GRIGOR'YEV, A.V.; SHIROKOV, A.P.

Construction parameters of a disk cutter with radially disposed cutting parts. Trudy KGMI no.13:241-248 '58 (publ. '59). (MIRA 13:11)
(Cutting machines)

GRIGOR'YEV, Aleksey Mikhaylovich

GRIGOR'YEV, Aleksey Mikhaylovich (Kazan' Technological Inst imeni Kirov), Academic degree of Doctor of Technical Sci, based on his defense, 19 April 1955, in the Council of the Moscow Heat Inst, of his dissertation entitled: "Problems of Interaction of Machines with Heat Strata." For the Academic Degree of Doctor of Sciences.

SO: Byulleten' Ministerstva Vysshego Obrazovaniya SSSR, List No. [illegible], 16 March 1956, Decision of Higher Certification Commission Concerning Academic Degrees and Titles

JPRS 512

SOV/124-57-4-4780

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 4, p 130 (USSR)

AUTHORS: Grigor'yev, A.M., Bulygin, V. Ya., Pleshchinskiy, B. I.

TITLE: A Photoelasticity Method for the Investigation of Slopes and Drains (K issledovaniyu otkosov i dren metodom fotouprugosti)

PERIODICAL: Tr. Kazansk. khim.-tekhnol. in-ta, 1955, Nr 19-20, pp 145-154

ABSTRACT: The paper adduces data on the influence of the geometrical parameters of slopes and the depths of drains on the character of the stress distribution therein. The investigations were made by the photoelastic method. The models for the investigations were prepared from photoelastic materials of the IM-44 type. Embankment slopes of canals 1000 mm deep were model-tested with a variation in the angle of the slope from 30° to 90° in increments of 5°. Relationships of the bearing capacity of the canal in terms of the change of its depth with a constant slope angle $\phi = 45^{\circ}$ were obtained. Rectangular-section drains, having parameters that varied with height, were also investigated. The model of a circular widening 300 mm in diameter was simulated at the bottom of the drain. The load was applied in the form of the distributed pressure of a caterpillar model at various

Card 1/2

A Photoelasticity Method for the Investigation of Slopes and Drains

distances from the edge of the drain. The above-mentioned investigations made it possible for the authors to recommend optimum parameters for canals and drains to avoid the danger of a collapse of their edges during excavation by machines equipped with caterpillar treads. Bibliography: 19 references.

B. M. Zuyev

123-1-1886

Translation from: Referativnyy Zhurnal, Mashinostroyeniye, 1957, Nr 1, p. 272 (USSR)

AUTHORS: Grigor'yev, A.M., Shitikov, B.V.

TITLE: Operational Efficiency of Vertical High-speed Worm Conveyer (K voprosu o proizvoditel'nosti vertikal'nogo bystrokhodnogo shneka)

PERIODICAL: Tr. Kazansk. khim-tekhnol. in-ta, 1955, Nr 19-20, pp. 155-165

ABSTRACT: Bibliographic entry.

Card 1/1

Grigor'yev, A.M.

3-3-11/40

AUTHOR: Grigor'yev, A.M., Doctor of Technical Sciences

TITLE: A letter to the editor on the problem of instruction in "Machine Parts"

PERIODICAL: Vestnik Vysshey Shkoly, March 1957, # 3, p 51-53 (USSR)

ABSTRACT: With reference to Professor N.A.Spitsyn's article in this journal, # 6, 1956, the author expresses the opinion that the supply of instructional literature will considerably improve training in "Machine Parts". The higher technical schools have at present 2 training manuals - one written by Professor V.A.Dobrovol'skiy and the other by an authors' collective under the editorship of Professor N.I.Kolchin. The author maintains that this is by far an insufficient number of manuals and that quite acceptable manuals could be prepared by the teaching personnel of the respective professorial chairs. He further claims that atlasses of Soviet and foreign machine tools, automats, textile machines, of agricultural machine building, power machine construction, transport and heavy machine construction etc. are not available and states that the Ministry of Higher Education should

Card 1/2

satisfy the schools' need for such aids, and to supplement the book market with writings of foreign authors on machine construction.

ASSOCIATION: Kazan' Chemico-Technical Institute(Kazanskiy khimiko-tekhnologicheskiy institut)

AVAILABLE: Library of Congress

Card 2/2

GRIGOR'YEV, A.M., inzh

Protective screen for vertical milling machines. Mont. i spets. rab. v stroi. 24 no.10:21 '62. (MIRA 15:10)
(Milling machines)

GRIGOR'YEV, A.M., inzh.

Improving working conditions at the Chebarkul' Repair and Machinery Plant. Mont. i spets. rab. v stroi. 25 no.3:23-24 Mr '63. (MIRA 16:2)

(Chebarkul machinery industry—Hygienic aspects)

L 65038-65 EWP(e)/EWT(m)/EPF(c)/EWP(1)/T/EWP(t)/EWP(k)/EWP(z)/EWP(b)/ETC(m)/EWP(w)
JD/WW/DJ/WH

ACCESSION NR: AP5020775 UR/0226/65/000/008/0082/0086

AUTHOR: Zozulya, V. D.; Grigor'yev, A. M.

TITLE: Choice of lubricating oils for graphite iron sliding bearings

SOURCE: Poroshkovaya metallurgiya, no. 8, 1965, 82-86

TOPIC TAGS: lubrication, lubricating oil, graphite, iron, roller bearing, friction coefficient, bearing steel/45 steel, ZhGr-20PF bearing

ABSTRACT: Several types of industrial lubricating oil were tested in conjunction with graphite iron bearings. In addition to the friction coefficient, the specific pressure at which the oil film or the friction surfaces are destroyed, the wear of the rubbing pieces, the temperature in the friction zone, and the dependence on the type of oil were also determined. The tests were made on an Mi-1-M friction machine by the standard method, at a sliding rate of 0.9 m/sec. The friction pair consisted of rollers made of normalized 45 steel and an iron graphite bearing of Type ZhGr-20PF, of ferritic-pearlitic structure with free inclusion of graphite. During the tests, the temperature in the friction zone and the friction coefficients

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ACCESSION NR: AP5020775

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were determined as a function of the specific pressures. The period of time between loadings was determined by stabilization of the moment of friction and the temperature. The amount of lubricant fed to the friction zone was 15 drops per minute. It was observed that the bearing capacity of iron graphite bearings lubricated with unpurified lubricants was from one and one-half to two times greater than with lubrication with purified distillates. This is explained by the presence in the unpurified products of oxygen containing products which, together with the graphite bearing, form a pasty lubricant which safely separates the friction surfaces. Further increase of the specific pressures leads to a sharp increase in the friction coefficients and the temperature. Under these circumstances, the authors believe that the reason for the worsening of the antifriction properties must be sought in the loss of capacity of the lubricating layer rather than in the materials of construction. Orig. art. has: 5 figures

ASSOCIATION: Institut problem materialovedeniya AN UkrSSR (Institute of Problems of Materials Processing, AN UkrSSR)

SUBMITTED: 19Mar64 ENCL: 00 SUB CODE: FP, IE

NR REF SOV: 008 OTHER: 000

Powder Metallurgy

Card 2/2

SOV-120-58-3-24/33

AUTHORS: Grigor'yev, A. M., Kuzmin, L. P., Tsybina, N. V.

TITLE: Measurement of Pressures from 0.1 to 5 mm Hg Using a Thermocouple Gauge (Izmereniye davleniy ot 0.1 do 5 mm rt. st. termoparnym manometrom)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1958, Nr 3, pp 97-99 (USSR)

ABSTRACT: A simple hot-wire gauge working at wire temperatures below 150°C is fitted with a thermocouple; the wire temperature is kept constant by manual adjustment. Fig.1 shows the theoretical circuit, and Fig.2 shows the mean and extreme range in the calibration curves for 7 such gauges working in dry air over the range 10^{-2} to 5 mm Hg. Fig.3 gives the detailed practical circuit, with all component values. Fig.4 shows the measured characteristics (lines) and calculated points for argon (1), air (2), neon (3), helium (4) and Hydrogen (5). The calculated points are derived using Smoluchovsky's equation (Ref.3), and agree very well with the experimental curves. The table gives values of the parameters in the Smoluchovsky equation

Card 1/2

SOV-120-58-3-24/33

Measurement of Pressures from 0.1 to 5 mm H_g Using a Thermocouple Gauge

calculated relative to air for the other gases. The paper contains 4 figures and 1 table, plus 6 references, 2 of which are Soviet

SUBMITTED: September 23, 1957.

1. Pressure---Measurement 2. Pressure gages--Design
3 Thermocouples--Applications

Card 2/2

GRIGORYEV, A. M.

"Methods and Equipment for the Measurement of Low Pressures" a paper read at the International Metallurgists' Conference, Moscow 26-30 June 56

SO: CS-3,302,240, 11 Jan 57.

21(8) PHASE I BOOK EXPLOITATION SOV/2117

Soveshchaniye po eksperimental'noy tekhnike i metodam vysokotempera-turnykh issledovaniy, 1956

Eksperimental'naya tekhnika i metody issledovaniy pri vysokikh temperaturakh; trudy soveshchaniya (Experimental Techniques and Methods of Investigation at High Temperatures; Transactions of the Conference on Experimental Techniques and Methods of Investigation at High Temperatures) Moscow, AN SSSR, 1959. 789 p. (Series: Akademiya nauk SSSR. Institut metallurgii. Konsiliya po fiziko-khimicheskim osnovam protsessov stali) 2,200 copies printed.

Resp. Ed.: A.M. Samarin, Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: A.I. Bashtriter.

PURPOSE: This book is intended for metallurgists and metallurgical engineers.

COVERAGE: This collection of scientific papers is divided into six parts: 1) thermodynamic activity and kinetics of high-temperature processes 2) constitution diagrs studies 3) physical properties of liquid metals and slags 4) new analytical methods and production of pure metals 5) pyrometry, and 6) general questions. For more specific coverage, see Table of Contents.

IV. NEW METHOD OF ANALYSIS AND PRODUCTION OF PURE METALS

Ban'shikov, N.I., and R.Ye. Rybchinskiy. The MAG-3 Mass Spectrometer for Continuous Analysis of Gaseous Mixtures 441
The MAG-3 mass spectrometer is in effect an ionization manometer, capable of measuring the partial pressure of the components of a gaseous mixture with a sensitivity of the order of 10^{-6} micron Hg.

Grigor'yev, A.M. Methods and Apparatus for Measurement of [illegible] 446

Fedotov, V.P. Determination of Nitrogen in Metals and Alloys 454

Ruzerin, G.V., and A.I. Kholodov. Instrument for Rapid Determination of Hydrogen Content in Hard Steel 461

Borisov, A.Ya. An Instrument of New Design for Determining the Hydrogen Content in Steel by Hot Extraction in Vacuum 465
The design of the instrument permits elimination of the open surface of mercury and a decrease in the actual quantity of mercury, thus lessening the danger of mercury poisoning. The temperature of the specimen can be measured with a thermocouple permitting more uniform determinations. The design of the instrument makes it possible to increase the weight of the specimen up to 35 kg, thereby increasing the accuracy of the determination. A special outlet makes possible the analysis of the extracted gas. A single determination can be completed in 30 minutes.

GREGORYEV, A.M.

8 Copies 1+2

PHASE I BOOK EXPLOITATION SOV/6270

Samarin, A. M., ed., Corresponding Member, Academy of Sciences USSR.

Vakuumnaya metallurgiya (Vacuum Metallurgy). Moscow, Metallurgizdat, 1962. 515 p. Errata slip inserted. 3200 copies printed.

Ed. of Publishing House: V. I. Ptitsyna; Tech. Ed.: L. V. Dobuzhinskaya.

PURPOSE: This book is intended for engineering personnel of metallurgical and machine-building plants, scientific research workers and teachers, and aspirants and students at schools of higher technical education.

