience of using them has shown that these paints fully met the requirements of multiple filming. They possess a good adhesion to celluloid sheets, sufficiently elastic, and dry quickly. The composition and color characteristics of these paints are given in Table 1 of the paper.

A comparison of conventional and luminescent paints used for cinema films led to a conclusion that luminescent paints gave colors of greater purity than the conventional ones.

The luminescent paints were used in several movies produced by the studio "Soyuzmul'tfil'm" (Union Multiplication Film) during the time from 1954 to 1956.

Luminescent paints are of special importance for representing such light effects as polar light, fireworks, rainbows, thunderstorms, etc.

Card 2/3

48-5-50/56

GORBACHEV, N.V.

"Trudy" of the All-Union Scientific Research Institute of Cinematography and Photography. Zhur.nauch. i prikl. fot. i kin. 3 no.1:76-77 Ja-F '58. (MIRA 11:2)
(Cinematography) (Motion-picture projection)

GORBACHEV, N.V., kand. tekhn. nauk; TSAR'KOV, V.M., inzh.

Decorative illumination of Moscow during the Sixth World Youth Festival. Svetotekhnika 4 no.3:25-29 Mr '58. (MIRA 11:2)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Moscow--Lighting, Architectural and decorative)

GORBACHEV, N.V., kand.tekhn.nauk; GOREV, Z.M., kand.tekhn.nauk; YERMOLINSKIY, N.N., inzh.; FOL'B, R.L., inzh.; KHAZANOV, V.S., kand.tekhn.nauk; SHEFTEL', Ye.B., kand.tekhn.nauk; SHKLOVER, D.A., kand.tekhn.nauk; YUROV, S.G., kand.tekhn.nauk

Principal works of professor S.O.Maizel' in the field of lighting engineering. Svetotekhnika 6 no.7:1-9 Jl '60. (MIRA 13:7)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Electric lighting) (Maizel', Sergei Osipovich, d. 1955)

BELOVA, L.T., kand.tekhn.nauk; GORBACHEV, N.V., kand.tekhn.nauk;
IVANOVA, N.S., kand.tekhn.nauk; KROL', TS.I., kand.tekhn.nauk;
OSTROVSKIY, M.A., kand.tekhn.nauk; SHEFTEL', Ye.B., kand.tekhn.nauk;
TSAR'KOV, V.M., inzh.

Proposed new version of "Norms on electric lighting."
Svetotekhnika 7 no.8:14-22 Ag '61. (MIRA 14:7)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Electric lighting--Standards)

GORBACHEV, N.V., kand.tekhn.nauk; TSAR'KOV, V.M., inzh.

Outdoor and architectural lighting of the Hall of Congresses in the Kremlin. Svetotekhnika 8 no.1:18-24 Ja '62. (MIRA 15:1)

1. Vsesoyuznyy svetotekhnicheskiy institut.
(Moscow--Kremlin--Lighting, Architectural and decorative)

GORBACHEV, N.V., kand.tekhn.nauk; GOREV, Z.M., kand.tekhn.nauk; KHAZANOV, V.S., kand.tekhn.nauk; SHEFTEL', Ye.B., kand.tekhn.nauk; SHKLOVER, D.A., kand.tekhn.nauk; YUROV, S.G., kand.tekhn.nauk; YERMOLINSKIY, N.N., inzh.; FOL'B, R.L., inzh.

Letter received by the editor of "Svetotekhnika." Svetotekhnika 8 no.1:30 Ja '62. (MIRA 15:1)

(Sight) (Electric lighting)

AYZENBERG, Yu.B.; GORBACHEV, N.V.; GOREV, Z.M.; DEMCHEV, V.I.; YEFIMKINA, V.F.; IVANOVA, N.S.; KOMISSAROV, V.D.; MARKIZOVA, G.B.; MESHKOV, V.V.; OSTROVSKIY, M.A.; RATNER, Ye.S.; SHEFTEL', Ye.B.; YUROV, S.G.

Nikolai Nikolaevich Ermolinskii; obituary. Svetotekhnika 8 no.12:28 D '62. (MIRA 16:1)
(Ermolinskii, Nikolai Nikolaevich, 1894-1962)

GORBACHEV, O.M.

GORBACHEV, O.M.

Electrode holder simultaneous recording of electrocardiograms from three chest leads. Vrach.delo supplement '57:32 (MIRA 11:3)

1. Kafedra detskoy nevrologii (zav.-dots. I.F.Kononenko) Khar'kovskogo meditsinskogo instituta.
(ELECTROCARDIOGRAPHY)

GORBACHEV, O.M.

Leads for an alectrocardiograph. Vrach.delo no.7:745 Jl '59.
(MIRA 12:12)

1. Kafedra detskoy nevrologii (zav. - dotsent I.F. Kononeko) Khar'kovskogo meditsinskogo instituta.
(ELECTROCARDIOGRAPHY)

GORBACHEV, O.M.

Electrocardiograph electrodes. Vrach.delo no.8:861 Ag '59.
(MIRA 12:12)

1. Kafedra detskoy nevrologii (zav. - dotsent I.F. Kononenko) Khar'kovskogo meditsinskogo instituta.
(ELECTROCARDIOGRAPHY--EQUIPMENT AND SUPPLIES)

GORBACHEV, O.M.

Small dimensional rectifier for electrophoresis. Lab. delo 8 no.10:57-58 '62 (MIRA 17:4)

1. Kafedra nervnykh bolezney (zav. - prof. G.D. Leshchenko) Khar'kovskogo meditsinskogo instituta.

LOCH, A. [Locs, A.]; GORBACHEV, P.; GRAUDIN, K. [Graudins, K.]

Development of industrial transportation in the Latvian S.S.R. Ventis Latv ak no.2:21-31 '62.

1. Institut ekonomiki AN Latviyskoy SSR.

GORBACHEV, Pavel; PILIPYUK, V., red.; KORNIYENKO, T., red.

[Nurek today] Nurek segodnia. Dushanbe, Izd-vo "Irfon," 1964. 34 p. (MIRA 18:3)

1. Sekretar' Nurekskogo gorodskogo komiteta kommunisticheskoy partii (for Gorbachev).

P. D. Gorbachev

24(7) PHASE I BOOK EXPLOITATION SOV/1700

Lvov. Universitet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii, 1956. t. II: Atomnaya spektroskopiya (Materials of the 10th All-Union Conference on Spectroscopy, 1956. Vol 2: Atomic Spectroscopy) [Lvov] Izd-vo L'vovskogo univ., 1958. 568 p. (Series: Its: Fizicheskiy sbornik, vyp.4(9)) 3,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii.

Editorial Board: G.S. Landsberg, Academician, (Resp. Ed.); B.S. Neporent, Doctor of Physical and Mathematical Sciences; I.L. Fabelinskiy, Doctor of Physical and Mathematical Sciences; V.A. Fabrikant, Doctor of Physical and Mathematical Sciences; V.G. Koritskiy, Candidate of Technical Sciences; S.M. Rayskiy, Candidate of Physical and Technical Sciences; L.K. Klimovskaya, Candidate of Physical and Mathematical Sciences; V.S. Miliyanchuk (Deceased), Doctor of Physical and Mathematical Sciences; A.Ye. Glauberman, Doctor of Physical and Mathematical Sciences; Ed.: S.L. Gaser; Tech. Ed.: T.V. Saranyuk.

PURPOSE: This book is intended for scientists and researchers in the field of spectroscopy, as well as for technical personnel using spectrum analysis in various industries.

