Chemical Equipment Made of Titanium

and hardness SM_1 - SM_2. Technical titanium in a cold state yields to bending, drawing and similar operations. The plasticity of annealed titanium is comparable to that of "18-8" grade cold-rolled stainless steel. Titanium alloys have a lower plasticity. In the USSR the coefficient of drawing for VT1 titanium (drawing with heating) is taken equal to 0.3. Titanium is drawn at low speeds (not over 0.25 m/sec) with repeated tempering. Electric welding of titanium is performed with an infusible tungsten electrode under a helium or argon shield. Argon of the 1st composition according to technical specifications "ТУ МХП 4315-54" (TU MKhP 4315-54) is used for this purpose. Tungsten electrodes with thorium oxyde grade "ВТ-15" (VT-15) are recommended. Automatic argon-arc welding of titanium with a fusible electrode of technically pure titanium wire has not yet received sufficient approval by the industry. Data on welding conditions are listed in Table 4 (Ref. 4 and 6). The Institut elektrosvarki imeni Ye.O. Patona (Institute of Electric Welding imeni Ye.O. Paton) developed the technology of automatic welding titanium under a layer of an oxygenless flux. In this case the corrosion resistance of welding seams and of the zone of thermal influence is about the same as of basic metal. Plastic properties of the weld metal are fairly good (elongation not under 20%) although they are somewhat lower than those of the

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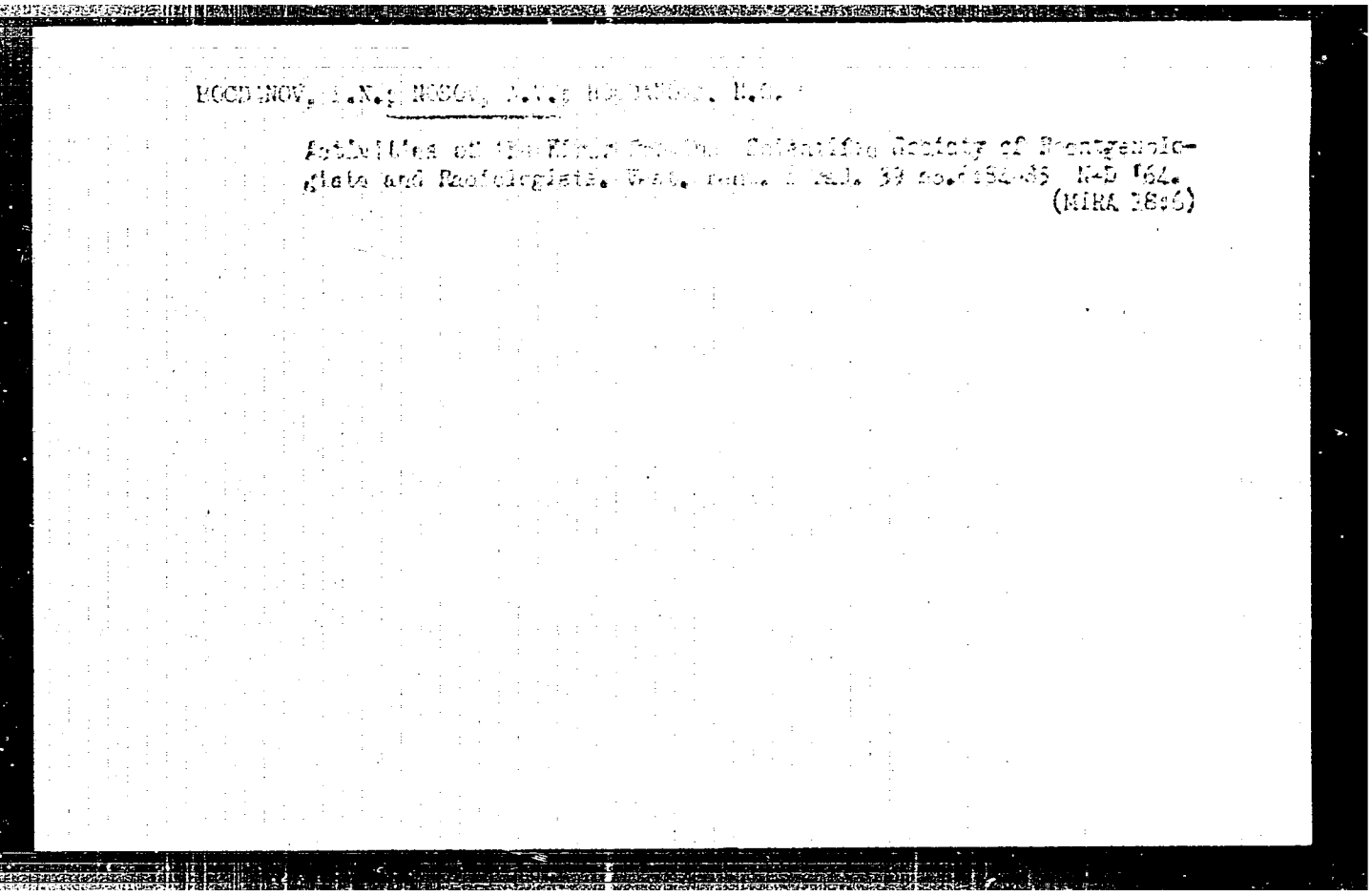
basic metal. Heat treatment(annealing at 600-700°C for 30-45 minutes) does not lead to markedly better mechanical properties of weld joints with VT1, VT4, VT5 and OT4 titanium alloys, but it removes internal stresses. There are 4 tables and 6 references: 2 German and 4 Soviet.

VOLCHEK, A.M., inzh.; MOSKOV, A.V., inzh.

Using polyethylene plated metal sheets for making containers.
Khim. i neft. mashinostr. no.8:29-32 Ag '65.
(MIRA 18:12)



KOIE SNIKOV, A.V.; NOSOV, A.Ya.

Errors in measuring irregular flows with a pneumatic-type measuring attachment. Prom.aerodin. no.24:134-141 '62. (MIRA 16:7)
(Flowmeters)

NOSOV, D.

In the Barguzin taiga. Vokrug sveta no.7:17-24 Jl '53. (MLRA 6:7)
(Barguzin valley)

NOSOV, D. K.

Nosov, D. K.

"Methods of preparing the soil for early spring grain crops, before sowing, on leached-out chernozems of Penza Oblast." Moscow Order of Lenin Agricultural Academy imeni K. A. Timiryazev. Moscow, 1956. (Dissertation for the Degree of Candidate in Agricultural Sciences.)

Knizhnaya Letopis'
No. 25, 1956. Moscow.

USSR/Soil Science. Tillage, Land Reclamation, Erosion. J-5

Abs Jour: Ref Zhur-Biol., No 6, 1958, 24799.

Author : Nosov, D.K
Inst :
Title : Tillage of Soil According to Mal'tsev on the Leached Chernozems of the Penza Oblast.

Orig Pub: S. kh. Povolzh'ya, 1956, No 12, 15-17.

Abstract: In the conditions of the Penza oblast, a 35-40 cm. deep unbanked ploughing in leached chernozem does not have a substantial advantage in comparison with deep banked ploughing. Results of conducted experiments are given.

Card : 1/1

NOSOV, [illegible] kand. sel'skokhozyaystvennykh nauk.