COVERAGE: Thermodynamic fundamentals of vacuum application in various metallurgical processes and problems of melting in vacuum induction and arc furnaces are discussed. Procedures of casting large ingots and vacuum degassing of steel in ladles are described, along with designs of metallurgical vacuum equipment. Problems connected with the use of mechanical and steam-ejector vacuum pumps, and with the

Card 1/7

designing, calculation, and operation of vacuum systems, are reviewed in detail, along with vacuum-measuring techniques. No personalities are mentioned. Each article is accompanied by references, mostly Soviet.

TABLE OF CONTENTS:

Card 2/7 4/12 2/3

AVAILABLE: Library of Congress

SUBJECT: Metals and Metallurgy

Card 7/7

DV/wb/jk
3/28/63

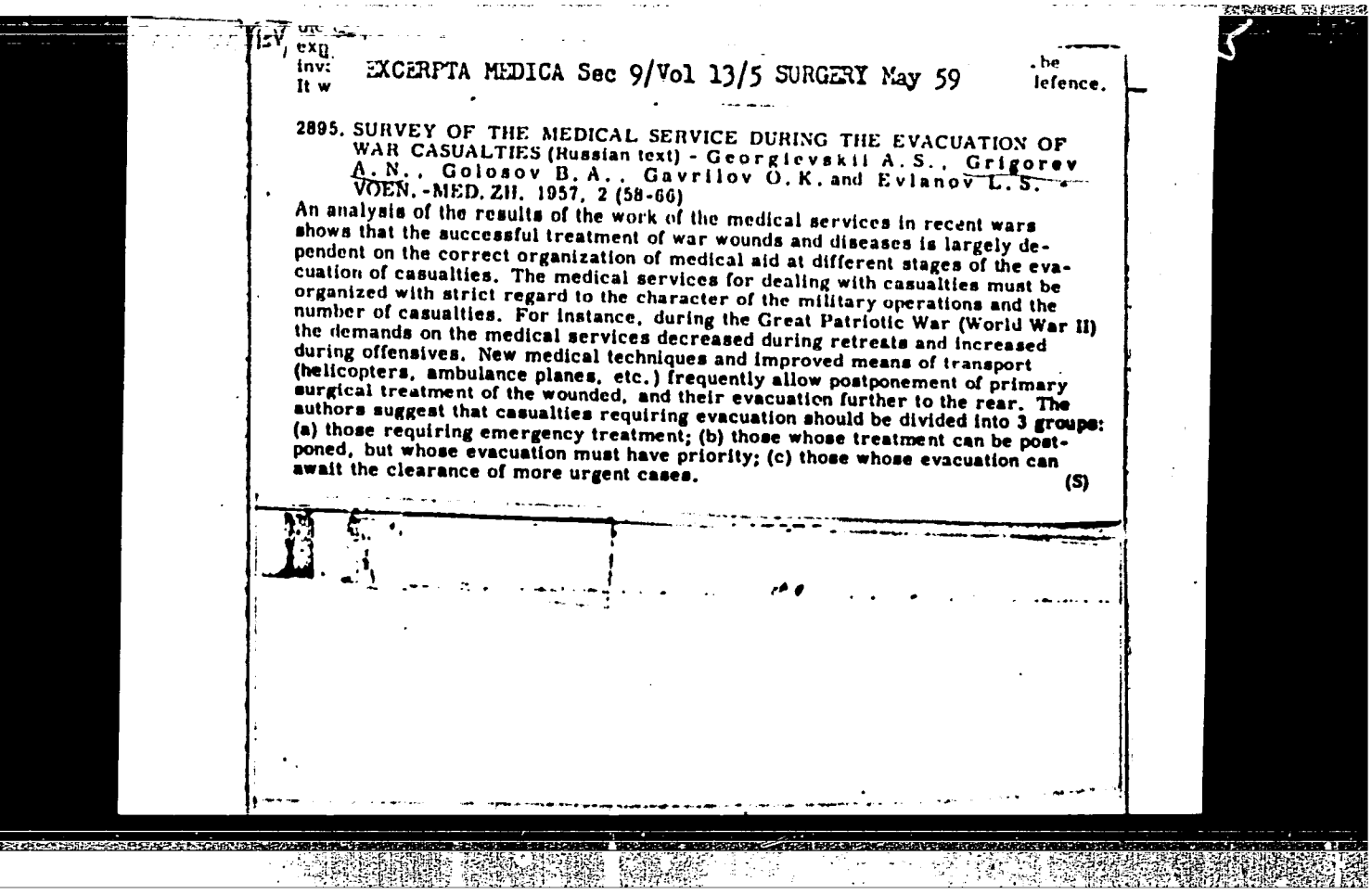
ARTOBOLEVSKIY, Sergey Ivanovich, prof. [deceased]; YUDIN, V.A., prof., retsenzent; ZINOV'YEV, Vyach., prof., retsenzent; GRIGOR'YEV, A. M., retsenzent; KOZINTSOV, B.P., red.

[Theory of mechanisms and machines] Teoriia mekhanizmov i mashin. Moskva, Vysshaia shkola, 1965. 367 p. (MIRA 18:9)

ZOZULYA, V.D.; GRIGOR'YEV, A.M.

Selection of lubricants for iron-graphite sliding friction bearings. Poroshk. met. 5 no.8:82-86 Ag '65. (MIRA 18:9)

1. Institut problem materialovedeniya AN UkrSSR.



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2895. SURVEY OF THE MEDICAL SERVICE DURING THE EVACUATION OF WAR CASUALTIES (Russian text) - Georgievskii A.S., Grigorev A.N., Golosov B.A., Gavrilov O.K. and Evlanov L.S. VOEN.-MED. ZH. 1957, 2 (58-66)

An analysis of the results of the work of the medical services in recent wars shows that the successful treatment of war wounds and diseases is largely dependent on the correct organization of medical aid at different stages of the evacuation of casualties. The medical services for dealing with casualties must be organized with strict regard to the character of the military operations and the number of casualties. For instance, during the Great Patriotic War (World War II) the demands on the medical services decreased during retreats and increased during offensives. New medical techniques and improved means of transport (helicopters, ambulance planes, etc.) frequently allow postponement of primary surgical treatment of the wounded, and their evacuation further to the rear. The authors suggest that casualties requiring evacuation should be divided into 3 groups: (a) those requiring emergency treatment; (b) those whose treatment can be postponed, but whose evacuation must have priority; (c) those whose evacuation can await the clearance of more urgent cases. (S)

GRIGOR'YEV, A.N., prof., gvardii general-mayor meditsinskoy sluzhby; GAVRILOV, O.K., dotsent, polkovnik meditsinskoy sluzhby; POLYAKOV, L.Ye., dotsent, mayor meditsinskoy sluzhby; LASHKOV, K.V., podpolkovnik meditsinskoy sluzhby

Cybernetics and problems of administration in medical service. Voen.-med.zhur. no.6:76-80 Je '59. (MIRA 12:9)
(CYBERNETICS
in military med. (Rus))
(MEDICINE, MILITARY AND NAVAL
cybernetics in military med. (Rus))

GRIGOR'YEV, Anatoliy Nikitich,[HRIHOR'IEV, Anatolii Mykytovych] (Stanislavskaya oblast'),; DIBROVA, O.T., kand. geogr. nauk, otv. red.; NEZHNYPAPA, V.Ya., red.; KIR'YAKOV, Yu. F., red. kart.; VOLKOVA, N.K., tekhn. red.

[Stanislav Province; a geographical description] Stanislavs'ka oblast'; geografichnyi narys. Vidpovidal'nyi red. O.T.Dibrova. Kyiv, Derzh. uchbovo-pedagog. vyd-vo "Radians'ka shkola," 1957. 109 p.
(MIRA 11:10)

(Stanislav Province--Geography)

GRIGOR'YEV, A.N.; MITROFANOVA, N.D.; MARTYNENKO, L.I.

Stretching vibrations of the metal-nitrogen bond from the data of the infrared spectra of nitrilotriacetates. Zhur.neorg.khim. 11 no.1:213-215 Ja '66.

(MIRA 19:1)

1. Kafedra neorganicheskoy khimii Moskovskogo gosudarstvennogo universiteta imeni M.V.Lomonosova. Submitted March 18, 1965.

[redacted], [redacted].

Reserves for an increased productin in industry. Moskva, Gosnalnizdat, 1943. 39 p.
(Narodnoe khoziaistve na sluzhbe Otechest-venoe voiny) (51-51052)

TS155.G85

[redacted], A.

Neuklonno povyshat' proizvoditel'nost'truda (Relentless [illegible] labor productivity). Moskva, Gospolitizdat, 1954. 62 p.

SO: Monthly List of Russian Accessions, Vol. 7, No. 7, Oct. 1954.

GRIGOR'YEV, A.

Technological progress and the organization of labor. Sots.trud no.1: 33-39 Ja '56. (Technology)(Industrial organization) (MLRA 9:7)

GRIGOR'YEV, A.

Let the labor system measure up to present needs. Sots. trud no.4: 11-14 Ap '57. (MLRA 10:6)

1. Zaveduyushchiy kafedroy ekonomiki truda Moskovskogo gosudarstvennogo ekonomicheskogo instituta.
(Industrial management)

GRIGOR'YEV, A.

To new successes in socialist labor organization. Sots.trud no.10:14-24 O '57. (MIRA 10:11)
(Labor and laboring classes)

PANASHCHENKO, I.P., dots.; CHUNTULOV, V.T., dots.; POGREBINSKIY, A.P., prof.; SPATAR, N.G., dots.; LAUTA, S.P., dots.; USTINOVA, L.A., dots.; KRIVEN', P.V., prof.; FILIPPOV, V.I., dots.; GOLUBEV,V.A. , kand. ekon. nauk; DZYUBKO, I.S., dots.; GRIGOR'YEV,A.N., dots.; ZATSEPILIN, V.G., dots.; TERESHCHENKO, V.F.; LOYBERG, M.Ya., kand. ist. nauk ; ORLIK, Ye.L., red.; KHOKHANOVSKAYA, T.I., tekhn. red.

[Economic history of foreign countries]Ekonomicheskaia istoriia zarubezhnykh stran; kurs lektsii. Kiev, Izd-vo Kievskogo univ. Pt.2.[From the 1870's to the present time]Ot 70-kh godov XIX v. do nastoiashchego vremeni. 1961. 387 p. (MIRA 15:11)

1. Prepodavateli kafedr politicheskoy ekonomii i istorii narodnogo khozyaystva Kiyevskogo instituta narodnogo khozyaystva (for all except Orlik, Khokhanovskaya).

(Economic history)

VASIL'KOVSKIY, S.M., inzh.; GRIGOR'YEV, A.N., inzh.

Power estimation of seeding units. Trakt. i sel'khozmash. no.7:37-39 Jl '65. (MIRA 18:7)

1. Povolzhskaya mashinoispytatel'naya stantsiya.

GRIGOR'EV, A. N.

Analiz balansa zheleznoi dorogi po osnovnoi deiatel'nosti. (Analysis of a financial statement of a railroad in its main lines of activities). 2. izd., perer. i dop. Moskva, Gos. transp. zheleznodor. izd-vo, 1946. 352p.

DLC: HE2741.G85 1946

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

GRIGOR'YEV, A.N.

[Analysis of balances for basic railroad operations] Analiz balansa zheleznoi dorogi po osnovnoi deiatel'nosti. Izd. 3. perer. i dop. Moskva, Transzheldorizdat, 1950. 398 p. (MLRA 8:1)
(Railroads--Accounts, bookkeeping, etc.)

GRIGOR'EV, A. N.

Collection of directives on economic principles of management in the railroad transport industry Moskva, Gos. transp. zhel-dor. izd-vo, 1951. (Mic 55-3957)

Collation of the original, as determined from the film: 831 p.