COVERAGE: This volume contains 177 scientific and technical studies of atomic spectrography presented at the 10th All-Union Conference on Spectroscopy in 1956. The studies were carried out by members of scientific and technical institutes and include extensive bibliographies of Soviet and other sources. The studies cover many phases of spectroscopy: spectra of rare earths, electromagnetic radiation, physicochemical methods for controlling uranium production, physics and technology of gas discharge, optics and spectroscopy, abnormal dispersion in metal vapors, spectroscopy and the combustion theory, spectrum analysis of ores and minerals, photographic methods for quantitative spectrum analysis of metals and alloys, spectral determination of the hydrogen content of metals by means of isotopes, tables and atlases of spectral lines, spark spectrographic analysis, statistical study of variation in the parameters of calibration curves, determination of traces of metals, spectrum analysis in metallurgy, thermochemistry in metallurgy, and principles and practice of spectrochemical analysis.

Card 2/31

Materials of the 10th All-Union Conference (Cont.) SOV/1700

Karabash, A.G., Sh.I. Peyzulayev, R.L. Slyusareva, M.P. Sotnikova, N.I. Smirnova-Averina, Z.N. Samsonova, L.S. Krans, G.G. Morozova, L.S. Romanovich, I.I. Smirenkina, V.N. Lipatova, S.K. Kazanova, L.I. Pogacheva, V.F. Nascheva, Ye.P. Voronova, P.D. Gorbachev, F.A. Kostareva, N.T. Kostereva, A.Y. Yeloretskaya, and N.N. Kuznetsova. Methods of Spectrochemical Analysis of Pure Metal for Impurities 556

AVAILABLE: Library of Congress

TM/gfm
7-7-59

Card 31/31

KARABASH, A.G.; FEYZULAYEV, Sh.I.; SLYUSAREVA, R.L.; SOTNIKOVA, N.P.; SMIRNOVA-AVERINA, N.I.; SAMSONOVA, Z.N.; KRAUZ, L.S.; MOROZOVA, G.G.; ROMANOVICH, L.S.; SMIRENKINA, I.I.; LIPATOVA, V.M.; SAZANOVA, S.K.; PUGACHEVA, L.I.; USACHEVA, V.P.; VORONOVA, Ye.F.; GORBACHEV, P.D.; KOSTAREVA, F.A.; KOSTEREVA, N.T.; YELOVATSKAYA, A.I.; KUZNETSOVA, N.N.

Spectrochemical analysis of pure metals for impurities. Fiz. sbor. no.4:556-562 '58. (MIRA 12:5)
(Spectrochemistry)

GORBACHEV, P.P. (Tashkent)

Solar heating installations. Fiz.v shkole 17 no.2:17-21 Mr-Ap '57. (MLRA 10:3)

(Solar heating)

YAGUDAYEV, M.D., red.; GORBACHEV, P.P., red.; AKHMEDOV, D.B., red.; ULAN, F.V., red.; GOR'KOVAYA, Z.P., tekhn. red.

[Research on the utilization of solar energy] Issledovaniia po ispol'zovaniiu solnechnoi energii. Tashkent, Izd-vo AN Uzb.SSR. No.1. 1963. 107 p. (MIRA 16:9)
(Solar energy)

GORBACHEV, P. S. and BABUSHKIN, V. S.

"How We Fulfilled the Annual Plan for Absolute Increase of Wired Radio Speakers," Vest. Svyazi, No.9, p. 20, 1953

Translation Trans No.533, 6 Apr 56

Gorbachev, P.S.

AUTHOR: Gorbachev, P. Head of the Gomel' Radio Club. 107-8-20/62

TITLE: Competition Chronicle (Khronika sorevnovaniya), Gomel'.

PERIODICAL: Radio, 1957, # 8, p 13, col 3 (USSR)

ABSTRACT: The Gomel' radio amateurs challenged the Minsk Provincial Radio Club to competition.
The Gomel' Radio Club will display 15 inventions of its ratio amateur designers at the 14th All-Union Exhibition.

Interclub and provincial competition among wireless operators and ultra-short wave amateurs are also projected.

INSTITUTION: None

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress

Card 1/1

1. GORBACHEV, S.; KOCHER, S.

2. USSR (600)

4. Peat Industry

7. Using the TEK-2 potato digger for loading shredded peat. MTS 12 no.10, 1952.

9. **Monthly List of Russian Accessions**, Library of Congress, January 1953. Unclassified.

MOSKATOV, P.; ZELENKO, G.; BORDADYN, A.; MAL'TSEV, B.; KIRPICHNIKOV, P.; DONSKOY, G.; KARTSEV, S.; MOISEYEV, P.; SAMOYLOV, P.; SHISHKOV, I.; NAUGOL'NOV, A.; PAPERNOV, N.; GORBACHEV, S.; SHABLIYEVSKIY, G.; GOLUBEV, S.

IA.T. Remizov. Prof.-tekh. obr. 15 no.4:3 of cover Ap '58.
(Remizov, IAkov Terent'evich, d. 1958) (MIRA 11:5)

GORBACHEV, S.S., inzh.; KHANIN, Ye.M., inzh.; MOROZOV, N.F., inzh.; RABINOVICH, Ye.M., inzh.; STROYEV, A.Ye., inzh.; FEL'MAN, Ya.M., inzh.; DOLGIKH, V.N., inzh.; ROGACHEV, S.A., inzh.; YAKUSHEV, A.A.

Dismountable plant for making and assembling house made of large aerated concrete blocks. Mats.i izobr.predl.v stroi. no.12:11-18 '59. (MIRA 13:5)

1. Glavnyy inzhener Konstruktorskogo byuro po zhelezobetonu Glavmosoblstroymaterialov pri Mosoblispolkome (for Yakushev). 2. Konstruktorskoye byuro po zhelezobetonu Glavmosoblstroy-materialov, Moskva, D'yakov per., d.4 (for all).
(Lightweight concrete) (Concrete blocks)

GORBACHEV, S. [deceased]; NIKITIN, N.; NESTEROV, Ya.

Method of working out standards for forging and stamping work. Sots. trud 6 no. 2:91-97 F '61. (MIRA 14:2)
(Forge shops--Production standards)

SHONIN, I. (g.Chelyabinsk); LIKHOVIDOV, I., frezerovshchik (g.Gzhatsk); BERCHENKO, Ye., master; GORBACHEV, S., tekhnolog; PONOMAREV, V.; GORYUSHIN, A., kompressorshchik (g.Moskva); SAZANTSEV, A., inzh. -gidrotekhnik (g.Kemerovo); MUROMTSEVA, L., inzh. (g.Volgograd)

Suggested, achieved, introduced. Izobr.i rats. no.12:22-23 D '61. (MIRA 14:12)

1. Moskovskiy zavod po remontu ekskavatorov (for Berchenko, Gorbachev). 2. Zamestitel' nachal'nika proizvodstvennogo otdela kombinata Cherepovetsles (for Ponomarev).
(Technological innovations)