Compact or loose seedbed? Nauka i pered. op. v sel'khoz. 8 no.3:52-54 Mr '58. (MIRA 11:3)

1. Michurinskiy plodoovoshchnoy institut imeni I.V. Michurina.
(Tillage) (Sowing)

NOSOV, D.K., kand.sel'skokhozyaystvennykh nauk

Green fallows in Tambov Province. Zemledelie 23 no.5:22-26 My '61.
(MIRA 14:4)

1. Plodoovoshchnoy institut imeni I.V.Michurina.
(Tambov Province—Fallowing)

NOSOV, D.K., kand. sel'skokhoz. nauk; DERZHAVIN, L.M.; YURCHENKO, K.F.

Plowing or disk harrowing? Zemledelie 27 no.7:53-54 Jl '65.
(MIRA 18:7)

1. Plodoovoshchnoy institut imeni I.V. Michurina.

KOSOV, D.M., starshiy nauchnyy sotrudnik

Improving the design of snow fences. Put' put.khoz. 4 no.1: 30-32 Ja '60. (MIRA 13:5)

1. Laboratoriya snegobor'by Vsesoyuznogo nauchno-issledovatel'skogo instituta zheleznodorozhnogo transporta Ministerstva putey soobshcheniya.
(Railroads--Snow protection and removal)

NOSOV, D.S.

What the elimination of the excessive power of the crusher-roll motor has given us. Stroi.mat. 6 no.1:16 Ja '60.
(MIRA 13:5)

1. Glavnyy mekhanik Bolokhovskogo kirpichnogo zavoda.
(Bolokhovo--Brickmaking machinery--Electric driving)

L 22443-66 EWT(m)/EWP(j) IJP(c) WW/RM
ACC NR: AP6006360 (A) SOURCE CODE: UR/0413/66/000/002/0095/0095

AUTHOR: Pashchenko, D. I.; Vtorygin, S. M.; Kleymenov, N. A.; Markevich, A. M.; Volokhonovich, I. Ye.; Nosov, E. F.; Zorina, L. B.

ORG: none

TITLE: Preparation of polytetrafluoroethylene. Class 39, No. 178104 [announced by Institute of Chemical Physics, AN SSSR (Institut khimicheskiy fiziki AN SSSR)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 95

TOPIC TAGS: polytetrafluoroethylene, polymerization, polymerization initiator

ABSTRACT: A method of preparing polytetrafluoroethylene through polymerization of tetrafluoroethylene under ultraviolet light in the presence of initiators is described. In order to obtain polymers with an extensive surface area, perhalogenated freons are proposed for use as initiators. [LD]

SUB CODE: 07/ SUBM DATE: 22Feb65/

Card 1/1 UDC: 678.743.41.002.2

L 00827-67 EWT(m)/EWP(j)/T IJP(c) WW/RM
ACC NR: AP6027766 (A) SOURCE CODE: UR/0190/66/008/003/1330/1335

43
42
B

AUTHOR: Nosov, E. F.; Kleymenov, N. A.; Markevich, A. M.

ORG: Institute of Chemical Physics, AN SSSR (Institut khimicheskoy fiziki AN SSSR)

TITLE: Tetrafluoroethylene polymerization in aqueous solutions

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 3, 1966, 1330-1335

TOPIC TAGS: tetrafluoroethylene, polymerization kinetics, polymerization initiator, activation energy, polymerization rate, polymerization degree, copolymer, copolymerization

ABSTRACT: A study was made of the kinetics of tetrafluoroethylene polymerization in aqueous solutions initiated by $(NH_4)_2S_2O_8$ at 40—70C, with pressures below 1 atm. The effect of O_2 on the reaction was analyzed. The reaction rate is proportional to the tetrafluoroethylene concentration and the square root of the concentration of the initiator (at low concentrations). The activation energy is 17.3 ccal/mol. The polymerization rate depends on pH and reaches its maximum

Card 1/2 UDC: 66.095.26+678.743

L 00827-67

ACC NR: AP6027766

at pH = 5—5.5. The ratio of propagation constants to the square root of the termination constant was calculated and the average polymerization rate was determined. Two to three percent O_2 admixtures in tetrafluoroethylene decrease the polymerization rate 40 times. Higher O_2 concentrations do not affect the polymerization rate. The ratio of tetrafluoroethylene to O_2 is close to 1:1 with more than 10% of O_2. The mechanism of CO_2 and HF formation is proposed in the copolymerization of tetrafluoroethylene with O_2. It is shown that the copolymer and the tetrafluoroethylene polymer obtained at a high initiator concentration contain fractions which are thermally unstable at 160—180C. Orig. art. has: 8 figures and 6 formulas. [Based on authors' abstract] [NT]

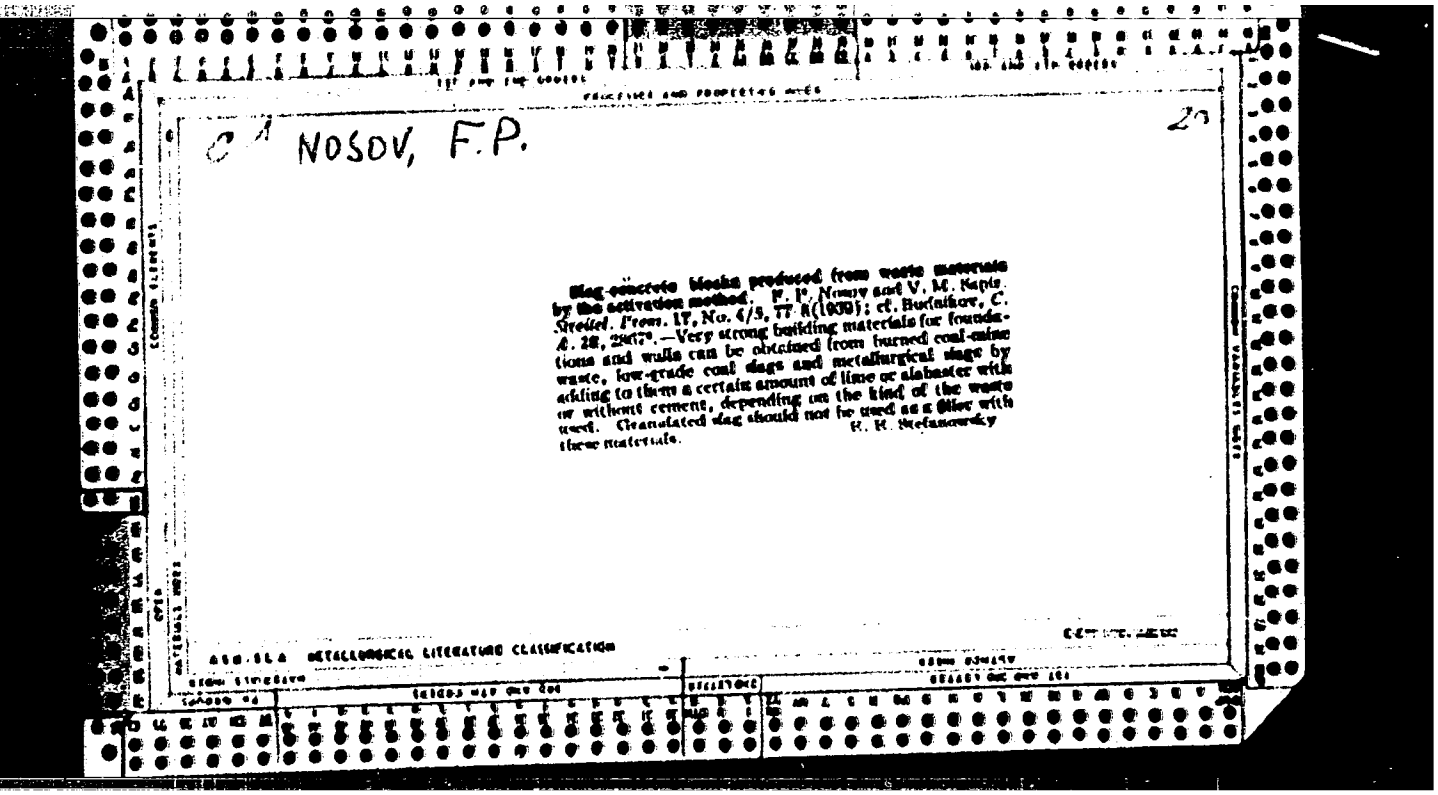
SUB CODE: 07/ SUBM DATE: 16Apr65/ ORIG REF: 004/ OTH REF: 005/