Microfilm Slavic 457 AC

1. Railroad law - Russia. I. Grigor'ev, A.N. II. Russia (1923- U.S.S.R.) Laws statutes etc.

GRIGOR'YEV, ALEKSANDR NIKOLAYEVICH

GRIGOR'YEV, Aleksandr Nikolayevich; CHERNYSHEV, V.I., redaktor; KHITROV, V.A., tekhnicheskiy redaktor.

[Accounting in various branches of the railroad] Khoziaistvennyy raschet otdeleniia zheleznoi dorogi. Moskva, Gos.transportnoe zheleznodor. izd-vo, 1955. 129 p. (MLRA 8:4)
(Railroads--Accounts, bookkeeping, etc.)

GRIGOR'YEV, A.N.

New cost accounting features for locomotive sheds and track sections. Zhel.dor.transp. 37 no.10:42-44 O '55. (MLRA 9:1)

(Railroads--Cost of operation)

[redacted], Aleksandr Nikolayevich

3/5
75[illegible].1
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ANALIZ KHOZYAYSTVENNOY DEYATEL'NOSTI ZHELEZNOY LOSHADI (PO OBRAZTSOVOY DEYATEL'NOSTI) (ANALYSIS OF THE ECONOMIC OPERATION OF [illegible]) [illegible]O-KVA, TRANS-ZHELDORIZDAT, 1956. 285 p. TABLES.

ALFEROV, A.A.; ARTEMKIN, A.A.; ASHKENAZI, Ye.A.; VINOGRADOV, G.P.; GALKYEV, A.U.; GRIGOR'YEV, A.N.; D'YACHENKO, P.Ye.; ZALIT, N.N.; ZAKHAROV, P.M.; ZOBNIN, N.P.; IVANOV, I.I.; IL'IN, I.P.; KMETIK, P.I.; KUDRYASHOV, A.T.; LAPSHIN, F.A.; MOLYARCHUK, V.S.; PERTSOVSKIY, L.M.; POGODIN, A.M.; RUDOY, M.L.; SAVIN, K.D.; SIMONOV, K.S.; SITKOVSKIY, I.P.; SITNIK, M.D.; TETEREV, B.K.; TSETYRKIN, I.Ye.; TSUKANOV, P.P.; SHADIKYAN, V.S.; ADELUNG, N.N., retsenzent; AFANAS'YEV, Ye.V, retsenzent; VLASOV, V.I., retsenzent; VOROB'YEV, I.Ye., retsenzent; VORONOV, N.M., retsenzent; GRITCHENKO, V.A., retsenzent; ZHEREBIN, M.N., retsenzent; IVLIYEV, I.V., retsenzent; KAPORTSEV, N.V., retsenzent; KOCHUROV, P.M., retsenzent; KRIVORUCHKO, N.Z., retsenzent; KUCHKO, A.P., retsenzent; LOBANOV, V.V., retsenzent; MOROZOV, A.S., retsenzent; ORLOV, S.P., retsenzent; PAVLUSHKOV, E.D., retsenzent; POPOV, A.N., retsenzent; PROKOF'YEV, P.F., retsenzent; RAKOV, V.A., retsenzent; SINEGUBOV, N.I., retsenzent; TERENIN, D.F., retsenzent; TIKHOMIROV, I.G., retsenzent; URBAN, I.V., retsenzent; FIALKOVSKIY, I.A., retsenzent; CHERPYZHEV, B.F., retsenzent; SHEBYAKIN, O.S., retsenzent, SHCHERBAKOV, P.D., retsenzent; GARNYK, V.A., redaktor; LOMAGIN, N.A, redaktor; MORDVINKIN, N.A., redaktor; NAUMOV, A.N., redaktor; POBEDIN, V.F., redaktor; RYAZANTSEV, B.S., redaktor; TVERSKOY, K.N., redaktor; CHERNVATYY, N.S., redaktor; ARSHINOV, I.M., redaktor; BABKLYAN, V.B., redaktor; BERNGARD, K.A., redaktor; VERSHINSKIY, S.V., redaktor; GAMBURG, Ye.Yu., redaktor; DNRIBAS, A.T., redaktor; DOMBROVSKIY, K.I., redaktor; KORNEYEV, A.I., redaktor; MIKHEYEV, A.P., redaktor

(Continued on next card)

ALFEROV, A.A. ---- (continued) Card 2.
MOSKVIN, G.N., redaktor; RUBINSHTEYN, S.A., redaktor; TSYPIN, G.S., redaktor; CHERNYAVSKIY, V.Ya., redaktor; CHERNYSHEV, V.I., redaktor; CHERNYSHEV, M.A., redaktor; SHADUR, L.A., redaktor; SHISHKIN, K.A., redaktor

[Railroad handbook] Spravochnaia knizhka zheleznodorozhnika. Izd. 3-e, ispr. i dop. Pod obshchei red. V.A.Garnyka. Moskva, Gos. transp.zhel-dor. izd-vo, 1956. 1103 p. (MLRA 9:10)

1. Nauchno-tekhnicheskoye obshchestvo zheleznodorozhnogo transporta. (Railroads)

GRIGOR'YEV, Aleksey Nikolayevich; ASLAMAZOV, Gevork Mikaelevich; KUZ'MIN, Sergey Pavlovich. Prinimal uchastiye: POLYAKH, B.S., SARANTSEV, Yu.S., red.; KHITROV, P.A., tekhn.red.

[Railroad tank cars; design, operation, and maintenance] Zheleznodorozhnye tsisterny; ustroistvo, ekspluatatsiia i remont. Moskva, Gos.transp.zhel-dor.izd-vo, 1959. 214 p. (MIRA 12:12)
(Tank cars)

BABELYAN, V.B.; VINNICHENKO, N.G., kand. ekon. nauk; GNEDASH, G.N.; GRIGOR'YEV, A.N.; DANILOV, N.K.; IVANOV, A.P.; IVLIYEV, Ivan Vasil'yevich; POTAPOV, I.A.; TRUBICHIN, M.G., kand.ekon. nauk; TUKHOVITSKAYA, L.K., inzh.; TYVANCHUK, D.P., inzh.; SHERMAN, A.Ya.; SHCHERBAKOV, P.D., inzh.; EVENTOV, G.S.; KRISHTAL', L.I., red.; MAKUNI, Ye.V., tekhn. red.

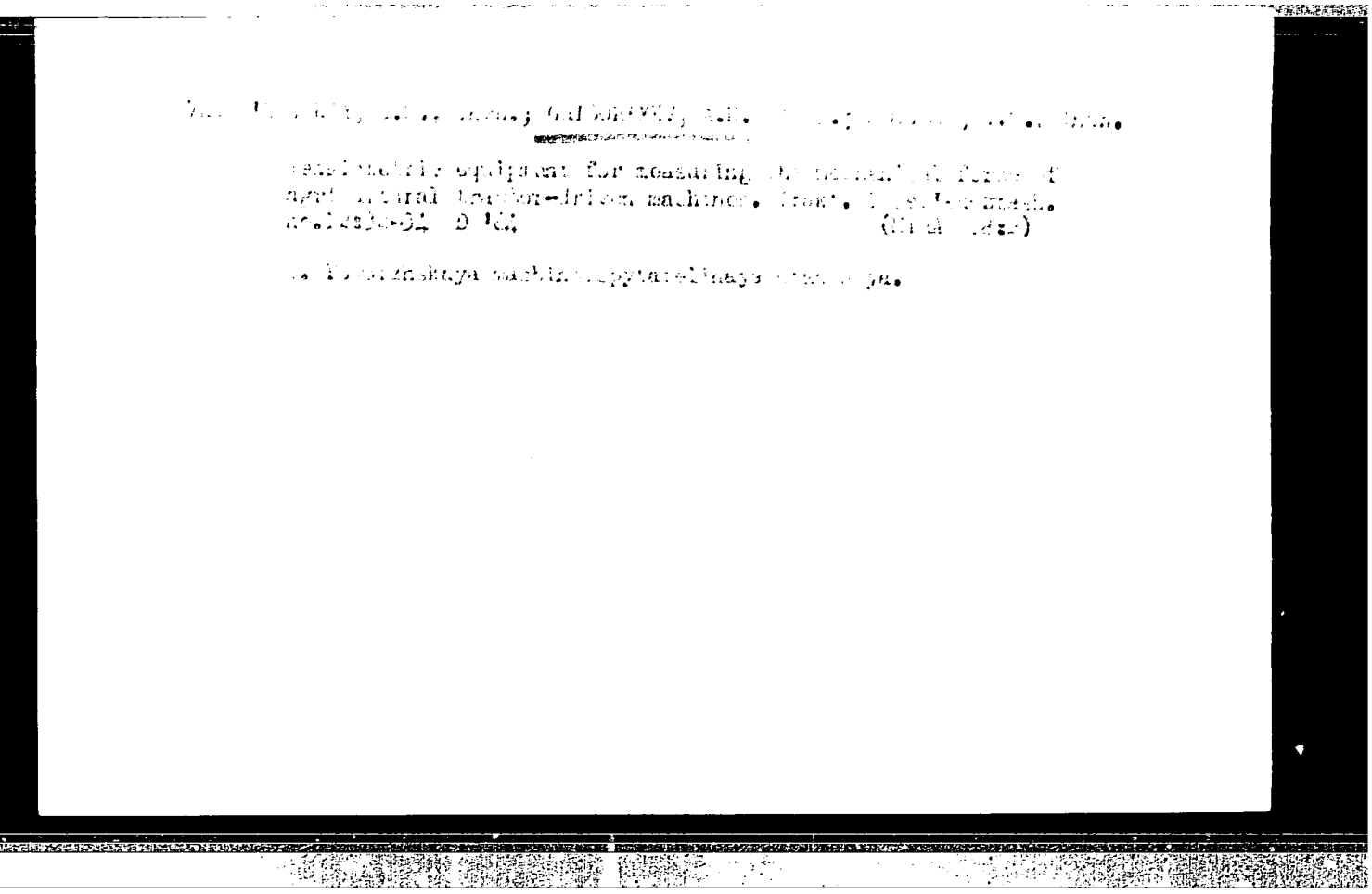
[Financing in railway transportation; manual] Finansirovanie na zheleznodorozhnom transporte; spravochnik. Pod obshchei red. I.V. Ivlieva. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1962. 422 p. (MIRA 15:4)
(Railroads--Finance)

FLEYSHMAN, F.M.; BOBROVA, L.I. Prinimali uchastiye: NEDOPEKIN, G.K.; GRIGOR'YEV, A.N.; USENKO, L.A., tekhn. red.

[Analysis of the production and economic operations of a railroad division; methodological textbook] Analiz proizvodstvenno-khoziaistvennoi deiatel'nosti otdeleniia dorogi; metodicheskoe posobie. Moskva, Transzheldorizdat, 1961. 119 p. (MIRA 15:10)

1. Russia (1923- U.S.S.R.) Ministerstvo putey soobshcheniya. TSentral'nyy nauchno-issledovatel'skiy institut Ministerstva putey soobshcheniya (for Fleyshman, Bobrova). 2. TsPEU (for Nedopekin).