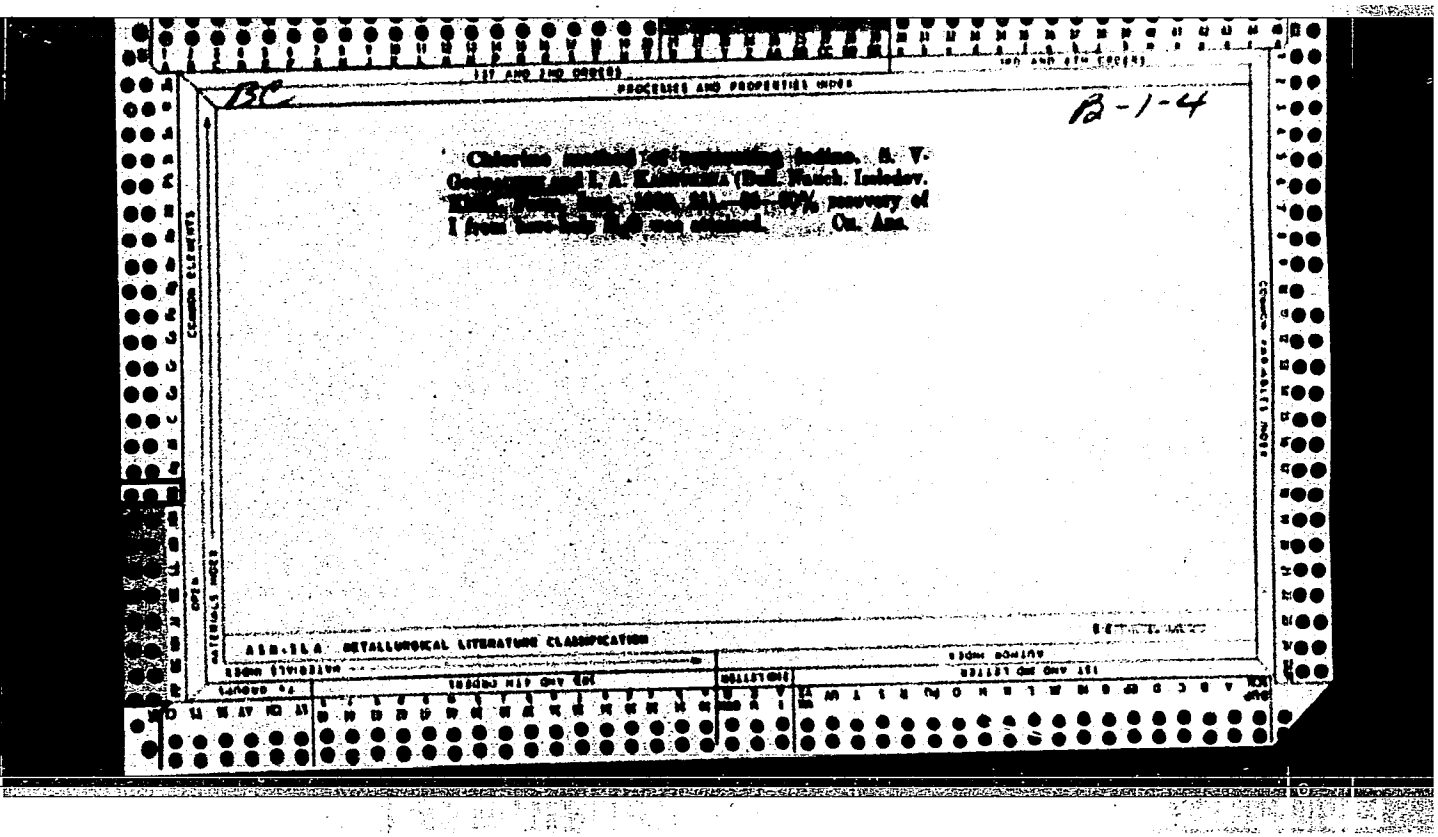
SULIMOV, Filaret Ivanovich; GORBACHEV, Sergey Mikhaylovich; KRETOV, Pavel Yevseyevich; LIOGEN'KIY, German L'vovich; VELISHCHANSKIY, V.M., red.; YELCHINA, L.A., red.izd-va; KAZANSKAYA, L.I., tekhn.red.

[Reorganization problems and forest management in Vologda Province] Voprosy reorganizatsii i lesnoe khoziaistvo Vologodskoi oblasti. Moskva, Goslesbumizdat, 1963. 74 p. (MIRA 17:3)

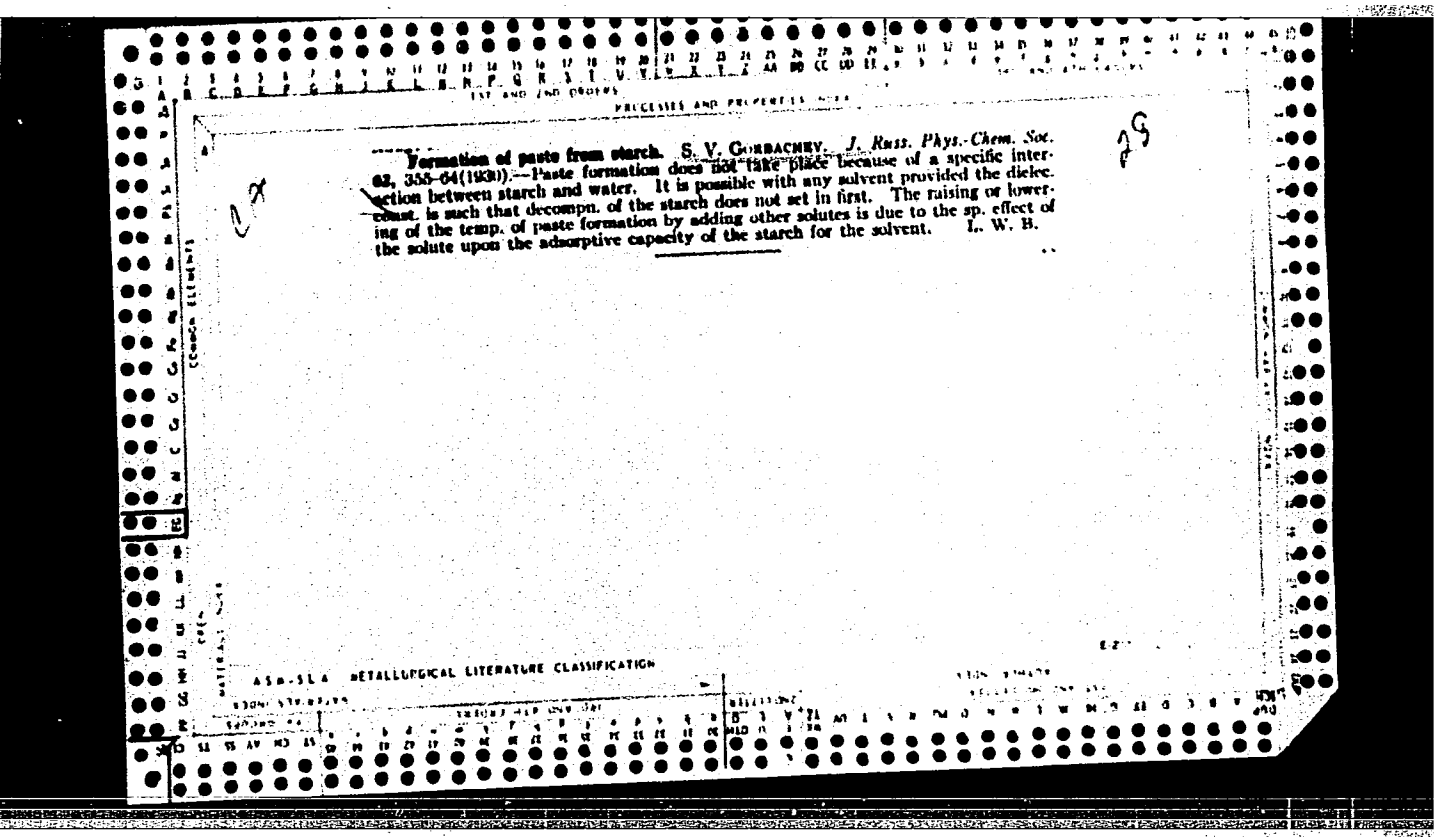
GORBACHEV, S.S., inzh.; PAVLOVA, A.I., inzh.