Card 2/2 fv

NOSOV, E.P.

Analyzing the persistent change in the regime of underground waters with a view to making long-range predictions. Razved. i okh. nedr 30 no.7:54-57 Jl '64. (MIRA 17:12)

1. Rostovskaya kompleksnaya geologicheskaya ekspeditsiya.



C A NOSOV, F.P.

Slag-concrete blocks produced from waste materials by the activation method. F. P. Nosov and V. M. Kapis. *Stroitel. Prom.* 17, No. 4/5, 77 R(1939); cf. Buchikhov, *C. A.* 28, 2867⁹.—Very strong building materials for foundations and walls can be obtained from burned coal-mine waste, low-grade coal slags and metallurgical slags by adding to them a certain amount of lime or alabaster with or without cement, depending on the kind of the waste used. Granulated slag should not be used as a filler with these materials. R. R. Mefanovsky

SKRAMTAYEVA, G.A., inzh., ispolnyayushchiy obyazannosti starshego nauchnogo sotrudnika. Prinimali uchastiye: KIR'YANOV, A.P.; FINKEL'SHTEYN, Ya.B.; NOSOV, F.P.; STRIZHEVSKIY, V.I., kand.tekhn.nauk, nauchnyy red.; CHABROV, I.M., red.

[Method for applying cement coatings in insulating steel pipes to be used in trenchless and jacketless pipelaying; scientific report] Tekhnologiia naneseniia tsementnoi izoliatsii na stal'nye truby dlia bestransheinoi besfutliarnoi prokladki truboprovodov; nauchnoe soobshchenie. Moskva, Otdel nauchno-tekhn.informatsii Akad.kommun. khoz., 1959. 18 p. (MIRA 13:6)

1. Glavnyy mekhanik Upravleniya po stroitel'stvu podzemnykh sooruzheniy Glavmosstroya (for Kir'yanov). 2. Nachal'nik Proizvodstvenno-tekhnicheskogo otdela (for Finkel'shteyn). 3. Glavnyy inzhener trubozagotovitel'nogo zavoda tresta "Mospodzemstroyenab" (for Nosov).
(Protective coatings) (Pipelines)

NOSOV, G.A.

Complete the construction of wire broadcasting networks in villages by 1960. Vest. sviazi 20 no.5:8-9 My '60. (MIRA 13:12)

1. Sekretar' Penzenskogo obkoma kommunisticheskoy partii Sovetskogo Soyuza.

(Wire broadcasting)

NOSOV, G.A., master

Device for removing pressed-on components. Energetik 12 no.1:19-20 Ja '64. (MIRA 17:3)

L 45900-66 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AR6016755 SOURCE CODE: UR/0277/66/000/001/0030/0030

AUTHOR: Nosov, G. G.

TITLE: Thermal stresses in reinforced plastics

SOURCE: Ref. zh. Mashinostroitel'nyye materialy, konstruktsii i raschet detaley mashin. Gidroprivod, Abs. 1.48.178

REF SOURCE: Sb. tr. Mosk. vyssh. tekhn. uch-shcha im. N. E. Baumana, v. 4, 1964, 55-64

TOPIC TAGS reinforced plastic, fiberglass, resin

ABSTRACT: The author considers various problems associated with the strength of fiberglass-reinforced plastics as a function of the thermal stresses which arise in the "resin-glass filler" system during binder hardening. Experimental curves are plotted for the temperature distribution in the resin-glass system. Formulas are derived for strength as a function of resin content, filler concentration, chemical and thermal shrinkage and a number of other factors observed during preparation of fiberglass-reinforced plastic. 5 illustrations. Bibliography of 8 titles. [Translation of abstract]

SUB CODE: 11

UDC: 678.5-419.677.521:539.4

Card 1/1

KOROLEV, Yu.M.; NOSOV, G.I.

X-ray study of paraffins separated from oils. Trudy VNIGNI no.27:225-227 '60. (MIRA 17:3)

NOSOV, G.I.

Using the lithologic-petrographic method of study for dividing a uniform chalk formation on the right bank of the Don. Trudy VNIGNI no.27:258-265 '60. (MIRA 17:3)

NOSOV, G. I.

NOSOV, G. I.: "THE Lithology of the Turon-Kon'yak stratum of chalk on the right bank of the Don." Acad Sci USSR. Geology Inst. Gidroprojekt (Hydraulic Planning), Min Electric Power Stations USSR. Moscow, 1956. (Dissertation For the Degree of Candidate in Geologicomineralogical Science.)

Knizhnaya letopis'
No 32, 1956. Moscow.

NOSOV, G. I.

"Lithology of the Turan-Konyak Mass of the Chalk on the Right Bank of the River Don."

dissertation defended for the degree of Cand. Sci. of Geological-Mineralogical Sciences, at the Inst. for Geology. (Jan-Jul 1957)

Defense of Dissertations
Sect. of Geological-Geographical Sci.
Vest. AN SSSR, 1957, v. 27, No. 12, pp. 113-115

NOSOV, G.I.

Detailed lithological correlation of the Turonian Chalk series in the Donets Basin. Biul.MOIP.Otd.geol. 32 no.1:99-106 Ja-F '57. (MLRA 10:5)

(Donets Basin--Geology, Stratigraphic)

PA - 2932

AUTHOR: NOSOV,G.I.

TITLE: The Composition of an Non-Carbonate Admixture in Writing-Chalk and its Influence upon the Physical-Mechanical Properties of the Rock. (Sostav nekarbonatnoy primesi v pischem melu i yeyevliyaniye na fiziko-mekhanicheskiye svoystva porody, Russian)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol 115, Nr 1, pp 179 - 182 (U.S.S.R.)