(Railroads--Management)



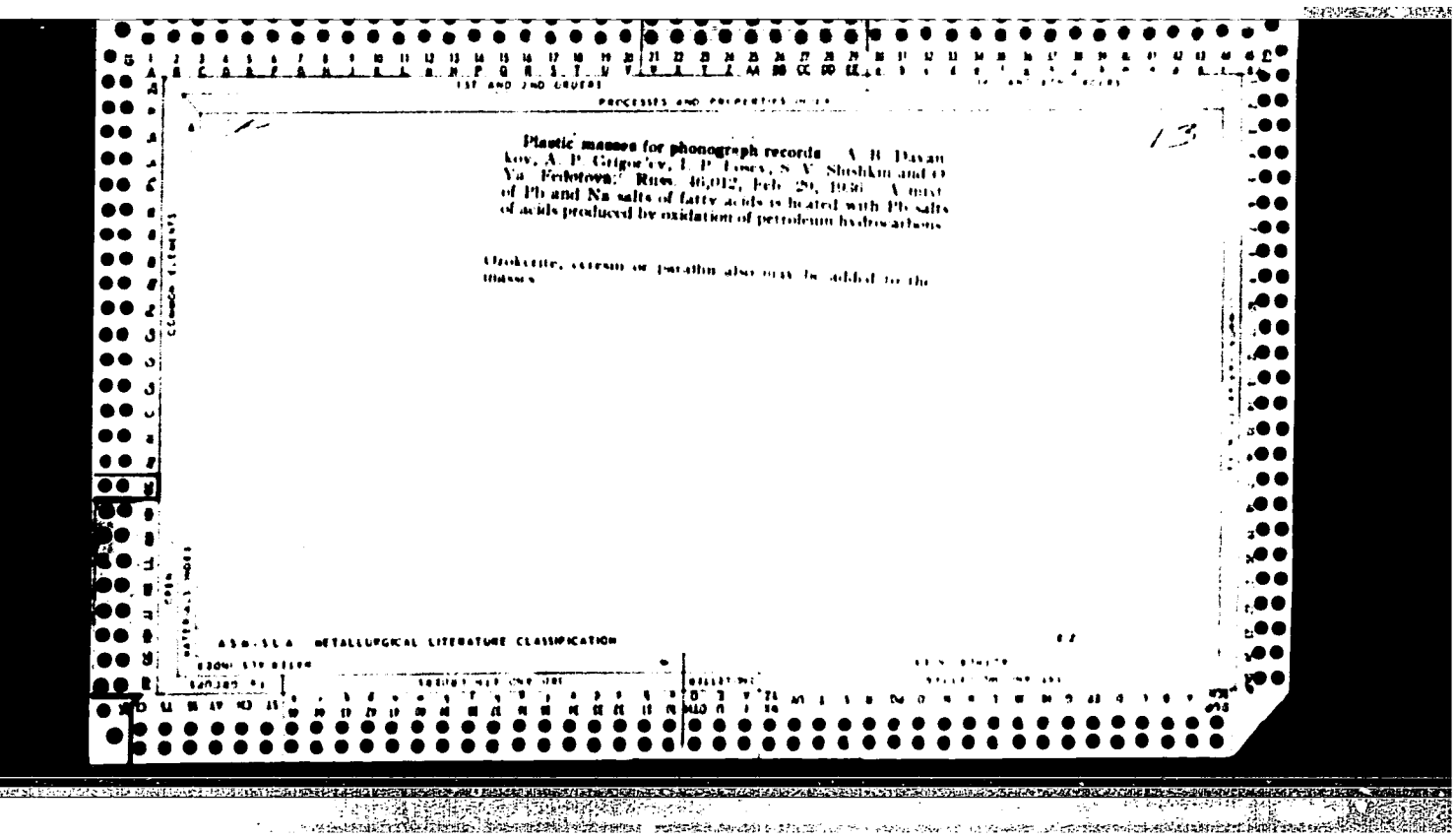
GRIGOR'YEV, Aleksandr Nikolayevich; KALMYCHIN, Ivan Fedorovich; FLEYSHMAN, Feliks Moiseyevich; KOLTUNOVA, M.P., red.

[Analysis of the administrative operations of the line enterprises of a railroad] Analiz khoziaistvennoi deiatel'nosti lineinykh predpriiatii zheleznoi dorogi. Moskva, Transport, 1965. 294 p. (MIRA 18:4)

GRIGOR'YEV, A.P.; NEKRASOV, I.Ya.

Hydrothermal synthesis of minerals of the ludwigite-vonsenite series. Dokl. AN SSSR 151 no.3:671-674 Jl '63. (MIRA 16:9)

1. Institut geologii Yakutskogo filiala Sibirskogo otdeleniya AN SSSR. Predstavleno akademikom V.S.Sobolevym.
(Ludwigite) (Vonsenite)

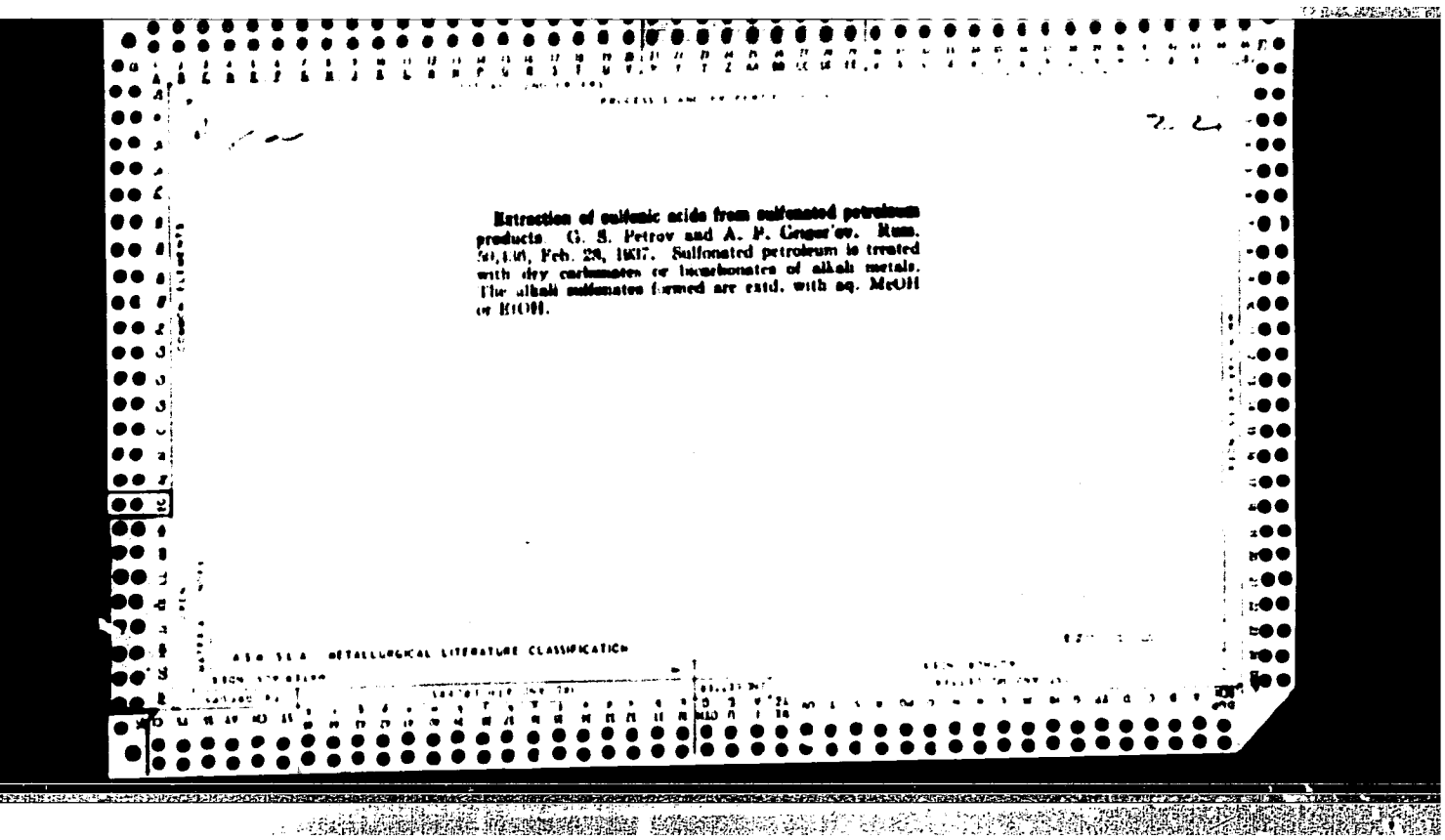


Plastic masses for phonograph records. A. B. Davankov, A. P. Grigor'ev, I. P. Losev, S. V. Shishkin and G. Ya. Fedotova. Russ. 46,012, Feb. 29, 1936. A mixt. of Pb and Na salts of fatty acids is heated with Pb salts of acids produced by oxidation of petroleum hydrocarbons.

Ozokerite, ceresin or paraffin also may be added to the masses.

Separating sulfonic acids of acid sludges. G. S. Petrov and A. P. Ungur'ev. Russ. [illegible], Feb. 28, 1937. Sulfonic acids are pptd. from acid sludges by converting them into Ca salts; these are converted into Na salts through treatment with Na_2CO_3. The mixt. of Na salts is fractionated by adding sol. Ba, Zn, Li, Fe, Mn and Pb salts.

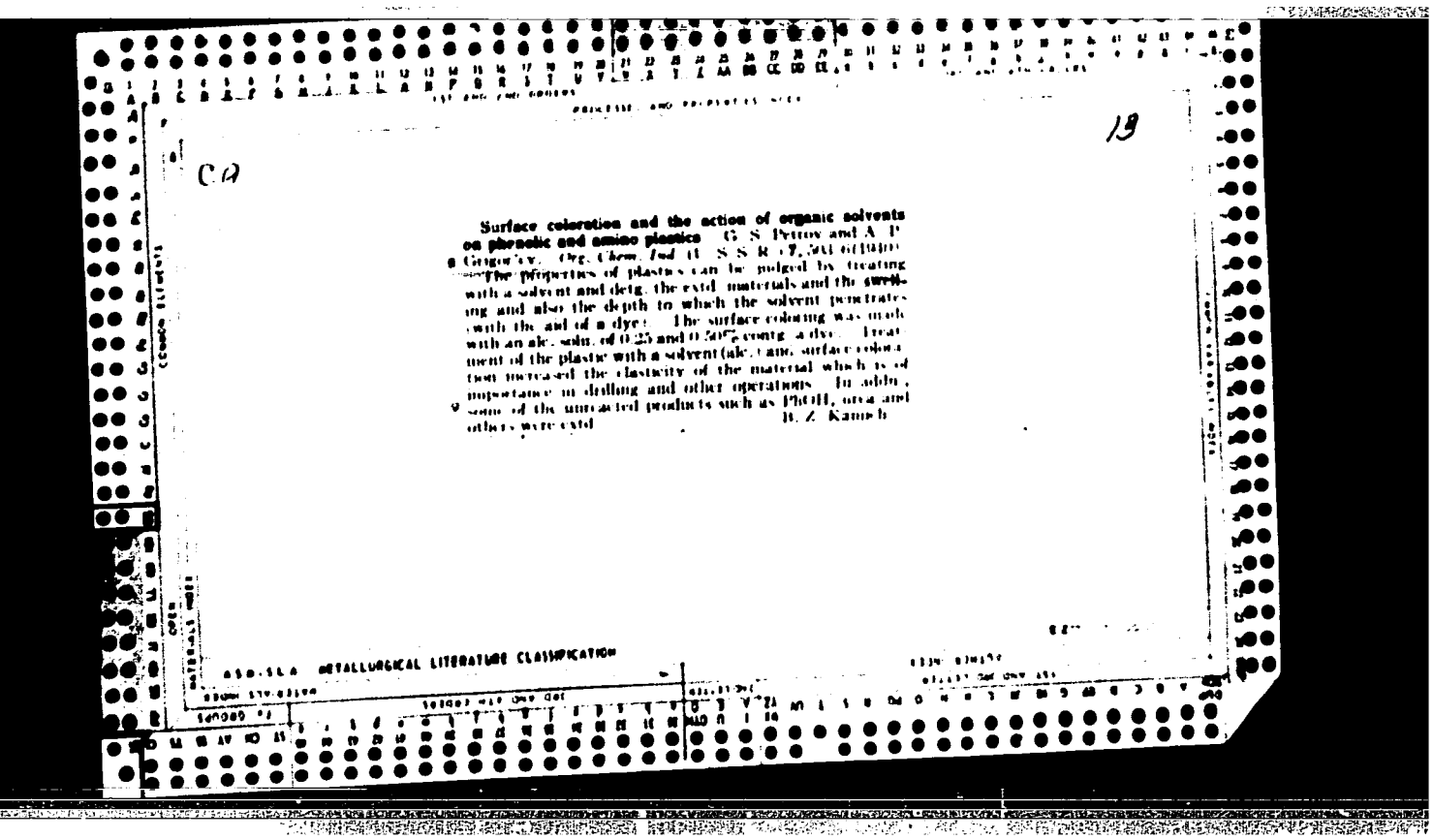
METALLURGICAL LITERATURE CLASSIFICATION



Extraction of sulfonic acids from sulfonated petroleum products. G. S. Petrov and A. P. Grigor'ev. Russ. 74,140, Feb. 28, 1947. Sulfonated petroleum is treated with dry carbonates or bicarbonates of alkali metals. The alkali sulfonates formed are extd. with aq. MeOH or EtOH.