Manufacture of multilayer wall panels and requirements for the materials used to make them. Stroi. mat. 7 no.9:3-5 S '61. (MIRA 14:11)

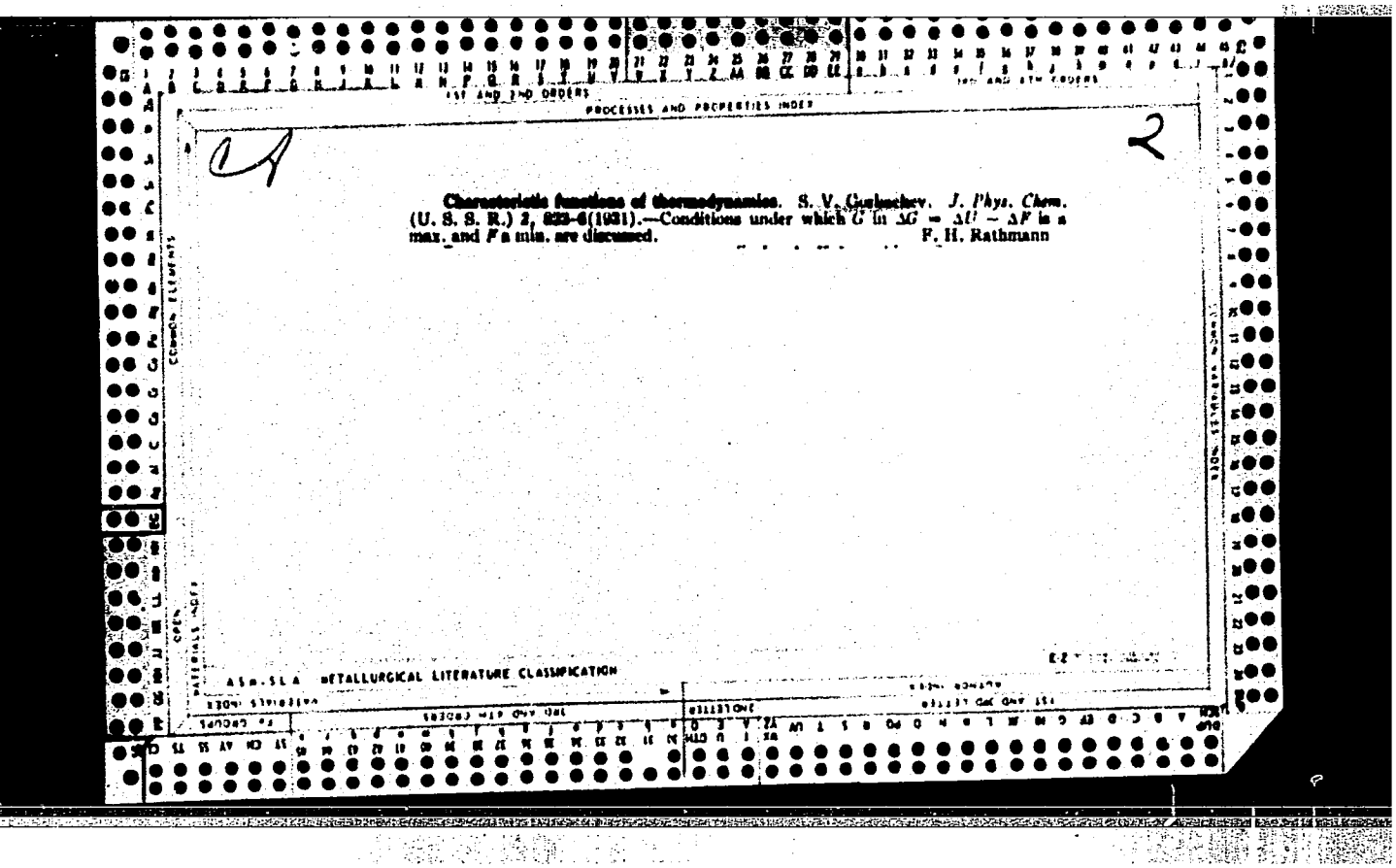
(Precast concrete) (Walls)



APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000516020018-8"



Formation of paste from starch. S. V. Gorbachev. *J. Russ. Phys.-Chem. Soc.* 62, 355-64(1930).—Paste formation does not take place because of a specific interaction between starch and water. It is possible with any solvent provided the dielec. const. is such that decompn. of the starch does not set in first. The raising or lowering of the temp. of paste formation by adding other solutes is due to the sp. effect of the solute upon the adsorptive capacity of the starch for the solvent. L. W. B.