Received: 6 / 1957 Reviewed: 7 / 1957

ABSTRACT: Although the writing-chalk of the Russian table land was thoroughly investigated, the question of non-carbonate admixtures has not been sufficiently explained. The Turon-Cognac-layers of the right bank of the river Don between the estuary of the Voronezh and the town of Kalakh are about uniform and mainly consist of pure chalk which in the lower reaches of the river Don turns into chalky marl. The magnesia content of the chalk is insignificant and the content of R_2O_3 is low; the content of silicon earth is greatest. Other compounds appear as traces. Among the formed components of the share of basic carbonates, powder-formed calzite prevail (up to 56 %), there is a little less of coccolithophorides (up to 51 %); and so are the shells of foraminiferae (till 25 %) of secondary importance, shard of the prismatic layers of inoceramen (up to 20 %) and other chalk organisms (up to 3 %). The non-carbonate part was determined

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The Composition of an Non-Carbonate Admixture in PA - 2932
Writing-Chalk and its Influence upon the Physical-Mechanical Properties of the Rock.

from a weighed quantity of about 2 kg by gradual treatment with HCl. Here the loamy (pelit-)fraction (90 - 97 %) of less than 0,01 mm prevails. The whole rest consists of an aleurit-fraction. The sand fraction practically does not exist.

Altogether 29 kinds of minerals were found. The frequent occurrence (about 50 %) of soiled and iron-concentrated grains in the heavy fraction, the mineralogic character of which can not be determined, as well as a great content of ore minerals (7 - 15 %) is characteristic in the heavy fraction. No difference between the mineralogic composition of the aleurit fractions of Turon and Cognac could be determined. The coarse fraction (0,01 - 0,05 mm) of the loamy material mainly consists of mordenite with admixtures of quartz, fieldspar, muscovite, glauconite and opal as well as of accessory and loamy minerals. The next finest fraction contains hydromica, beidellite and kaolinite.

The finely dispersed fraction (of less than 1) chemically contains quite a number of sesquioxide. A somewhat increased content of K_2O is apparently due to hydromica. About 10 4 of amorphous opal as well as organic substance in form of humus were determined in

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PA - 2932

The Composition of the Non-Carbonate Admixture in Writing-Chalk and its Influence upon the Physical-Mechanical Properties of the Rock.

the alkaline test. Therefore the mineralogic composition of loamy (pelit-) material (of less than 0,01 mm) is as follows: beidellite with hydromica with a steady admixture of haolinite, mordenite, opal, glakonite, hydrohetite, humus.and earthy minerals. The quantity of admixtures increases with increasing size of grain in loamy material on the lower reaches of the river Don. The composition and the physical-mechanical properties of chalk are mutually dependent on each other. Specific weight differs only slightly (2,60 - 2,73), porosity is in inverse ratio to the content of clay and is about 30 - 54 %. In the case of a saturation with water the strength of the chalk is reduced 2 - 3 fold, apparently as a consequence of the weakening of the cementation of the finest calzite particles forming it and of a swelling of the pore-filling beidellite. Resistence to frost is low and decreases with increasing content of clay.

Card 3/3

ASSOCIATION: Not given
PRESENTED BY: N.S.SHATSKIY, Member of the Academy
SUBMITTED: 16.10.1956
AVAILABLE: Library of Congress

SOV/11-59-10-6/16

3(5)

AUTHOR: Nosov, G.I. and Bogokina, F. Ye.

TITLE: Glauconite in the Paleogene Deposits from the Volga Region near Stalingrad.

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 1959, No. 10, pp 69-77 (USSR)

ABSTRACT: Glauconite is one of the rock-forming minerals in the Paleogene deposits of the Volga region near the town of Stalingrad. The glauconite-containing stratum of maritime greenish-gray terrigenous rocks is composed of sands, sandstones, and of aleurolites with layers of aleurite argillites and clays. The stratum is divided into three suites: Proleyskaya, Tsaritsynskaya, and Buchakskaya suites of the Eocene epoch, altogether 100 m thick. Different analyses showed that the glauconite contained in all three suites does not differ. The comparison of its composition with the composition of the glauconite from other Tertiary formations showed by their close similarity the strict association of its formation with specific geochemical surrounding of the maritime terrigenous-glauconite formations.

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SOV/11-59-10-6/16

Glauconite in the Paleogene Deposits from the Volga Region near Stalingrad

/ Design and Planning Experimental Scientific-Research Institute (Gidroproyekt) of the Ministry of Electric Power Plants of the USSR Moscow)

SUBMITTED: December 17, 1958

Card 3/3

BELYAKOV, N.A.; PUZYREV, I.V.; NOSOV, G.I.

Some problems of the improvement of the carding machine developed by the Ivanovo Scientific Research Institute of Textile Industry. Nauch.issl.trudy IvNITI 25:42-50 '61. (MIRA 15:10)
(Ivanova—Carding machines)

VLODARSKAYA, V.R.; NOSOV, G.I.

Genetic type of clay minerals in Devonian and Permo-Triassic deposits of the Kama-Vyatka Depression. Dokl.AN SSSR 137 no.6:1430-1433 Ap '61. (MIRA 14:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut. Predstavleno akademikom N.M.Strakhovym.
(Kazhim region—Clay)

NOSOV, G. I.

Montmorillonization in hydromica as a diagnostic feature of Tertiary oil-bearing series in Daghestan. Izv. AN SSSR Ser. geol. 27 no.10:46-54 O '62. (MIRA 15:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut, Moskva.

(Daghestan—Montmorillonite)
(Daghestan—Petroleum geology)

BELYAKOV, N.A.; FUZYREV, I.V.; NOSOV, G.I.

Shortening the opening and scutching process by the use of sawlike elements. Nauch.-issl. trudy IvNITI 26:3-23 '63. (MIRA 18:4)

BELYAKOV, N.A.; NOSOV, G.I.; PUZYREV, I.V.

Carding machine with bicoil coiler. Nauch.-issl.trudy IvNITI 26:35-52 '63. (MIRA 18:4)

NOSOV, G.I.; VLODAVSKAYA, V.R.

Relations between clay minerals and organic matter in the oil producing sediments of the southern margin of the Azov-Kuban trough. Lit. i pol. iskop. no.2:63-76 Mr-Ap '64. (MIRA 17:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut.

RATEYEV, M.A.; YEROSHCHEV-SHAK, V.A.; NOSOV, G.I.

Conditions governing the formation of the clay minerals of recent and ancient sea basins. Izv.vys.ucheb.zav.; geol. i razv. 8 no.2:15-24 F '65. (MIRA 18:3)

1. Geologicheskiy institut AN SSSR.

NOSOV, Gleb Yakovlevich; NIKOLAYEVA, N.G., red.; ANTSELOVICH, K.I., tekhn. red.

[Safety and fire-prevention engineering] Tekhnika bezopasnosti i protivopozharnaia tekhnika. Moskva, Ekonomika, 1964. 163 p. (MIRA 17:4)

NOSOV, G.L.

AUTHOR: Nosov, G. [illegible] SOV/[illegible]-58-2-10/46

TITLE: The Thermophysical Properties of Cast Armco Steel (Teplofizicheskiye svoystva litoy kipyashchey stali)

PERIODICAL: Nauchnyye zapiski Lvovskoy [illegible]. Metallurgiya, no. 2, 1958, [illegible], pp. [illegible] (USSR)

ABSTRACT: [illegible] data on the thermophysical properties of the melt of rimmed steel were completed. These properties of the steel alloys were investigated at various temperatures. In a comparison between the thermal conductivity in cast rimmed steel and the temperature it was found that the thermal conductivity is the same in the interior and at the surface of the alloys. At [illegible] the thermal conductivity of the surface layer is greater than in the interior. The reasons for the constant character of the magnitude λ, as well as of the outer and inner layer of the alloys at low temperatures were mentioned, disregarding their different structure. The thermal conductivity coefficient λ was determined for all samples and also its dependence on the temperature. As the surface and in the interior of the alloys are [illegible] within

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the temperature range of 700-900°C the mean thermal conductivity coefficient differs only little from the thermal conductivity in the interior of the rail. At temperatures above 1000°C the mean equivalent conductivity increases. There are 4 figures, 1 table, and 6 references, 6 of which are Soviet.