Plastic masses G. S. Petrov and A. P. Grigor'ev. Russ. 53,610, July 31, 1938. Vinyl resins are mixed in the usual manner with petroleum or tar oil hydroxy acids or their esters, and treated with hot rollers.

A S M - S L A METALLURGICAL LITERATURE CLASSIFICATION



19

CA

Surface coloration and the action of organic solvents on phenolic and amino plastics G S Petrov and A P Grigor'ev. *Org. Chem. Ind.* (U S S R), 7, 501 (1940). The properties of plastics can be judged by treating with a solvent and detg. the extd. materials and the swelling and also the depth to which the solvent penetrates with the aid of a dye. The surface coloring was made with an alc. soln. of 0.25 and 0.50% eosin, a dye. Treatment of the plastic with a solvent (alc., ether, surface colorant test increased the elasticity of the material which is of importance in drilling and other operations. In addn., some of the unreacted products such as PhOH, urea and others were extd. H. Z. Kamich

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION

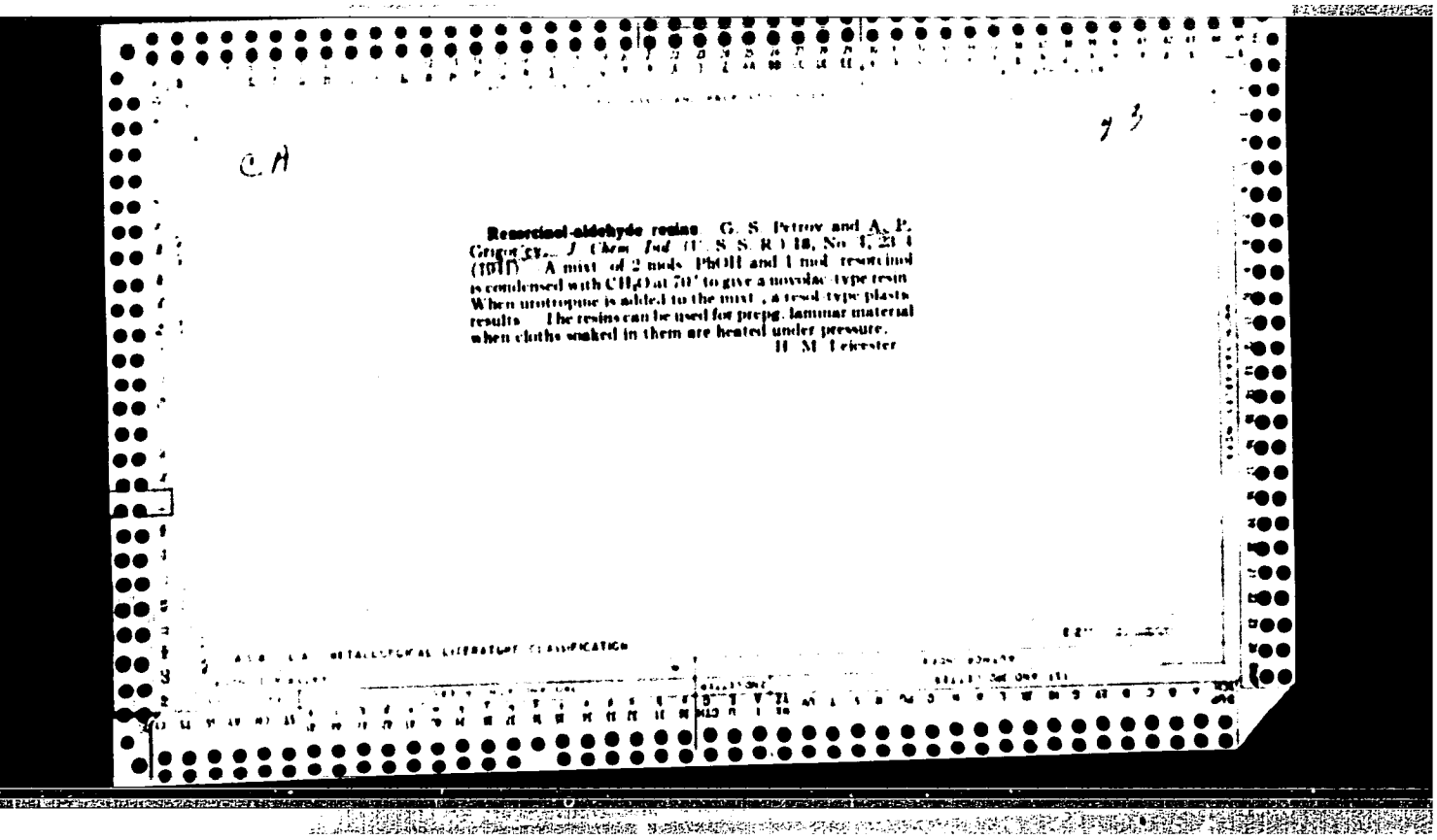
PROCESSES AND PROPERTIES INDEX

13

24

Utilizing seed hulls as fuel after hydrolysis for furfural production. G. S. Petrov and A. F. Grus... *Maslo-Zhirovaya Prom.* 16, No. 5/6, 21-2(1940). Recovery of acid from hydrolyzed sunflower seed hulls is not profitable but cheap fuel can be made by neutralizing the acid with lime and briquetting with 5% pitch and 5-10% fuel oil. The hulls can be washed with water to lower their acid content. Neutralization increases ash content only about 1-2%. Julian F. Smith

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Resorcinol-aldehyde resins G. S. Petrov and A. P. Grigor'ev. *J. Chem. Ind.* (U. S. S. R.) 18, No. 1, 23-6 (1941). A mixt. of 2 mols. PhOH and 1 mol. resorcinol is condensed with CH_2O at 70° to give a novolac-type resin. When urotropine is added to the mixt., a resol-type plastic results. The resins can be used for prepg. laminar material when cloths soaked in them are heated under pressure.
H. M. Leicester

GRIGOR'YEV, A. P.

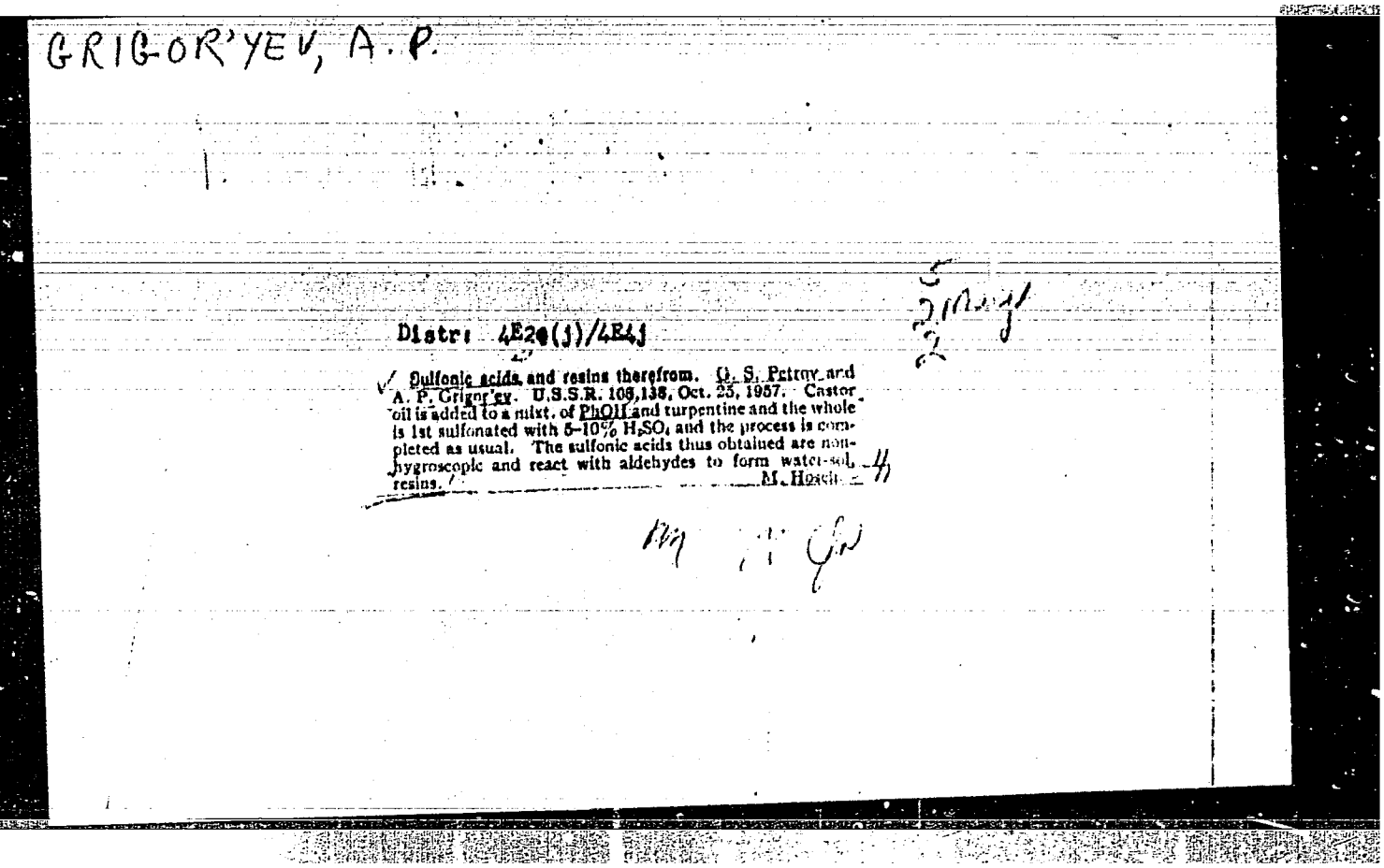
3
1-4E3d
1-4E4a

1

Sulfonation of naphthenic acids of synthetic acids of the same type. G. S. Petrov and A. P. Grigor'ev. U.S.S.R. 105,812, May 23, 1957. The sulfonation of these acids is carried out simultaneously with phenols, terpenes, and $H_2SO_4.H_2O$.

M. Hasel

13



GRIGOR'YEV, A. P.