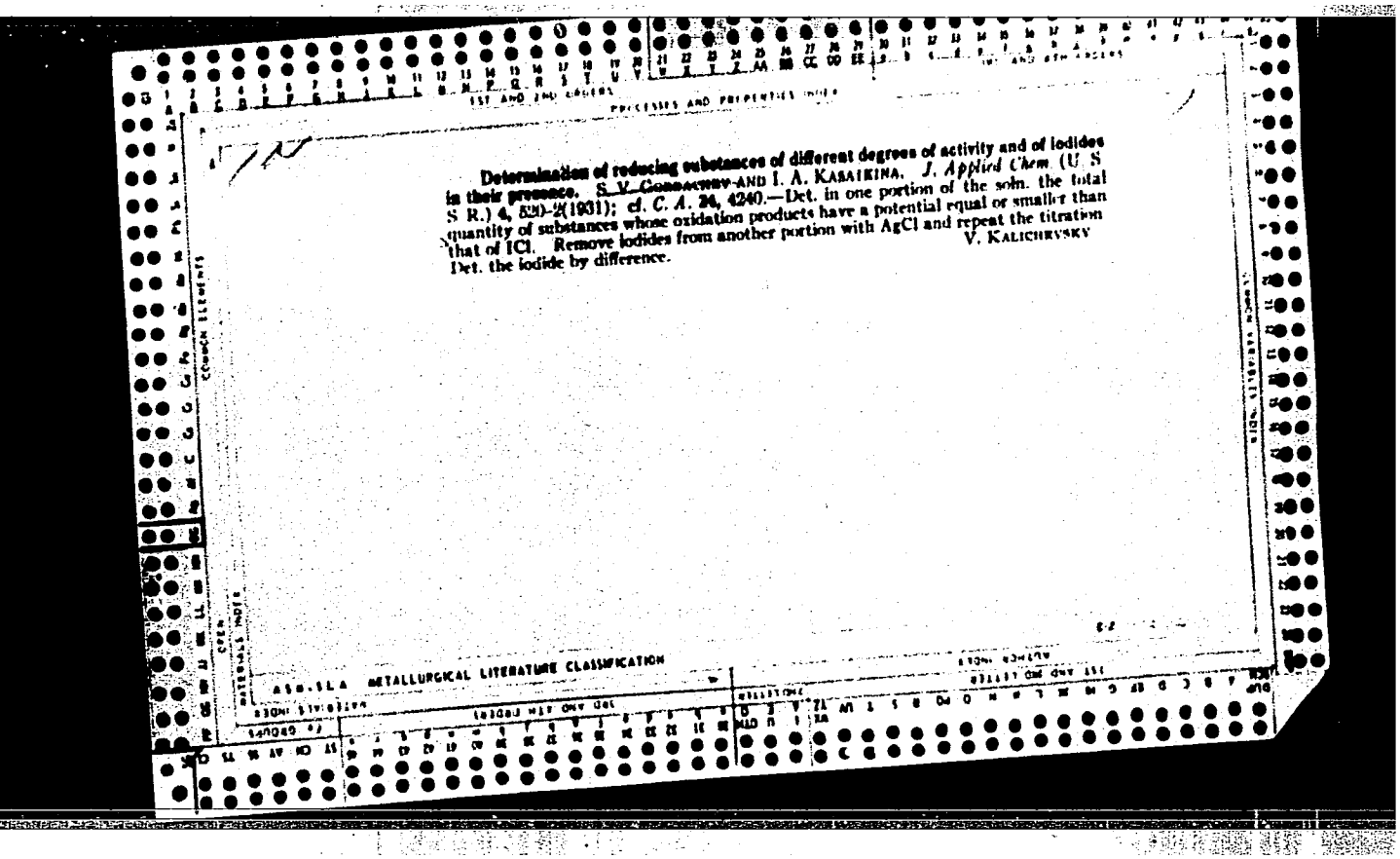


PROCESSES AND PROPERTIES INDEX

1ST AND 2ND ORDERS

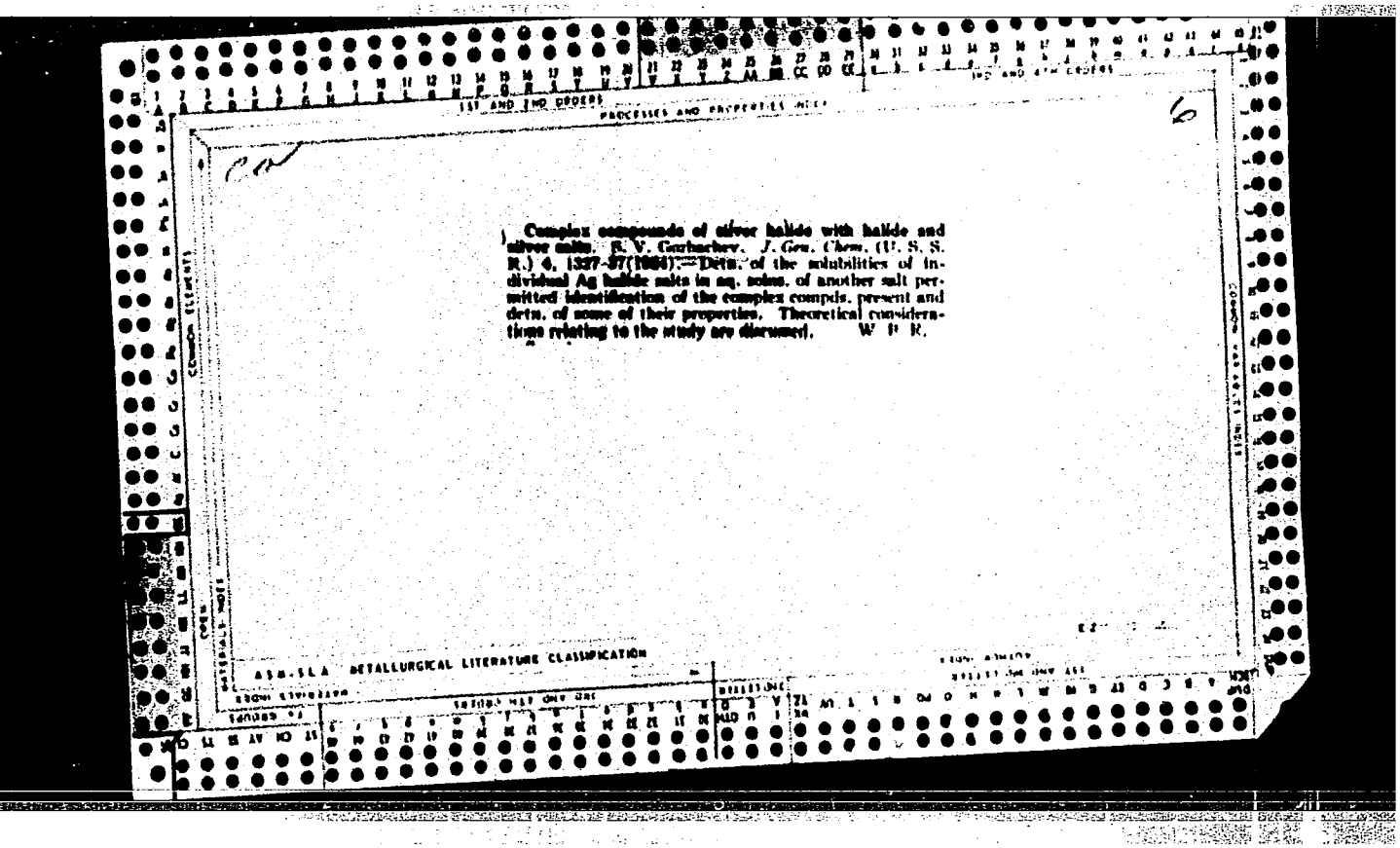
Characteristic functions of thermodynamics. S. V. Gorbachev. *J. Phys. Chem.* (U. S. S. R.) 2, 823-6(1931).—Conditions under which G in $\Delta G = \Delta U - \Delta F$ is a max. and F a min. are discussed. F. H. Rathmann

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Determination of reducing substances of different degrees of activity and of iodides in their presence. S. V. Gorbachev and I. A. Kasatkina. *J. Applied Chem* (U. S. S. R.) 4, 520-2(1931); cf. *C. A.* 24, 4240.—Det. in one portion of the soln. the total quantity of substances whose oxidation products have a potential equal or smaller than that of ICl. Remove iodides from another portion with AgCl and repeat the titration. Det. the iodide by difference.

V. Kalichevsky



Complex compounds of silver halide with halide and silver salts. B. V. Gorbachev. *J. Gen. Chem.* (U. S. S. R.) 4, 1327-37(1934).—Data of the solubilities of individual Ag halide salts in aq. solns. of another salt permitted identification of the complex compds. present and data of some of their properties. Theoretical considerations relating to the study are discussed. W. P. R.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