ASSOCIATION: Gor'kiy politekhnicheskiy institut (Gor'kiy Polytechnical Institute)

SUBMITTED: October 20, 1957

SOV/137-59-3-4928

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 3, p 4 (USSR)

AUTHORS: Nosov, G. L., Malkin, V. M.

TITLE: Heating a Two-layer Plate (Nagrev dvukhsloynoy plastiny)

PERIODICAL: Tr. Ural'skogo politekhn. in-ta, 1958, Nr 73, pp 198-206

ABSTRACT: The analytical solution of the heating of an unbounded plate (P) consisting of two layers with different thermal characteristics is adduced. The heat transfer onto one of the P surfaces proceeds according to Newton's law. The ambient space has a constant temperature. No heat is lost on the reverse side of the P (adiabatic surface or plane of symmetry). The thermal characteristics of the layers and the heat transfer coefficient are assumed to be at their medium values and independent of the temperature. Cases are examined when the temperatures of P are either equal at all points at the initial moment or when each layer has its own initial temperature.

G G.

Card 1/1

NOSOV G. L.

24.5200

77147
SOV/148-59-9-17/22

AUTHOR: Nosov, C. L. (Engineer)

TITLE: Analytical Investigation of the Process of Heating a Two-Layer Plate and a Cylinder

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, 1959, Nr 9, pp 145-151 (USSR)

ABSTRACT: The article refers to the investigation of: (1) The process of heating a two-layer plate according to provisions of the analytical method. (2) The process of heating a two-layer cylinder by using a hydrostatic integrator designed by D. V. Budrin. The hydrostatic integrator system was placed at the disposal of the author by the administration of the All-Union Scientific Research Institute of Metallurgical Thermotechnology (Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy deplotekhniki). The integrator is suitable for work with plates and cylinders due to interchangeable containers. Description of it was previously given in literature, e.g.,

Card 1/9

Budrin, D. V., Hydrostatic Modeling of Non-Stationary Thermal Processes, Sverdlovsk, Soyuzteplostroy, 1947; Blokhin, Ye. P., and Kavaderov, A. V., Heating Metal by Radiation, Bulletin nauchno-tekhnicheskoy informatsii VNIIT, Nr 1, Metallurgizdat, 1956. The analytical solution of the problem for two-layer plate under the boundary conditions of the third type describes the temperature field for any time-moment. Equation (1) for

$$\theta_1 = \frac{t_c - t_1(x,\tau)}{t_c - t_0} = \sum_{n=1}^{n=\infty} \frac{\cos\mu_n \frac{x}{s_1} \cos\left(\mu_n \frac{k_c}{k_b}\right) - k_b \sin\mu_n \frac{x}{s_1} \sin\left(\mu_n \frac{k_c}{k_b}\right)}{\varkappa_n(\mu)} e^{-\mu_n^2 Fo_1}, \quad (1)$$

where $0 \leqslant X \leqslant S$,

gives the temperature field of the outer layer which exchanges heat with the ambient medium. Equation (2) for the inner layer

$$\Theta_2 = \frac{t_c - t_2(x,\tau)}{t_c - t_0} = \sum_{n=1}^{\infty} \frac{\cos\left|\mu_n \frac{k_w}{k_b}\left(\frac{x+S_2}{S_2}\right)\right|}{\varkappa_n(\mu)} e^{-\mu_n^2 \frac{k_w^1}{k_b^2} Fo} \qquad (2)$$

where $S_2 \leqslant X \leqslant 0$;

f_c-temperature of the medium, ^oC; f_o - initial temperature of the body, ^oC; $f_1(x, \tau)$, $f_2(x, \tau)$-temperatures at any point for layers I and II at any time-moment, ^oC; S_1, S_2 - thickness of layers I and II in meters; γ_1, γ_2 - volumetric weight of layers I and II kg/m^3; c_1, c_2 - average specific heat of layers I and II, kilocal/kg-degr; λ_1, λ_2 - average heat conductivity of layers I and II kilo cal/m-hr-degr; a_1, a_2 - average temperature conductivity of layers I and II

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m^2/hr; b_1, b_2 - average coefficient of thermal inertia of layers I and II kilo cal/m^2 $hr^{0.5}$-degr; W_1, W_2 - water equivalent, referred to 1 m^2 surface of layers I and II; x coordinate of the point measured from the plane of layers division, in meters; τ - time from beginning of heating, hr. Values of the roots μ_n are determined from the following equation:

$$1 - \frac{\mu_n \operatorname{tg} \mu_n}{Bi} - \frac{k_b \mu_n \operatorname{tg}\left(\mu_n \frac{k_w}{k_b}\right)}{Bi} - k_b \operatorname{tg} \mu_n \operatorname{tg}\left(\mu_n \frac{k_w}{k_b}\right) = 0 \qquad (3)$$

$$Bi = \frac{\alpha s_1}{\lambda_1} ;$$

where α - average coefficient of heat transfer kilo/cal/m^2-hr-degr. As shown in equations 1, 2, 3, the temperature field depends upon three parameters: Bi, k_b, and k_w, where

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$$k_w = \frac{W_2}{W_1} = \frac{s_2 c_2 \gamma_2}{s_1 c_1 \gamma_1}$$

$$k_b = \frac{b_2}{b_1} = \sqrt{\frac{\lambda_2 \gamma_2 c_2}{\lambda_1 \gamma_1 c_1}}$$

Based on the analytical solution, numerous calculations have been made which allowed the determination of the characteristics of heating two-layer bodies. Results for plates with different thermo-physical characteristics of the layers are shown in Fig. 1. The analysis of heating heterogeneous two-layer bodies which require different heating periods shows that the principal characteristics of the process are the same. Figure 2 illustrates the calculated results for the determination of heating time for plates composed of heterogeneous layers. The interrelations and characteristics of heating and cooling two-metal

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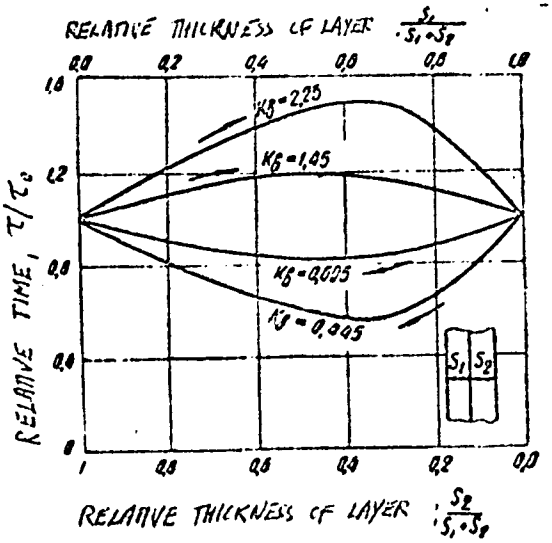

Fig. 1. Changes in the relative duration of heating of two-layer plate at $K_b \neq 1$ (for limited conditions when homogeneous plate of $S = S_1 + S_2$ thickness, with different thermo-physical properties of component layers, have identical duration of heating).