Distr: 4E2e(j)/4E4j

Sulfonic acids and resins therefrom. O. S. Petrov and A. P. Grigor'ev. U.S.S.R. 106,138, Oct. 25, 1957. Castor oil is added to a mixt. of PhOH and turpentine and the whole is 1st sulfonated with 5–10% H_2SO_4 and the process is completed as usual. The sulfonic acids thus obtained are non-hygroscopic and react with aldehydes to form water-sol. resins. M. Hosch

AUTHOR GRIGOR'YEV, A.P., OPORKOVA, S.I., FESENKO, A.I. 56-6-53/56

TITLE An Anomalous Decay of Hyp nucleus.
(Anomal'nyy raspa giperjadra, Russian)

PERIODICAL Zhurnal Eksperim. i Teoret. Fiziki 1957, Vol 32, Nr 6, p 1589 (USSR)

ABSTRACT An uncommon decay of a hyperfragment was discovered in an emulsion chamber (emulsion HIKFI Type "p") which was irradiated by cosmic rays in the stratosphere. A star of the type 10 + 0n emits a hyperfragment which, after passing through a course of 2930 µ, disintegrates during flight into three charged particles. These particles come to a standstill already in the emulsion chamber. A micro-photograph is attached and the data on the products of decay are shown in a table. The masses of the products of decay were determined by means of the method density - range (with respect to the pions).
The charge and the remaining range of the hyperfragment in the emulsion were determined from the density of the δ electrons along the remaining range; they amounted to 2e and 600 ± 100 µ. respectively. As the mass of one of the produced particles is equal to 850 ± 300 mass of electrons, it is naturally possible to presume that here

CARD 1/3

a K-meson is concerned, As, on the other hand, the charge of the hyperfragment determined with great accuracy, is equal to 2e, the K-meson can be assumed to be negative. (Also the lack of decay products in the case of the K-meson tends to indicate a negative charge of the K-meson). The noncomplanarity of the products of decay of the hyperfragment tends to indicate the flying-off of at least one neutron; its energy is determined from the vector diagram of the momenta. Thus it may be assumed that the hyperfragment decays either according to the scheme

$$(He_2^5)^* \rightarrow H_1^1 + K^- + n + He_2^3 + (103 \pm 5)\ MeV \quad \text{or the scheme}$$

$$(He_2^6)^* \rightarrow H_1^1 + K^- + n + He_2^4 + (110 \pm 6)\ MeV .$$

When determining the energy the mass of the K-meson was assumed to be equal to 966,7 electron masses. If it is assumed that the hyperfragment, as a result of the decay of a certain bound hyperon disintegrates, the mass of this hyperon is equal to 3000 electron masses. The estimation of the life of the hyperon gives the amount 5.10^{-11} sec. The here discussed case is at present being studied more closely.

CARD 2/3

An Anomalous Decay of a Hypernucleus. 56-6-53/56

ASSOCIATION: Moscov Engineering-Physical Institute.
(Moskovskiy inzhenerno-fizicheskiy institut.- Russian)
PRESENTED BY: -
SUBMITTED: 26.3. 1957.
AVAILABLE: Library of Congress.

CARD 3/3

TOPORKOVA, E.P.; FESENKO, A.I.; GRIGOR'YEV, A.P.

K -meson decay of hypernuclei. Nek.vop.inzh.fiz. no.3:28-31 '58. (MIRA 12:5)

(Nuclear reactions) (Mesons)

Grigor'yev A.P.

PHASE I BOOK EXPLOITATION SOV/3663

Akademiya nauk SSSR. Institut khimicheskoy fiziki

Okisleniye uglevodorodov v zhidkoy faze; sbornik statey (Oxidation of Hydrocarbons in the Liquid Phase; Collection of Articles) Moscow, Izd-vo AN SSSR, 1959. 334 p. Errata slip inserted. 2,200 copies printed.

Ed.: N. M. Emanuel', Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House: K. M. Dyumayev; Tech. Ed.: I. F. Kuz'min.

PURPOSE: This collection of articles is intended for chemists interested in hydrocarbon oxidation reactions, particularly for those specializing in petroleum fuels.

COVERAGE: This collection of 35 articles represents the results of investigations over a period of several years on problems of hydrocarbon oxidation. The authors present their own theoretical and experimental data and also draw from current literature. No personalities are mentioned. References accompany most of the articles.

Mal'kovskaya, N.K., G.I. Moskvina, and V.P. [illegible] [Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov i Kombinat sinteticheskikh zhirnykh kislot i zhirnykh spirtov (All-Union Research Institute of Fats; Combine of Synthetic Fatty Acids and Fatty Alcohols)]. Oxidation of High-Molecular Hydrocarbons to Fatty Acids 268
The authors have synthesized fatty acids and several neutral oxygen derivatives by oxidizing paraffinic hydrocarbons with atmospheric oxygen. Catalysis with 0.2% potassium permanganate increased oxygen absorption fourfold and yielded 45% fatty acids after 20 hours.

Kutyumnikov, B.N. and A.A. Perchenko. [Khar'kov Polytechnical Institute imeni V.I. Lenin]. Role of a Mixture of Manganese Oxides as an Accelerator of Paraffin Oxidation by Atmospheric Oxygen 275
Manganese oxide waste-products of the vitamin industry and manganese oxide residue from treating paraffin with a potassium permanganate solution increased the rate of air oxidation of paraffin. The authors cite a method for the preparation of active catalysts for this reaction from pyrolusite.

Varlamov, V.S., and A.I. Il'ina [Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov (All-Union Scientific Research Institute of Fats)]. Effect of Temperature and a Catalyst on Liquid-Phase Oxidation of Paraffin to Monatomic Fatty Acids 282

Petrov, G.S. (Deceased), and A.P. Grigor'yev. Preparation of Various Types of Acids From Solar Distillate 295
The authors give data on the extraction of sulfo acids from the sulfonated solar oil fraction of petroleum, and on the oxidation of vaseline oil to obtain carboxylic and hydroxy carboxylic acids.

Chertkov, Ya.B., and V.N. Zrelov [Nauchno-issledovatel'skiy institut goryuche-smazochnykh materialov (Scientific Research Institute of Combustibles and Lubricating Materials)]. The Oxidation of Hydrocarbon Fuels in Storage 299
The authors state that the oxidation of fuels stored at moderate temperatures may be minimized by removing low-stability cyclic hydrocarbons having unsaturated side chains, or by introducing additives which will prevent their oxidation or the thickening of their oxidation products into resinous substances. It is also stated that low temperatures and nearly hermetic conditions also inhibit oxidation.

10

85711
S/081/60/000/018/007/009
A006/A001

15.8105

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 18, p. 543, # 75449

AUTHORS: Kamenskiy, I. V., Grigor'yev, A. F.

TITLE: Production of Organic Glass on Allyl Ester Base

PERIODICAL: Tr. Mosk. khim-tekhnol. in-ta im. D. I. Mendeleyeva, 1959, No. 29, pp. 50-54

TEXT: The authors studied the possibility of obtaining scale-resistant and mechanically durable organic glasses on diethylene glycol diallyldicarbonate (I) base. It is established that polymerization proceeds according to a radical mechanism using benzoyl peroxide (2% of the ester weight). The cracking of blocks cannot be prevented by introducing various admixtures and plasticizers into I. Copolymerization of I with methyl methacrylate ($\geqslant$ 50%) causes the formation of transparent colorless or light-yellow non-cracking blocks with a Martens scale resistance of 110 - 115°C and a Brinell hardness as high as 25 - 26 kg/cm^2. Conditions are given for the copolymerization and solidification of blocks. The specimens obtained withstand heating at 180°C for 2 - 3 hours

Card 1/2

S/081/60/000/018/007/009
A006/A001

Production of Organic Glass on Allyl Ester Base

without cracking and warping (the intensity of coloring increases slightly) In copolymerization of I with styrene, non-cracking opaque blocks of milk-white color are obtained.

Ye Zambrovskaya

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

Card 2/2

KAMENSKIY, I.V.; GRIGOR'YEV, A.P.

Synthesis of organic glass from allyl esters. Trudy MKHTI no.29:50-54 '59. (MIRA 13:11)
(Allyl alcohol) (Glass reinforced plastics)

GRIGOR'YEV, A.I.; KORCHAK, V.V., red.; FEDOSOVA, T.P., red.

[Laboratory work in the technology of polymeric plastic materials] Praktikum po tekhnologii polimerizatsionnykh plasticheskikh mass. Moskva, Vysshaia shkola, 1964. 274 p. (MIRA 18:1)

1. Chlen-korrespondent AN SSSR (for Korshak).

KOVALEVA, L.T.; NEKRASOV, I.Ya.; ARKHIPENKO, D.K.; BROVKIN, A.A.; GRIGOR'YEV, A.P.; KOMAR, L.V.

Study of the minerals in the series of ascharite-sussexite by infrared spectroscopy and electron diffraction methods. Zhur. strukt. khim. 6 no.1:79-82 Ja-F '65.

(MIRA 18:12)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR, Novosibirsk i Institut geologii Yakutskogo filiala Sibirskogo otdeleniya AN SSSR, Yakutsk. Submitted October 28, 1963.

L 33985-66

ACC NR: AR6017248 SOURCE CODE: UR/0058/65/000/012/D045/D045

AUTHOR: Kovaleva, L. T.; Nekrasov, I. Ya.; Arkhipenko, D. K.; Brovkin, A. A.; Grigor'yev, A. P.

TITLE: Study of minerals of the szaibelyite-sussexite series by infrared spectroscopy and x-ray diffraction methods

SOURCE: Ref. zh. Fizika, Abs. 12D380

REF SOURCE: Tr. Komis. po spektroskopii. AN SSSR, t. 3, vyp. 1, 1964, 604-610

TOPIC TAGS: mineral, ir spectroscopy, x ray diffraction study, absorption band

ABSTRACT: The authors studied minerals of the series $M_2B_2O_5(OH)_2$-$M_2B_2O_5(OH)_2$. The parameters of the unit cell were calculated for the entire series. A dependence of the parameters, position, and intensity of the absorption bands on the chemical composition is established. The possibilities are discussed of crediting the ir bands to vibrations of the B-O-R^{2+} and OH-Mg, OH-Mn groups. The formula $(Mg, Mn)_2B_2O_5(OH)_2$ is proposed in place of the formula $(Mg, Mn)HBO_3$, since it has been established spectroscopically that the B_2O_5 groups and free OH are present. These singularities are characteristic also of the natural minerals. [Translation of abstract]

SUB CODE: 20, 08/

Card 1/1

EVLIYA, Chelebi [Evliya, Efendi]; ZHELTYAKOV, A.D.; TVERTINOVA, A.S. [translator]; VEKILOV, A.P. [translator]; GARBUZOVA, V.S. [translator]; GRIGOR'YEV, A.P. [translator]; ZYRIN, A.A. [translator]; IVANOVA, R.D. [translator]; IVANOV, S.N.[translator] Prinimali uchastiye: KYAMILEV, Kh. [translator]; MASHTAKOVA, Ye.I. [translator]; GRUNINA, E.A., red. izd-va; KUZ'MIN, I.F., tekhn. red.

[A travel book (excerpts from the work of a 17th century Turkish traveler); translation and commentary] Kniga puteshestviia (izvlecheniia iz sochineniia turetskogo puteshestvennika XVII veka); perevod i kommentarii. Moskva, Izd-vo vostochnoi lit-ry. (Pamiatniki literatury narodov Vostoka: Perevody, no.6) No.1. [Moldavia and the Ukraine] Zemli Moldavii i Ukrainy. 1961. 337 p. (MIRA 14:12)

1. Vostochnyy fakul'tet Leningradskogo Gosudarstvennogo universiteta (for all except Kyamilev, Mashtakova, Grunina, Kuz'min).
2. Institut narodov Azii AN SSSR (for Kyamilev , Mashtakova).
(Elviya, Efendi, ca. 1611- ca. 1682)
(Moldavia--Description and travel)
(Ukraine--Description and travel)

1. GRIGOR'YEV, A. S.

2. USSR (600)

4. Deformations (Mechanics)

7. Bending of a round membrane with linear reinforcement of the material. Inzh.sbor., 13, 1952.

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

GRIGOR'YEV, A.S.