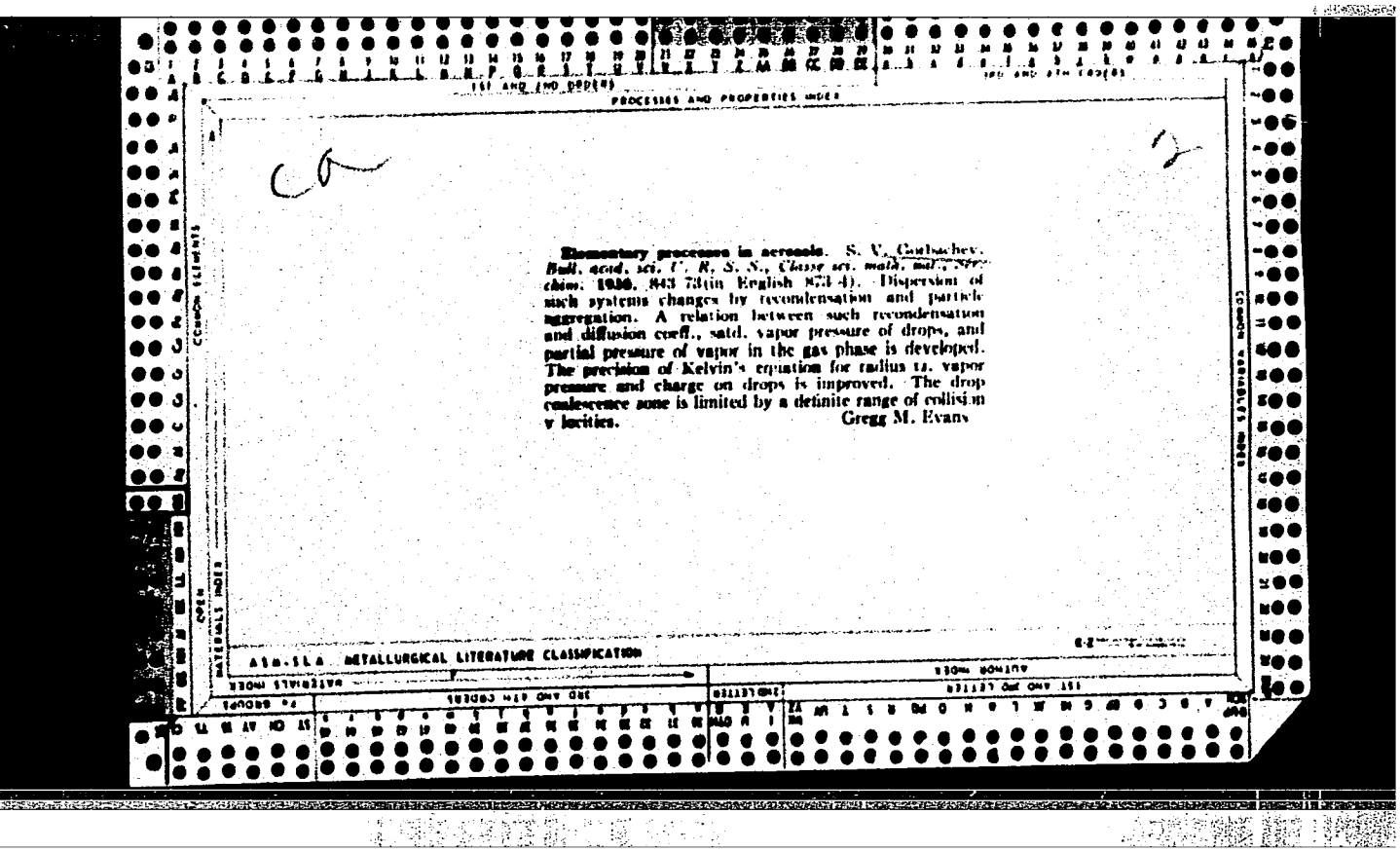
PROCESSES AND PROPERTIES INDEX

0X

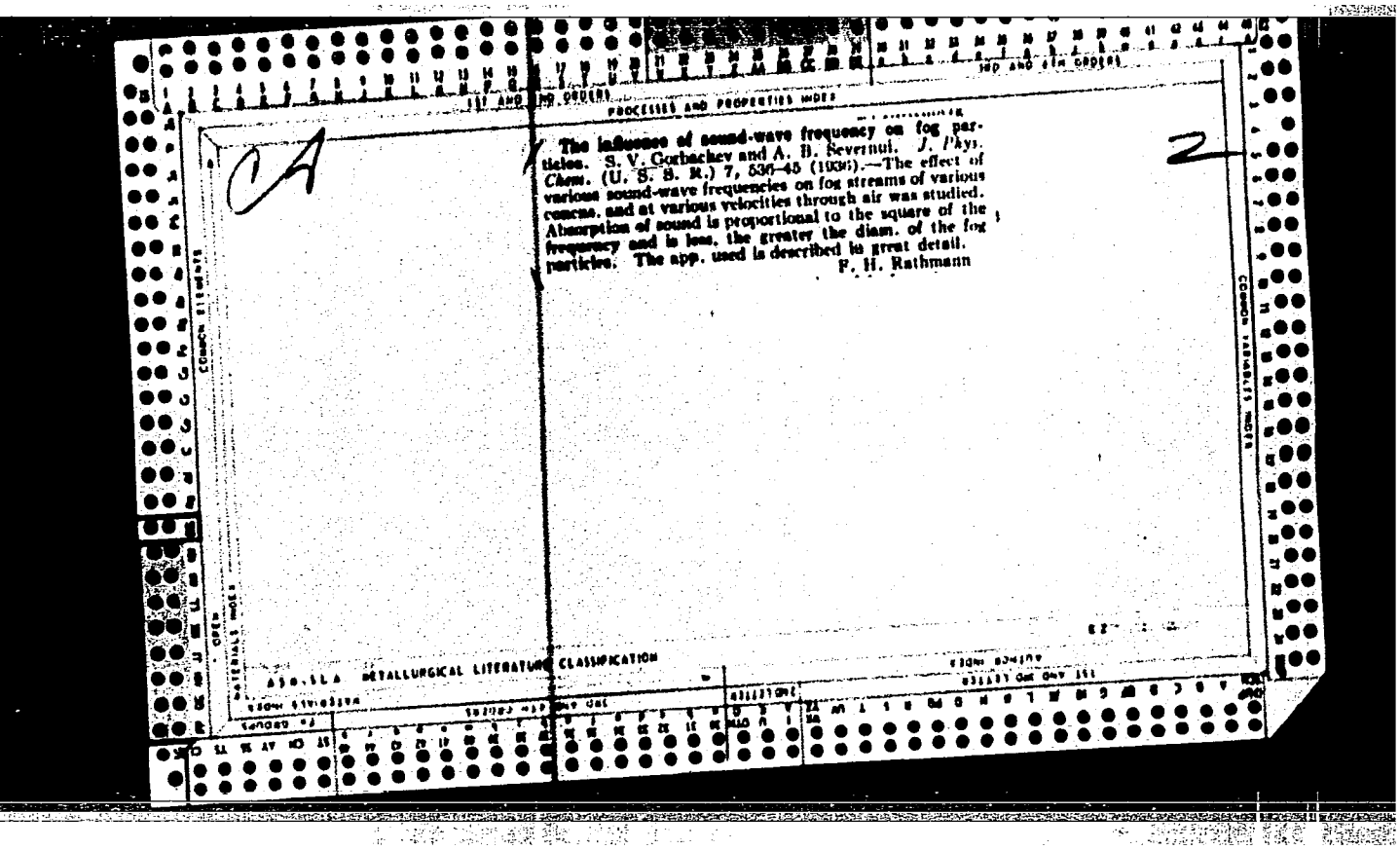
2

Vapor [illegible] **of anabasine and nicotine.** S. V. Gorbachev. [illegible] *Applied Chem.* (U. S. S. R.) 7, 384-91 (1934). The [illegible] vapor-pressure data, were made by detg. the b. ps. in a [illegible] "ebulliometer" constructed by G. (description is given), and [illegible] pressures of anabasine and nicotine within the [illegible] range of 100-250° were found. The exptl. results [illegible] quite in agreement with the Kistyakowskii [illegible], which is for anabasine $\log P = \log T - (2886.6/T)$ [illegible] 1.9143 and for nicotine $\log P = \log T - (2605.4/T)$ [illegible] 1.9125. Various other equations were tried in the [illegible], and were found unsuitable for this data. The [illegible] is described. A. A. B.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



Elementary processes in aerosols. S. V. Gaibacher. *Bull. acad. sci. U. R. S. S., Classe sci. math., nat., Sér. chim.* **1940**, 843-73(in English 873-4). Dispersion of such systems changes by recondensation and particle aggregation. A relation between such recondensation and diffusion coeff., satd. vapor pressure of drops, and partial pressure of vapor in the gas phase is developed. The precision of Kelvin's equation for radius vs. vapor pressure and charge on drops is improved. The drop coalescence zone is limited by a definite range of collision velocities.
Gregg M. Evans