Card 6/9

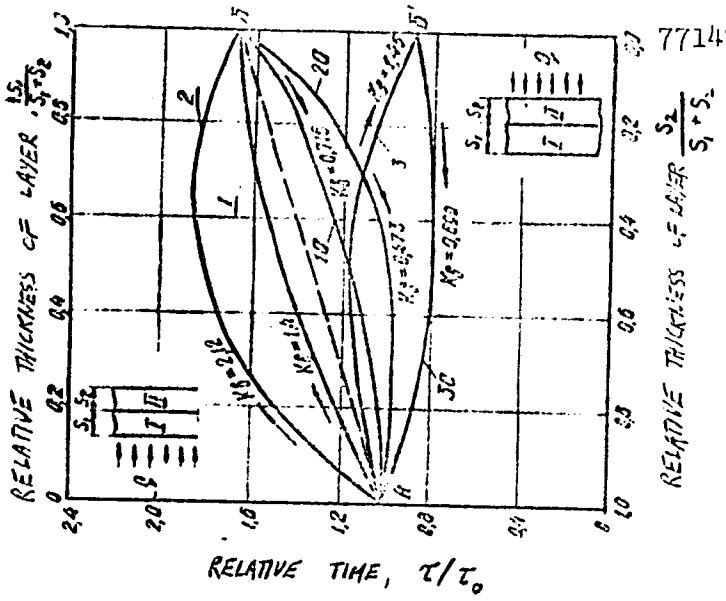

Fig. 2. Changes in the relative heating period of a two-layer plate depending on the thickness of the outer layer at $K_b \neq 1$.

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layers apply to a certain extent to the process of heating a two-layer square, prism, or cylinder. Nevertheless, the effect of the outer layer on the heating period differs for various cases. Figure 3 shows the test results for 0.9 m and 0.5 m diam cylinders by using a hydrostatic integrator. The maximum difference between calculated and experimental values (obtained on the integrator) amounted to 1.5 to 2.0%. The author concludes as follows: (1) Similar laws govern the process of heating both the two-layer plates and the cylinders; however, in cylinders the presence of a second layer affects the heating process to a lesser degree; (2) although the analytical investigation of the heating of two-layer bodies is not by itself complete, it provides an adequate presentation of the characteristics of heating such systems in comparison with homogeneous bodies. There are 3 figures; 1 table; and 5 Soviet references.

ASSOCIATION: Ural Polytechnic Institute (Ural'skiy politekhnicheskiy institut)

SUBMITTED: June 19, 1959

Analytical Investigation of the Process of Heating a Two-Layer Plate and a Cylinder

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SOV/148-59-9-17/22

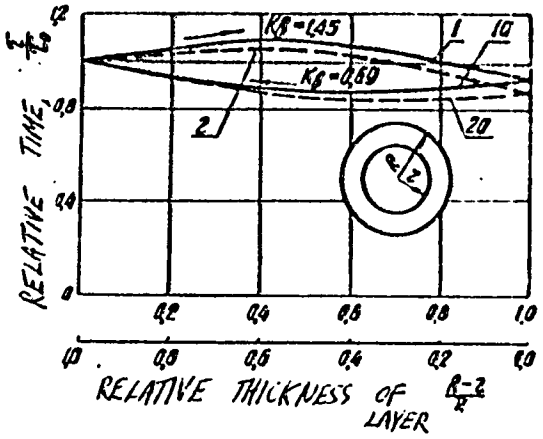
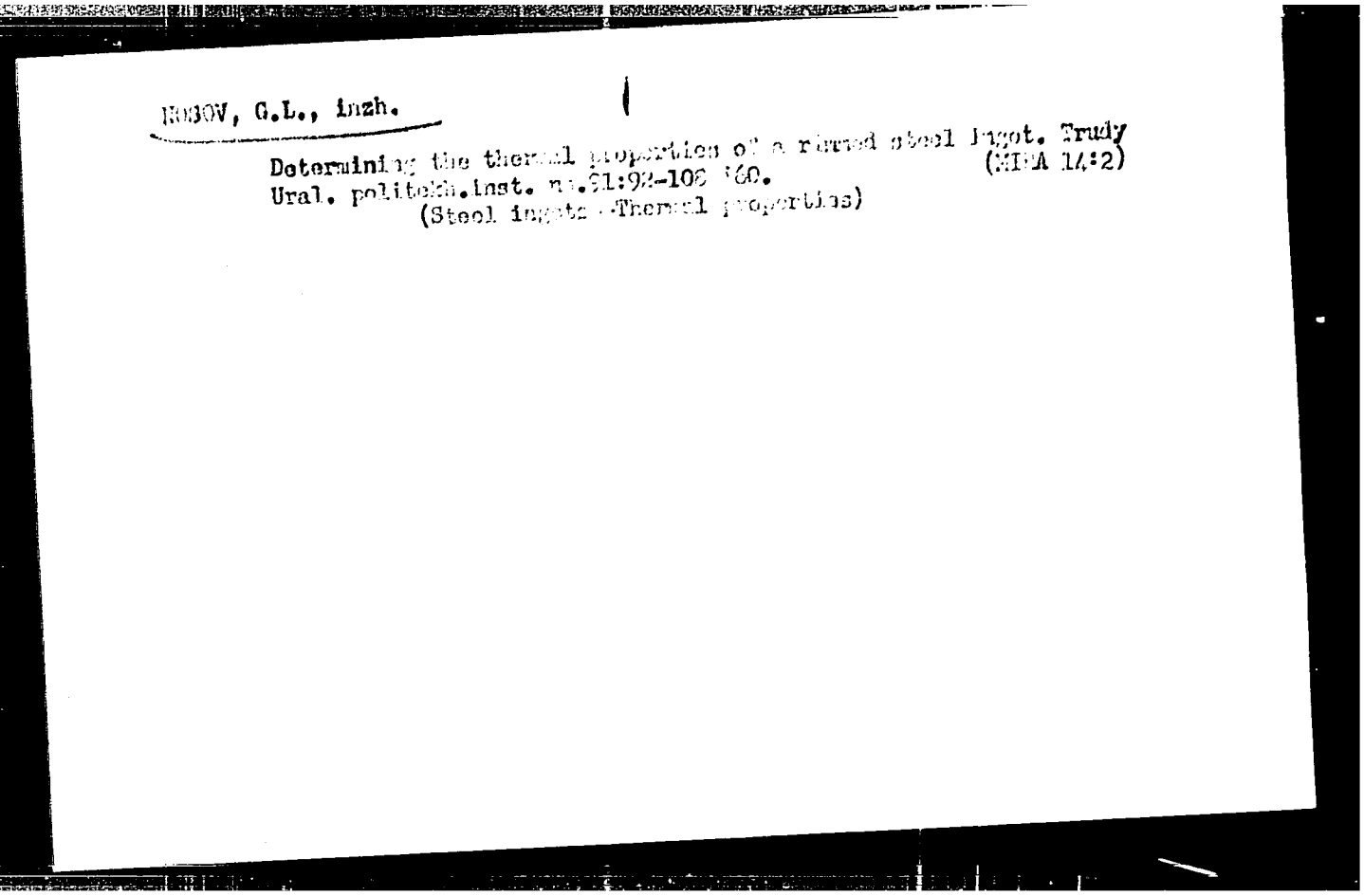


Fig. 3. Changes in the relative heating period for a two-layer cylinder depending on the relative thickness of the outer layer at $K_b \neq 1$: 1, 1a - 0.9 diam two-layer cylinder; 2, 2a - 0.5 diam two-layer cylinder.