200

Grigor'ev, A. S. On the bending of a round elastic plate beyond the elastic limit. Akad. Nauk SSSR. Prikl. Mat. Meh. 16, 111–115 (1952). (Russian)

Consider a simply supported circular plate exhibiting linear hardening and loaded uniformly over a circle concentric with the plate. At a critical value of the load plastic deformations will first appear at the center on the underside of the plate. The paper presents a closed form solution for the elastic part and a numerical procedure for determination of the plastic region. Results of a special experiment are compared with a numerical solution and good agreement is found. *H. I. Ansoff* (Santa Monica, Calif.).

Inst. Mech., Acad. Sci. USSR

Source: Mathematical Reviews, Vol 13 No. 9

GRIGOR'YEV, A. S.

USSR/Engineering - Stress of Materials Jan/Feb 52

"Review and Bibliography," V. Z. Vlasov, A. S. Grigor'yev, S. G. Lekhnitskiy, V. M. Panferov

"Prik Matemat i Mekh" Vol XVI, No 1, pp 123-128

Reviews Yu. N. Rabotnov's "Resistance of Materials," Moscow State U, 1950, 336 pp, Manual for Universities, M. V. Rubinin's "Manual in Practical Studies of Resistance of Materials," Part I., 1949, 287 pp., Part II; 1950, 264 pp, Mashgiz; and G. N. Savin's "Concentration of Stresses Near Apertures," Moscow/Leningrad, 1951, 496 pp.

203T40

[redacted]

"Some Problems of Equilibrium of Plates and Jars [illegible] Limit of Elasticity." Dr Tech Sci, Inst of Mechanics, Acad Sci USSR, Moscow, 1955. Dissertation (abstract) Prikl Matem i Mekhanika (Moscow, Feb 57)

SO: [illegible], 19 Aug 1957.

GRIGOR'YEV, A-S.

3

USSR.

1361. Grigor'ev, A. S., Load-carrying capacity of thick flat plastic rings (in Russian), *Inzhener. Sbornik, Akad. Nauk SSSR* 16, 177-182, 1953.

Author treats the problem on the assumption of constant tangential stresses by the method of limit analysis. Several cases of practical interest are solved, namely: (1) Built-in outer edge symmetrically loaded across the ring; same uniformly loaded all over and carrying another uniformly distributed load on the inner edge; (2) simple supported ring with loads both on the edges and on the surface distributed according to some law of proportionality. For the benefit of the practical designer, graphs are given showing the carrying load capacity and the corresponding stress for different ratios of the inner and outer radius. M. Malets, USA

GRIGOR'YEV, A. S.

3246. Grigor'ev, A. S., Bending of circular and annular plates of varying thickness beyond the limits of elasticity (in Russian), *Inzhener. Sbornik, Akad. Nauk SSSR* 20, 59-92, 1954.

Author investigates plates described in the title in a symmetric conditions of loading and support. The normal loads are of constant and distributed and a number of cases, where plates are of constant thickness, of variable thickness, are freely supported or rigidly supported, are dealt with seperately. Plates are made of material which does not possess a yield region. Author develops equations for deformations and stresses in the plastic region, which can only be applied to that part of the plate which is in plastic equilibrium; hence the necessity to determine which part of the plate is in elastic equilibrium, and which in plastic equilibrium. Thus the author had to find a criterion for that. Solutions in closed form are approximations; more exact solutions can be obtained numerically. Analysis of error and conditions under which author's method is applicable are also presented.

T. Lesser, USA

VMH

LEVINZON, Leonid Samuilovich, 1879-1951 (deceased); NEKRASOV, A.I., akademik; TIKHONOV, A.N.; IL'YUSHIN, A.A.; SOKOLOVSKIY, V.V.; GALIN, L.A.; SHCHELKACHEV, V.N., doktor tekhnicheskikh nauk; TROBIN, F.A., doktor tekhnicheskikh nauk; GRIGOR'YEV, A.S., kandidat tekhnicheskikh nauk; SEDOV, L.I., akademik, redaktor; ZVOLINSKIY, N.V., professor, redaktor; ALEKSEYEVA, T.V., tekhnicheskiy redaktor.

[Collected works] Sobranie trudov. Moskva, Izd-vo Akademii nauk SSSR. Vol.4[Hydroaerodynamics. Geophysics] Gidroaerodinamika, Geofizika, 1955. 398 p. (MLRA 8:11)

1. Chlen-korrespondent AN SSSR (for Tikhonov, Il'yushin, Sokolovskiy, Galin)
(Geophysics) (Fluid dynamics)

GRIGOR'YEV, A.S.

LEYBENZON, Leonid Samuilovich, akademik; NEKRASOV, A.I., akademik; TIKHONOV, A.N.; IL'YUSHIN, A.A.; SOKOLOVSKIY, V.V.; SHCHELKACHEV, V.N., doktor tekhnicheskikh nauk; TREBIN, F.A., doktor tekhnicheskikh nauk, redaktor; GALIN, L.A.; GRIGOR'YEV, A.S., doktor tekhnicheskikh nauk; CHARNYY, I.A., doktor tekhnicheskikh nauk, redaktor; ALEKSEYEVA, T.V., tekhnicheskiy redaktor.

[Collected works] Sobranie trudov. Moskva, Izd-vo Akademii nauk SSSR. Vol.3.[Petroleum engineering] Neftepromyslovaia mekhanika 1955. 678 p. (MLRA 8:10)

1. Chlen-korrespondent AN SSSR (for Tikhonov, Il'yushin, Sokolovskiy and Galin)
(Petroleum engineering)

SOV/124-57-5-5938

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 5, p 133 (USSR)

AUTHOR: Grigor'yev, A. S.

TITLE: The Equilibrium of Moment-free Cylindrical Shells in the Presence of Large Deformations Beyond the Elastic Limit (Ravnovesiye bezmomentnykh tsilindricheskikh obolochek pri bol'shikh deformatsiyakh za predelami uprugosti)

PERIODICAL: Tr. 3-go Vses. Matem. s"yezda. Vol I. Moscow, AN SSSR, 1956, pp 202-203

ABSTRACT: Bibliographic entry

Card 1/1

GRIGOR'YEV, A.S. (Moskva)

Supporting capacity of stretched and curved circular plates.
Inzh.sbor. 24:52-61 '56. (MLRA 10:5)
(Elastic plates and shells)
(Strains and stresses)

AUTHOR: Grigor'yev, A.S. (Moscow) 40-21-6-12/18

TITLE: The State of Stress of Cylindrical Shells, Free of Moments, in Connection With Great Deformations (Napryazhennoye sostoyaniye bezmomentnykh tsilindricheskikh obolochek pri bol'shikh deformatsiyakh)

PERIODICAL: Prikladnaya Matematika i Mekhanika, 1957, Vol 21, Nr 6 pp 827-832 (USSR)

ABSTRACT: In the paper the equilibrium of shells which are free of moments with regard bottoms is investigated. The shells are assumed to possess a circular-cylindrical form in unloaded state. It is supposed that the material the shells consist of, can suffer strong deformations up to the destruction. Therefore the state of stress must be investigated for great displacements and great deformations. The material of the shells is supposed to be incompressible. The connection between the stresses and the so-called original deformations is taken from the mechanic characteristics of the material. Besides of the given supposition the usual neglects are carried out in the paper which are known in the theory of shells being free of moments. After the establishment of the initial

Card 1/2

The State of Stress of Cylindrical Shells, Free of Moments, in Connection With Great Deformations

40-21-1-12/18

equations the equilibrium of shells which are stressed by internal pressure is investigated in detail. There are 5 figures and 7 references, 5 of which are Soviet, and 2 American.

SUBMITTED: November 20, 1956

AVAILABLE: Library of Congress

1. Cylindrical shells-Stresses

Card 2/2

GRIGOR'YEV, A.S.

PHASE I BOOK EXPLOITATION SOV/4531

Akademiya nauk SSSR. Institut mekhaniki

Inzhenernyy sbornik, tom 26 (Engineering Symposium, Vol. 26) Moscow, 1958. 286 p. 2,400 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk. Institut mekhaniki.

Resp. Ed.: A. A. Il'yushin; Ed.: G. I. Pshenichnov; Tech. Ed.: R. M. Lerman.

PURPOSE: This book is intended for engineers.

COVERAGE: The book contains 29 articles dealing with professional work performed by mechanical engineers, such as the calculations of shells, rods, and plates, and solutions of problems in stress distribution and equilibrium. Oscillations (including flutter) and deformation of shells, equilibrium of shell panels, rods and solids, stability of rods, plates, frames and other members, stress concentration, and bending are discussed. Oscillations of aircraft wings are studied. References accompany each article.

Card 4/6

GRIGOR'YEV, A.S.

16(1);10(2) PHASE I BOOK EXPLOITATION SOV/2659

Akademiya nauk SSSR. Institut mekhaniki

Inzhenernyy sbornik, t. 25 (Engineering Symposium, Vol. 25) Moscow, Izd-vo AN SSSR, 1959. 218 p. Errata slip inserted. 2,200 copies printed.

Ed.: A.A. Il'yushin; Ed. of Publishing House: D.M. Ioffe; Tech. Ed.: Ye. V. Makuni.

PURPOSE: This book is intended for applied mathematicians, physicists and engineers.

COVERAGE: The book is a collection of articles published by the Department of Engineering Sciences of the Institut mekhaniki (Institute of Mechanics) of the Academy of Sciences, USSR. The articles discuss various aspects of the mechanics of materials and of fluid mechanics, such as stress and bending of beams, shells, plates and reels, supersonic gas flows, vibrations, etc. The problems are treated in a highly theoretical, i.e., mathematical, manner. References are given at the end of each article.

SOV/179-59-3-15/45

AUTHOR: Grigor'yev, A. S. (Moscow)

TITLE: Large Deflections of Rectangular Membranes (Bol'shiye progiby pryamougol'nykh membran)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1959, Nr 3, pp 105-113 (USSR)

ABSTRACT: The equilibrium of a uniformly loaded rectangular membrane is discussed above and below the elastic limit. The deflection of the membrane is assumed large relative to the thickness. The problem has already been investigated by Hencky (Ref 1), A. and L. Föppl (Ref 2), Timoshenko (Ref 3) and Vol'mir (Ref 4). The strains are assumed to be given by

$$\varepsilon_x = \frac{\partial u}{\partial x} + \frac{1}{2}\left(\frac{\partial w}{\partial x}\right)^2 ,$$

$$\varepsilon_y = \frac{\partial w}{\partial y} + \frac{1}{2}\left(\frac{\partial w}{\partial y}\right)^2 , \qquad (1.1)$$

$$\gamma_{xy} = \frac{\partial u}{\partial y} + \frac{\partial v}{\partial x} + \frac{\partial w}{\partial x}\frac{\partial w}{\partial y} ,$$

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where u, v and w are the displacements in the x, y and z directions respectively. Using the equations of equilibrium with those of Hooke's law in the elastic region and of the Hencky-Mises theory in the plastic region, the differential equation governing the deflection is obtained and solved by a finite difference method. In the elastic region, expressions are obtained for the deflection and stress at the centre of the membrane: a similar treatment is given for a membrane within the plastic region and a load-deflection curve is calculated (Fig 4).
There are 2 tables, 4 figures and 6 references, 5 of which are Soviet and 1 German.

SUBMITTED: June 15, 1958

GRIGOR'YEV, A.S. (Moskva)

Plates with equal resistance to bending. Insh. sbor. 25:45-50 '59. (MIRA 13:2)
(Elastic plates and shells)

GRIGORYEV, A. S. (Acad. Sci. USSR)

"The Equilibrium of momentless cylindrical shells from nonlinearly elastic material under pressure, varying along the axis of the shell,"

Report presentes at the 10th International Congress of Applied Mechanics, (ICSU) Stresa, Italy, 31 August - 7 Sep 1960.