CA

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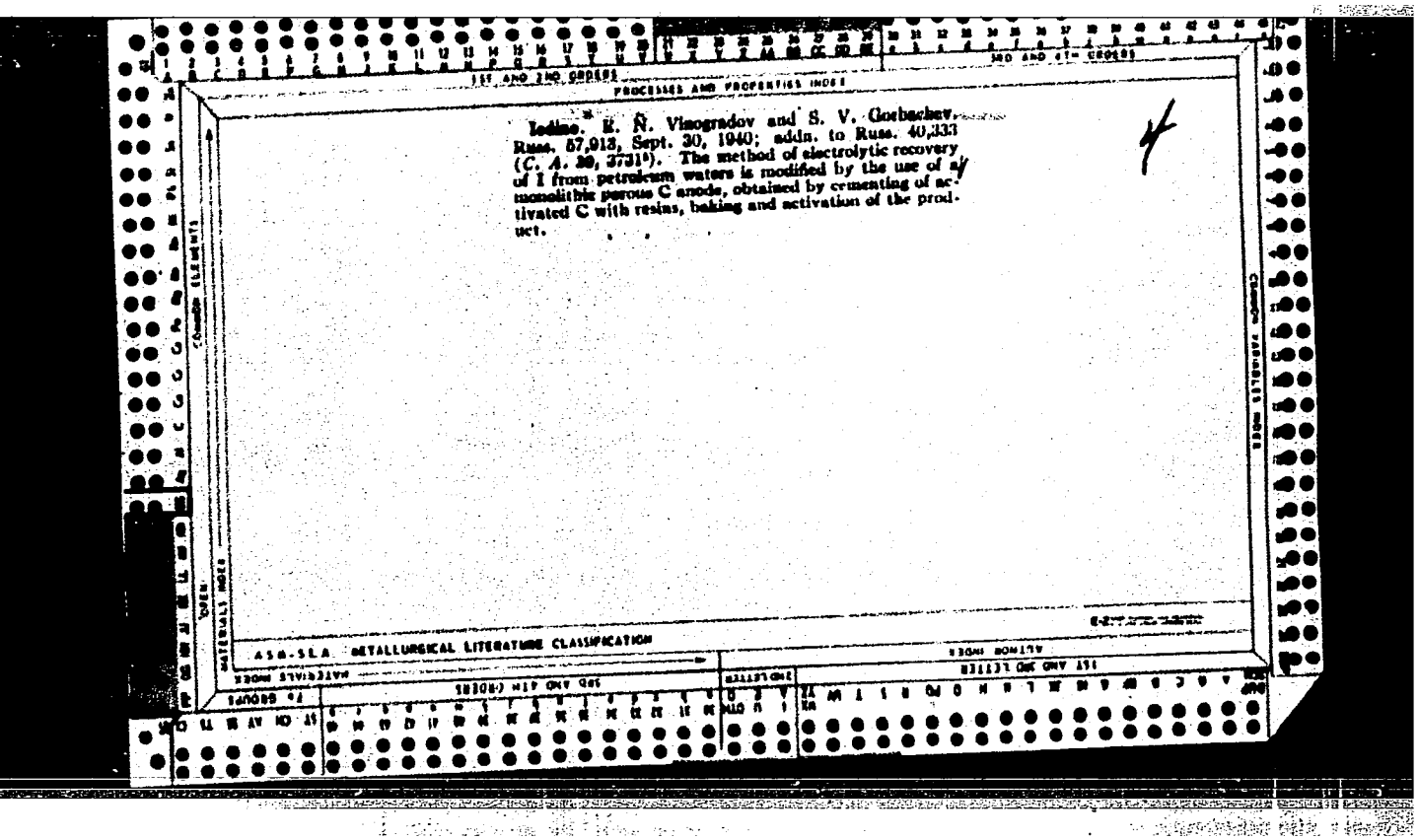
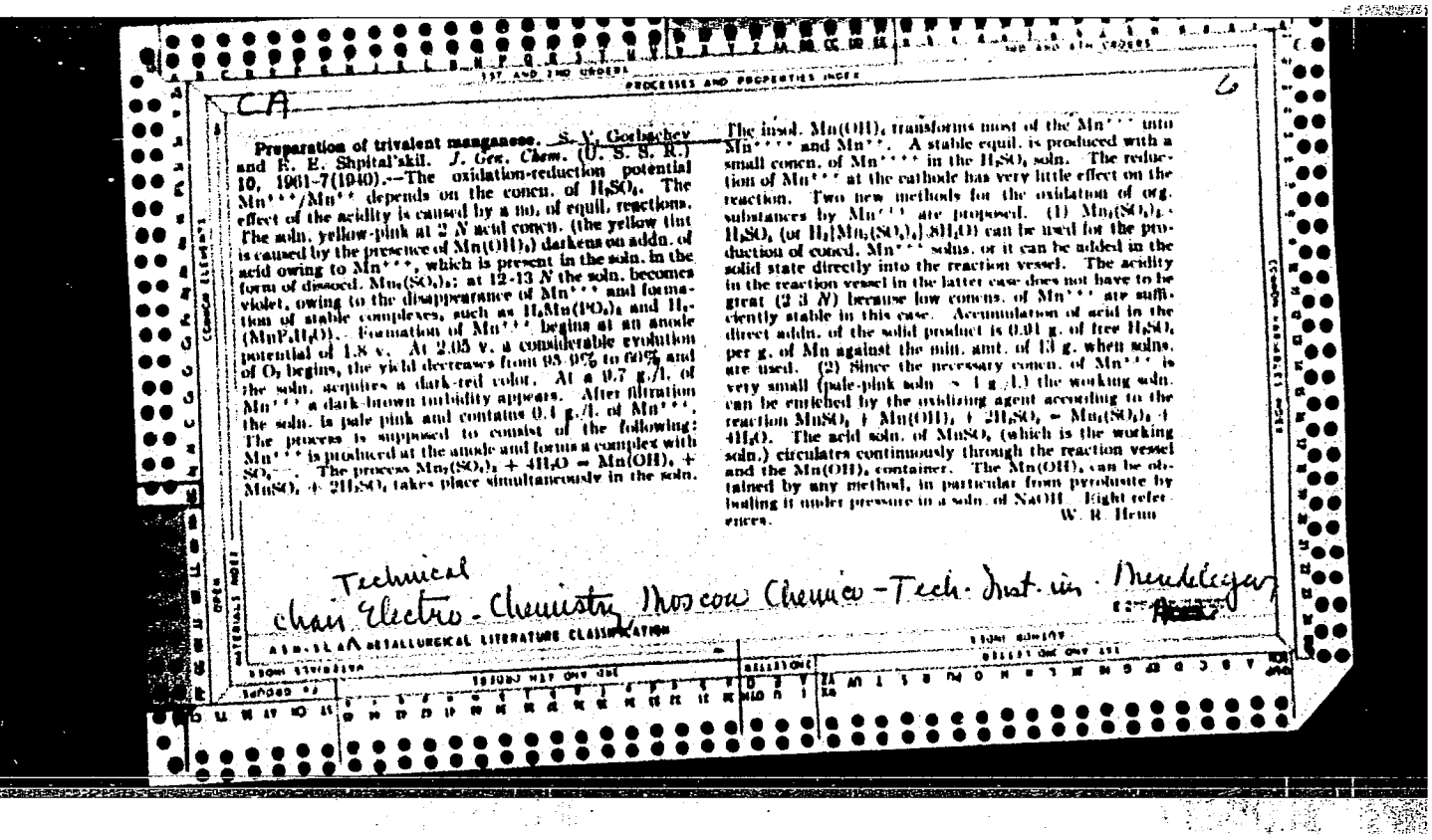
PROCESSES AND PROPERTIES INDEX

The influence of sound-wave frequency on fog particles. S. V. Gorbachev and A. B. Severnui. *J. Phys. Chem.* (U. S. S. R.) 7, 536–45 (1936).—The effect of various sound-wave frequencies on fog streams of various concns. and at various velocities through air was studied. Absorption of sound is proportional to the square of the frequency and is less, the greater the diam. of the fog particles. The app. used is described in great detail.
P. H. Rathmann

A50-51A METALLURGICAL LITERATURE CLASSIFICATION



Iodine. E. N. Vinogradov and S. V. Gorbachev, Russ. 57,913, Sept. 30, 1940; addn. to Russ. 40,333 (*C. A.* **38**, 3731[9]). The method of electrolytic recovery of I from petroleum waters is modified by the use of a monolithic porous C anode, obtained by cementing of activated C with resins, baking and activation of the product.