Card 9/9



ROSOV, G.L., inzh.

Determining the thermal properties of a rimmed steel ingot. Trudy Ural. politekh.inst. no.91:93-106 '60. (MIRA 14:2)
(Steel ingots--Thermal properties)

NOSOV, G.L., inzh.; KITAYEV, B.I., doktor tekhn.nauk, prof.; BURKSER, V.Ye., inzh.; RYABOKON', M.K., inzh.; SHALAYEV, V.V., inzh.

Improving the performance of soaking pits. Stal' 20 no. 12:1141-1145 D '60 (MIRA 13:12)

(Furnaces, Heating)
(Rolling mills--Equipment and supplies)

NOSOV, G.L.; LEONT'YEV, V.A.; AKSEL'ROD, L.M.; [illegible] V.Y.; IOFFE, Ya.Ye.

Solidification and cooling of various brand steel ingots in ingot molds. Stal' 25 no.6:529-534 Je '65. (MIRA 18:6)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat i Vsesoyuznyy nauchno-issledovatel'skiy institut metallurgicheskoy teplotekhniki.

IVANOV, V.A., dotsent, kand.tekhn.nauk; KUNITSKIY, L.P., dotsent, kand.tekhn. nauk; KORMAKOV, L.I., dotsent, kand.tekhn.nauk; GUDKOV, P.N., dotsent; PRIMAK, N.G., dotsent, kand.tekhn.nauk; BRYANTSEV, V.I., inzh.; SIKALO, P.I., inzh.; NOSOV, G.M., inzh.; LUKASHENKO, I., red.; HERGER, K., red.; KHRUNICHENKO, I., red.; ZELENKOVA, Ye., tekhn.red.

[Wooden construction elements; analysis and design] Derevianne konstruktsii; primery raschetа i konstruirovaniia. Kiev, Gos.izd-vo lit-ry po stroit. i arkhit.USSR, 1960. 537 p. (MIRA 13:9)
(Building, Wooden)

SOV/112-58-3-4797

9(0)

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1958, Nr 3, p 204 (USSR)

AUTHOR: Nosov, G. N.

TITLE: Sweep-Frequency Generator
(Generator kachayushcheysya chastoty)

PERIODICAL: Sb. stud. nauch. rabot Ul'yanovskiy gos. ped. in-t, 1956, Nr 1, pp 101-104

ABSTRACT: Bibliographic entry.

Card 1/1

TURANOV, V.A.; GAVRILOV, V.P.; BYKOV, R.I.; NOSOV, G.N.

Upper Jurassic sediments in the southern Aral Sea Region. Neftegaz, geol. i geofiz. no.4:11-14 '64. (MIRA 17:6)

1. Moskovskiy ordena Trudovogo Krasnogo Znameni institut neftekhimicheskoy i gazovoy promyshlennosti im. akademika Gubkina i trest "Bukharaneftegaz."

L 23582-66 EWT(m)/EWP(j)/T HM
ACC NR: AP6005283 (A) SOURCE CODE: UR/0413/66/000/001/0025/0025

INVENTOR: Khaylov, V. S.; Artem'yev, A. A.; Ovakimyan, G. B.; Zhizhikov, V. A.; Nosov, G. P.

ORG: none

TITLE: Method of preparing E-caprolactam. Class 12, No. 177421

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 25

TOPIC TAGS: caprolactam nitration

ABSTRACT: An Author Certificate has been issued describing a method for preparing E-caprolactam for cyclohexane by liquid-phase nitration with nitric acid and hydrogen reduction of the nitrocyclohexane on metallic copper in a medium of cyclohexane and liquid ammonia. To reduce processing time, the tubular reactor is pressure-fed cyclohexane (50-150 atm) plus 25 -- 45% nitric acid in a 1.4 -- 0.5 molar ratio. At the reactor outlet, the reaction mixture is rapidly cooled to 25 -- 30C without lowering the pressrue the nitrocyclohexane is then separated from the mixture by conventional methods and reduced, within 40 -- 45 min at 180 -- 200 atm and a temperature which is gradually increased from 80 -- 85C to 115 -- 120C, to cyclohexanonoxime which is subsequently converted to E-caprolactam by conventional methods. To ensure a constant temperature of 200 -- 250C, the reactor walls at the inlet are washed

Card 1/2 UDC: 547.466.3.07

L 23582-66

ACC NR: AP6005283 O

with a cold liquid circulated from the point of the outlet of the hot reaction mixture to the point of admission of the cold mixture. [LD]

SUB CODE: 07/ SUBM DATE: 21Jul54/

Card 2/2 PB

IVANOV, A.A., prof.; NOSOV, G.R., inzh.; SAKALO, L.G., inzh.

Study of the properties of coal and rock in order to develop the means of automation. Izv.vys.ucheb.zav.; gor.zhur. 6 no. 12:177-180 '63. (MIRA 17:5)

1. Dnepropetrovskiy ordena Trudovogo Krasnogo Znameni gornyy institut imeni Artema. Rekomendovana kafedroy avtomatizatsii proizvodstvennykh protsessov.

NOSOV, G. YA.

Mining Engineering

Dissertation: "Investigation of the Precision of Machining on Combined Boring Machines in Aviation Instrument Building." Cand Tech Sci, Moscow Aviation Technological Inst, 19 Mar 54. (Vechernyaya Moskva Moscow, 8 Mar 54)

SO: SUM 213, 20 Sep 1954

PAVLOV, Yevdokiya Kuz'minichna. Prinimal uchastiye NOSOV, G.Ya., kand. tekhn. nauk, prepodavatel'; KIRILLOV, A.Ya., inzh., red.; CHERVYAKOVA, L.S., red.; EL'KINA, E.M., tekhn. red.

[Mechanical equipment for public eating establishments] Mekhanicheskoe oborudovanie predpriiatii obshchestvennogo pitaniia. Pod red. A.IA.Kirillova. Moskva, Gos. izd-vo torg. lit-ry, 1961. 238 p. (MIRA 15:1)

1. Moskovskiy tekhnikum obshchestvennogo pitaniya (for Nosov).
(Restaurants, lunchrooms, etc.—Equipment and supplies)

LYASHED'KO, M.; NOSOV, I.

Lumberyards in Archangel Province. Pozh.delo 4 no.11:13-14 N '58. (MIRA 11:12)

1. Nachal'nik Upravleniya pozharnoy okhrany Arkhangel'skogo oblispolkoma (for Lyashed'ko). 2. Nachal'nik otdela Upravleniya pozharnoy okhrany Arkhangel'skogo oblispolkoma (for Nosov). (Archangel Province--Lumberyards--Fires and fire prevention)

NOSOV, I.

In the old Arkhangel'sk. Pozh. delo 5 no.5:28 My '59.
(MIRA 12:6)

(Arkhangel'sk--Fires and fire prevention)

NOSOV, I.