In the author's absence, the paper was presented by Grigoliuk. It is shown that the governing equations may be decomposed into two parts and in some cases the solution can be obtained in finite form.

ARAMANOVICH, I.G.; GRIGOL[redacted]UK, E.I.; GRIGOR'YEV, [redacted].S.; DZHANDELIDZE, G.Yu.

"Calculation of force fits in the manufacture of machinery" by N.D. Tarabasov. Reviewed by I.G.Ara[redacted]anovich, [redacted] others. Izv.Akad SSSR. Otd.tekh.nauk.Mekh.i mashinostr. no.5:189-190 S-O '61. (MIRA 14:9)

(Machine-shop practice) (Strains and stresses)
(Tarabasov, N.D.)

BELYAVSKIY, I.Yu., inzh.; GRIGOR'YEV, A.S., inzh.

"Eskapon" insulation material for electric machinery. Elek.i tepl. tiaga 5 no.10 14-15 O '61. (MIRA 14:10)
(Electric insulators and insulation)
(Gums and resins, Synthetic)

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P/033/61/013/005/005/006
D234/D302

AUTHOR: Grigor'yev, A. S. (Moscow)

TITLE: On bending round plates made of material, inhomogeneous in plastic deformations

PERIODICAL: Archiwum mechaniki stosowanej, v. 13, no. 5, 1961, 637-649

TEXT: The material is assumed to be homogeneous in elastic deformations and inhomogeneous in plastic ones; the load to be axially symmetric. The author takes a system of dimensionless cylindrical coordinates rθz. The yield limit is assumed to be

$$\sigma_s = \sigma_{s_0} [1 + f(z)] \qquad (1)$$

The solution of the problem is reduced to finding the quantities

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$$\begin{cases} \alpha = -\dfrac{2E}{3\sigma_{s_0}}\left(\dfrac{H}{R}\right)^2\left(2\dfrac{d^2W}{dr^2}+\dfrac{1}{r}\dfrac{dW}{dr}\right) \\ \zeta = -\dfrac{2E}{3\sigma_{s_0}}\left(\dfrac{H}{R}\right)^2\left(\dfrac{d^2W}{dr^2}+\dfrac{2}{r}\dfrac{dW}{dr}\right) \end{cases} \qquad (2)$$

where E is the modulus of elasticity, W the bending. Solutions are formulated for conditions of plasticity of Huber-Mises with Hankey's relation and for those of Tresca-de-Saint-Venant. The example of a plate, freely supported along its edge and uniformly loaded, is considered in detail, first for any f(z) and then for f(z) = $\frac{1}{2}z^5$. Graphs of extension of domains of plastic deformation and of

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dimensionless deflections are given for the latter case. There are 5 figures and 7 Soviet-bloc references.

SUBMITTED: February 22, 1961

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S/040/61/025/006/011/021
D299/D304

AUTHOR: Grigor'yev, A.S. (Moscow)

TITLE: Equilibrium of membrane shells of revolution under large deformations

PERIODICAL: Prikladnaya matematika i mekhanika, v. 25, no. 6, 1961 1083 - 1090

TEXT: The shell is under internal pressure which varies with its height, and also subjected to forces which act on its end surface. The material is considered as incompressible. The fundamental system of equations is derived; the case of an initially cylindrical shell is considered in more detail. The shell is referred to a system of dimensionless cylindrical coordinates xθz, rigidly fixed to one of the vertices (see Fig. 1). In the general case, 2 zones are formed in the equilibrium state of the shell, an "elongated"- and a "folded" zone. The equilibrium equations for a shell element in the elongated zone are (in the case of variable thickness h, and variable pressure):

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$$\frac{d}{dx}(xhp_1) = p_2 h, \quad \frac{d}{dx}(xhp_1 \sin\varphi) = \frac{Q(y)}{h} x \qquad \left(Q(y) = \frac{R_1}{2KH_1} q(y)\right) \qquad (2.1)$$

where p_1 and p_2 are the stresses, $q(y)$ - the intensity of the pressure, R_1 - a characteristic dimension, K - the shear modulus, H_1 - the thickness in the initial state. If $p_1 > p_2$, the system of equations

$$\frac{dx}{d\xi} = \frac{1}{h}\frac{\cos\varphi}{\cos\psi}, \quad \frac{dy}{d\xi} = \frac{1}{h}\frac{\sin\varphi}{\cos\psi}$$
$$\frac{d\varphi}{d\xi} = \frac{1}{xh\cos\psi}\left(\ln\frac{1}{xh}\right)^{-1}\left[\frac{Q(y)}{h}\left(\ln\frac{1}{xh}\right)^{1-\varphi} - \frac{\sin\varphi}{x}\ln\frac{x}{\xi h}\right] \qquad (2.3)$$
$$\frac{dh}{d\xi} = \frac{[illegible]\cos\varphi - \xi^2[\mu + \ln([illegible]/\xi^2)]\cos\varphi}{x\xi[\mu + \ln([illegible]/\xi)]\cos\psi}$$

is obtained; if $p_2 > p_1$, the last two equations are replaced by

$$\frac{d\varphi}{d\xi} = \frac{1}{xh\cos\psi}\left(\ln\frac{1}{xh}\right)^{-1}\left[\frac{Q(y)}{h}\left(\ln\frac{x}{\xi h}\right)^{1-\varphi} - \frac{\sin\varphi}{x}\ln\frac{x}{\xi h}\right] \qquad (2.5)$$

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$$\frac{dh}{d\xi} = \frac{x^9 h\left(\mu \ln \frac{xh^9}{\xi} - 3\ln h\right)\cos\psi - \xi^9\left(\mu \ln \frac{xh^9}{\xi} - 3\ln h - \ln \frac{h^9 h'}{\xi} \ln \frac{x'}{\xi h}\right)\cos\varphi}{x^9 \xi\left[3\ln \frac{x}{\xi} + \left(\mu - \ln \frac{x}{\xi h}\right)\ln \frac{xh^9}{\xi}\right]\cos\psi} \qquad (2.5)$$

In considering the folded zone, the concept of "determinant" surface is introduced, i.e. of the surface which would be generated by the system of filaments which undergo pressure. It is stipulated that in the folded zone, x and y denote the coordinates of the determinant surface and φ - the angle between the tangent to its meridian and the plane, normal to the shell-axis. After transformations, one obtains the fundamental system of equations for the folded zone:

$$\frac{dx}{d\xi} = \frac{\cos\varphi}{h^9\cos\psi}, \quad \frac{dy}{d\xi} = \frac{\sin\varphi}{h^9\cos\psi} \qquad (2.8)$$

$$\frac{d\varphi}{d\xi} = \frac{Q(y)}{A_0 h^9(-3\ln h)^\mu \cos\psi}, \quad h^9(-3\ln h)^\mu \xi = c$$

c are constants, determined by the condition of continuity of h on the boundary between the two zones. The above derived fundamental

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systems can be numerically integrated for any concrete problem; hence the shape and thickness of the shell can be found, as well as the principal stresses. It is noted that if the shell is subjected to uniform pressure only, then $Q = qR_1/2KH_1 = \text{const.}$, and there is no folded zone; thereby systems (2.3) and (2.5) simplify considerably and one obtains

$$\sin\varphi = \frac{Qx}{2Ap_1h}, \qquad (2.9)$$

where A is a dimensionless parameter. It is further noted that even on the assumption that the fundamental stress-strain relations are applicable to arbitrarily large deformations, yet a critical value $Q = Q_{max}$ exists, beyond which the proposed solution is inapplicable. This maximum load and the corresponding $\rho = \rho^*$ and $h = h^*$ are

$$Q_{max} = 2\left(\frac{\mu}{e}\right)^{\mu}, \quad \rho_* = e^{\mu/3}, \quad h_* = e^{-2\mu/3},$$

(μ being a constant). In the case of initially cylindrical shells,

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the problem is considerably simplified. Assuming $\Lambda = 1$, and setting $\ln x = \alpha$, $\ln h = \beta$, one obtains

$$\frac{d\beta}{d\alpha} = -\frac{\mu + 2\alpha + \beta}{2\mu + \alpha + 2\beta} \qquad (3.4)$$

for $p_1 \geqslant p_2$ and

$$\frac{d\beta}{d\alpha} = \frac{\mu(\alpha + 2\beta) - 3\beta + (\alpha - \beta)(2\alpha + \beta)}{\mu(\alpha + 2\beta) - 3\alpha - (\alpha - \beta)(\alpha + 2\beta)} \qquad (3.7)$$

for $p_2 \geqslant p_1$. Equation (3.7) can be numerically integrated. Thus, irrespective of the law of pressure variation with height, the fundamental system decomposes, and the dimensionless thickness and principal stresses depend only on the parameter μ which characterizes the material and on the parameter h_0 which represents the contributions of the stable factors (such as absolute value of dimensions, their ratio, pressure characteristic, etc.). If the curves $h(x)$ are given, the majority of concrete problems can be solved by simple mathematical operations. If the pressure varies linearly

with height, one obtains

$$\sin\varphi = \frac{Q_0}{2bp_1h}\left[x(b-y)+\frac{1}{x}\int_0^y x^2dy\right],\quad \frac{dx}{dy}=\operatorname{ctg}\varphi,\qquad \eta=\int_0^y \frac{xh}{\sin\varphi}dy \tag{3.11}$$

System (3.11) can be readily solved numerically; the parameters h_0, b and Q_0 cannot however, be arbitrarily assigned; it is necessary to find initially for each type of problem, the limits of the possible values of these parameters. In an earlier work by the author, a method is set forth whereby these limits can be found. Finally, a numerical problem is solved, involving linear dependence between pressure and height. There are 2 figures, 1 table and 10 references: 6 Soviet-bloc and 4 non-Soviet-bloc, (including 1 translation). The references to the English-language publications read as follows: E. Davis, Welding and Fracture of Medium Carbon Steel under Combined Stress, Journal of Applied Mech., 1945, no. 1; N.A. Weil and N.M. Newmark, Large plastic deformations of circular membrances, Journal of Applied Mech., 1955, no. 4; W.T. Lankford, E. Saibeil, Some Problems in Unstable Plastic Flow under Biaxial Tensions. Me-

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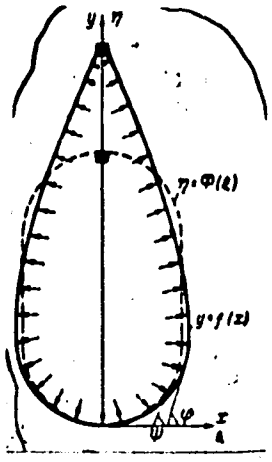
Equilibrium of membrane shells ...

tals Technol. August 1947.

ASSOCIATION: Institut mekhaniki AN SSSR (Institute of Mechanics AS USSR)

SUBMITTED: May 18, 1961

Fig. 1.



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GRIGOR'YEV, A.S.

GRIGOV'YEV, A.S.

Plastic bending of nonhomogenous circular plates. Archiw mech 13 no.5:635-650 '61.

GRIGOR'YEV, A.S. (Moskva)

Bending of a circular clamped plate beyond the elastic limit.
Izv.AN SSSR.Otd.tekh.nauk.Mekh.i mashinostr. no.6:83-87 N-D '62.
(MIRA 15:12)
(Elastic plates and shells)

GRIGOR'YEV, A.S.

Theory and design of a linear electrometer. Izv.vys.ucheb.zav.; prib. 6 no.6:15-20 '63. (MIRA 17:3)

1. Kuybyshevskiy politekhnicheskiy institut imeni Kuybysheva. Rekomendovana kafedroy izmeritel'noy tekhniki.

GRIGOR'YEV, A. S.

Stresses in spherical domes under arbitrary loading including thermal and shrinkage effects.

report presented at the Symposium on Non-Classical Shell Problems, Warsaw, 2-5 Sept 1963.