CA

Preparation of trivalent manganese. S. V. Gorbachev and E. E. Shpital'skii. *J. Gen. Chem.* (U. S. S. R.) 10, 1961-7(1940).—The oxidation-reduction potential Mn^{+++}/Mn^{++} depends on the concn. of H_2SO_4. The effect of the acidity is caused by a no. of equil. reactions. The soln. yellow-pink at 2 *N* acid concn. (the yellow tint is caused by the presence of $Mn(OH)_3$) darkens on addn. of acid owing to Mn^{+++}, which is present in the soln. in the form of dissocd. $Mn_2(SO_4)_3$; at 12-13 *N* the soln. becomes violet, owing to the disappearance of Mn^{+++} and formation of stable complexes, such as $H_3Mn(PO_4)_2$ and $H_3(MnP_2H_4O)$. Formation of Mn^{+++} begins at an anode potential of 1.8 v. At 2.05 v. a considerable evolution of O_2 begins, the yield decreases from 93-97% to 60% and the soln. acquires a dark-red color. At a 0.7 g./l. of Mn^{+++} a dark-brown turbidity appears. After filtration the soln. is pale pink and contains 0.4 g./l. of Mn^{+++}. The process is supposed to consist of the following: Mn^{+++} is produced at the anode and forms a complex with SO_4^{--}. The process $Mn_2(SO_4)_3 + 4H_2O = Mn(OH)_3 + MnSO_4 + 2H_2SO_4$ takes place simultaneously in the soln. The insol. $Mn(OH)_3$ transforms most of the Mn^{+++} into Mn^{++++} and Mn^{++}. A stable equil. is produced with a small concn. of Mn^{++++} in the H_2SO_4 soln. The reduction of Mn^{+++} at the cathode has very little effect on the reaction. Two new methods for the oxidation of org. substances by Mn^{+++} are proposed. (1) $Mn_2(SO_4)_3$ + H_2SO_4 (or $H_3[Mn_2(SO_4)_4].8H_2O$) can be used for the production of concd. Mn^{+++} solns. or it can be added in the solid state directly into the reaction vessel. The acidity in the reaction vessel in the latter case does not have to be great (2-3 *N*) because low concns. of Mn^{+++} are sufficiently stable in this case. Accumulation of acid in the direct addn. of the solid product is 0.01 g. of free H_2SO_4 per g. of Mn against the min. amt. of 1.3 g. when solns. are used. (2) Since the necessary concn. of Mn^{+++} is very small (pale-pink soln. ~ 1 g./l.) the working soln. can be enriched by the oxidizing agent according to the reaction $MnSO_4 + Mn(OH)_3 + 2H_2SO_4 = Mn_2(SO_4)_3 + 4H_2O$. The acid soln. of $MnSO_4$ (which is the working soln.) circulates continuously through the reaction vessel and the $Mn(OH)_3$ container. The $Mn(OH)_3$ can be obtained by any method, in particular from pyrolusite by boiling it under pressure in a soln. of NaOH. Eight references.

W. R. Henn

Technical
Chair Electro-Chemistry, Moscow Chemico-Tech. Inst. im. Mendeleyev

CA 4

Effect of temperature on the rate of electrolysis. S. V. Gorbachev (Mendeleev Chem.-Tech. Inst., Moscow). *Zhur. Fiz. Khim.* 24, 888-98(1950).—The methods of chem. kinetics cannot be applied directly to all processes occurring during electrolysis, as is shown by the temp. dependence of these processes. The first one is the concn. polarization for which a formula is derived by integrating Fick's equation and detg. the integration consts.: $C_0 - C = In_a\sqrt{t}f(-x^2/4Dt)/2nF\sqrt{\pi D}$ (1) where C_0 is the initial concn., I the current, n the cation valency, t the time, x the distance, n_a the anion transport no., D the diffusion coeff. Substituting the value of C into Nernst's equation, one gets formula (2). By measuring C as a function of x for various t, and E as a function of t for various C, (1) and (2) are verified in an electrolyzed $ZnSO_4$ soln. Introducing into (2) the polarization potential $\Delta E = E_{pol} - E_{rev}$, one gets: $I = 2nFC_0\sqrt{\pi D}[1 - (f)(\Delta EnF/RT)]/(1 - n_a)\sqrt{t}$ (3). Neglecting the function (f) in (3) and setting $D_T = D_{\infty}$, one gets: $\ln I = A_1 - Q/2RT$ (4), where Q is the activation energy for viscous flow in the soln. Electrolysis of a 0.1 M $NaNO_3$ soln. between 0 and 100° gives a straight line in a plot ($\log I$, $1/T$), the effective activation energy being 502 cal. The second process is the chem. polarization for which chem. kinetics predict a relation similar to (4) but with much higher values of the effective activation energy E. Straight lines in ($\log I$, $1/T$) diagrams are obtained for the anodic (on Pt) oxidation of benzene in alc. aq. soln. (E = 21370), chlorides in 3 M NaCl and 0.1 M NaOH soln. (E = 11,025) and oxalic acid (E = 7940). A third possible process is the polarization due to metallic electrocrystn. Taking into account the formation of the new phase, one gets a different relation between $\log I$ and $1/T$; no straight line is obtained, but a curve presenting a max. at $T = T_m$ and $I = I_m$. Data obtained by electrolyzing a 0.1 M $CuSO_4$ soln. at ΔE = 0.0271, 0.0480, and 0.0580 v. give a curve which is fitted by: $\log(I/I_m) = 3\alpha\log(T_m/T) - 0.4343\,T_m/T + 0.4343$.

Michel Boudart

CA

Autocatalytic phenomena in the electrochemical oxidation of aniline. N. B. Khomutov and S. V. Gorbachev (D. I. Mendeleev Chem.-Tech. Inst., Moscow). *Zhur. Fiz. Khim.* 24, 1101-6(1950).—Investigation of the kinetics of the electrochem. oxidation of $PhNH_2$ indicates that the reaction is autocatalytic and occurs by an oxidizing polymerization. Paul W. Howerton

GORBACHEV, S. V.
PHASE I

TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 740 - I

BOOK Call No.: AF51006

Authors: IZGARYSHEV, N. A., GORBACHEV, S. V.
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PURPOSE: This monograph is intended as a textbook for students of chemical technology. It may also be helpful for engineers and technicians in the field of electrochemistry and electrochemical processes.

TEXT DATA
Coverage: The fundamentals of theoretical electrochemistry are discussed here: Mendeleyev's hydrate theory of solutions, the flow of the current through electrolyte solutions, the theory of strong electrolytes and its adaptation, the phenomena of hydration and solvation of ions, the theory of the origin of electromotive forces, the theories of electrocapillary effects, and the

NOTE: See card for IZGARYSHEV, N. A. for page of the abstract

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USSR/Chemistry - Chlorine Jul 51

"Effect of Temperature on the Rate of the Process of Electrolytic Evolution of Chlorine," S. V. Gorbachev, N. P. Zhuk, Chem-Technol Inst imeni Mendeleyev, Moscow

"Zhur Fiz Khim" Vol XXV, No 7, pp 841-853

Obtained data from investigation of anodic evolution of Cl_2 at Pt-Rh electrode for wide range of electrolyte concns and cd which cannot be fully reconciled with any existing theory. Established linear dependence between log of cd and reciprocal of temp over wide polarization range. Calcd activation energy of process under different conditions. 206T26

USSR/Chemistry - Chlorine (Contd) Jul 51

Making possible detn of nature of polarization (chem or concn). Discusses effect of polarization on activation energy. Proposes anodic reaction mechanism to correspond with obtained data.

206T26

GORBACHEV, S. V.