Fire hazards in wood flour shops. Pozh.delo 6 no.5:5-6 My '60.
(MIRA 13:8)

1. Nachal'nik Otryada pozharny okhrany Vologodskogo oblispolkoma.
(Woodworking industry--Fires and fire prevention)
(Wood waste)

NOSOV, I. (Arkhangel'sk)

Errors and their consequences. Pozh.delo 6 no.12:19-20 D '60.
(MIRA 13:12)
(Fire prevention)

NOSOV, I. (poselok Amderma-Arkhangel'sk)

People of a rough region. Pozh.delo 7 no.6:13, 16 Je '61. (MIRA 14:6)
(Amderma (Archangel Province)—Fires and fire prevention)

NOSOV, I. (Arkhangel'sk)

When fire starats on a ship... Pozh.delo 7 no.9:16-17 S '61.
(MIRA 14:11)
(Harbors--Fires and fire prevention)

NOSOV, I. (Arkhangel'sk)

Letting things drift. Pozh.delo 8 no.7:22-23 Jl '62.
(MIRA 15:8)
1. Vneshtatnyy korrespondent zhurnala "Pozharnoye delo".
(Archangel Province--Woodworking industries--Fires and fire prevention)
(Socialist competition)

NOSOV, I.

Drying of lumber in package piles. Pozh. delo 8 no.9:14 S '62.
(MIRA 16:11)

1. Vneshtatnyy korrespondent zhurnala "Pozharnoye delo."

NOSOV, I. (Arkhangel'sk)

Fire won't take them by surprise. Pozh. delo 8 no.10:15-16 O '62. (MIRA 15:10)

1. Vneshtatnyy korrespondent zhurnala "Pozharnoye delo".

(Archangel—Fire prevention)

MOSOV, I., (Sverdlovsk)

Volunteer economists at work. Mest.prom.i khud. promys. 3 no.1:32 Ja '63. (MIRA 16:2)
(Sverdlovsk—Industrial management)

NOSOV, I.

Good start. Pozh.delo 9 no.2:11-12 F '63. (MIRA 16:3)

1. Vneshtatnyy korrespondent zhurnala "Pozharnoye delo".
(Archangel Province—Fire testing)

LYASHED'KO, M.; NOSOV, I.

New developments in the equipment of lumberyards. Pozh.delo 9 no.5:23 My '63. (MIRA 16:5)
(Lumberyards—Fires and fire prevention)

NOSOV, I. (Arkhangel'sk)

Eleven hundred piles of lumber have been saved. Pozh.delo 10 no.1: 17-18 Ja '64. (MIRA 17:2)

NOSOV, I.G.

Automatic stop of soap-wash, dyeing and other machine units in case of fabric breakage. Tekst. prom. 24 no.7:75 Jl '64.
(MIRA 17:10)

1. Starshiy konstruktor otdelochnoy fabriki Tashkentskogo tekstil'nogo kombinata.

NOSOV, I.G.

Use of natural gas for the heating of grooved singer units.
Tekst. prom. 23 no.10:85-87 O '63. (MIRA 17:1)

1. Starshiy inzh.-konstruktor otdelochnoy fabriki Tashkentskogo tekstil'nogo kombinata.

NOSOV, I. I.

Nosov, I. I. - "The Clinical Aspects, Etiology, and Therapeutic-Prohylactic Measures in Mass Infections of the Extremities of Sheep in Leningrad Oblast." Leningrad Sci Res Veterinary Inst. Min Agriculture RSFSR. Leningrad Veterinary Inst. Leningrad, 1956 (Dissertation for the Degree of Candidate in Veterinary Sciences).

So: Knizhnaya Letopis', No. 10, 1956, pp 116-127

NOSOV, I. I., ZHADOVETS, K. I., LEVANIDOVA, Z. N. and KOVALEV, A. A.

"Blood indices of cows with calves and toxic dyspepsia in calves."

Veterinariya, Vol. 37, No. 4, 1960, p. 63

Nosov -- Cand. Vet. Sci., UNIIEV

NOSOV, I.I. and ORLOV, I.V.

"The Planning of Open-Hearth Shops", Stal' [Steel], No 11-12, 1942.

GRIGOR'YEV, V.P.; POPOV, S.Ya.; NOSOV, I.M.

Industrial adoption of the technology of direct copper plating of iron parts in a sulfate ammonium electrolyte. Trudy NPI 134:59-63 '62. (MIRA 17:2)

GIRTS, K.G.; MOSKOV, I.Ya.

Car changing unit. Ugol' Ukr. 10 no. 1:29 Ja '66.
(MIRA 18:1)

KUZNETSOV, Yevgeniy Semenovich. Prinimali uchastiye: KUROPTEV, V.T.; LEYDERMAN, S.R.; NOSOV, L.I.; PLEKHANOV, I.P.; PLESHAKOVA, T.I.; SALOSHIN, N.P.; SOKOLOV, O.V.; SHIBIN, P.V.; YAKOVLEV, A.V.. MARTENS, S.L., red.; ZUYKVA, N.K., tekhn.red.

[Efficient conditions for the maintenance of motor vehicles and methods for its improvement] Ratsional'nye rezhimy tekhnicheskogo obsluzhivaniia i metodika ikh korrektirovaniia. Moskva, Avtotransizdat. Pt.1. [Every day and the first maintenance of motor vehicles] Ezhednevnoe i pervoe tekhnicheskoe obsluzhivanie. 1958. 35 p. (MIRA 13:5)

(Motor vehicles--Maintenance and repair)

KUZNETSOV, Yevgeniy Semenovich; Prinimali uchastiye: RYTCHENKO, V.I.; OHLOV, V.P.; RUBETS, D.A.; ZAYATS, T.P.; KUROPTEV, V.T.; LEYDERMAN, S.R.; NOSOV, L.I.; SOKOLOV, O.V.; TULUKOV, G.A.; SHIBIN, P.V. LESHYAKOV, F.I., red.; DONSKAYA, G.D., tekhn.red.

[Efficient systems of maintenance and methods for their correction] Ratsional'nye rezhimy tekhnicheskogo obsluzhivaniia i metodika ikh korrektirovaniia. Moskva, Avtotransizdat. Pt.2. [Second stage of motor vehicle maintenance] Vtoroe tekhnicheskoe obsluzhivanie. 1960. 98 p. (MIRA 14:3)

(Motor vehicles--Maintenance and repair)

POLYANSKIY, B.A.; BULGAKOV, P.P.; NOSOV, L.M.

Potentiated surface gas anesthesia with uninterrupted curarization in surgical intervention in traumatology. Sov. med. 25 no.8:123-127 Ag '61. (MIRA 15:1)

1. Iz kliniki obshchey khirurgii (zav. - prof. B.A.Polyanskiy) Novosibirskogo meditsinskogo instituta (dir. - zasluzhennyy deyatel' nauki prof. G.D.Zalesskiy).
(NITROUS OXIDE) (ANESTHESIA INTRATRACHEAL)
(MUSCLE RELAXANTS)

112-57-7-15645D

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1957, Nr 7, p 261 (USSR)

AUTHOR: Nosov, L. N.

TITLE: No-Contact Magnetic Recording and Reproduction
(Beskontaktnaya magnitnaya zapis' i vosproizvedeniye)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Technical Sciences, presented to Mosk. elektrotekhn. in-t svyazi (Moscow Electrotechnical Institute of Communications), Moscow, 1956.

ASSOCIATION: Mosk. elektrotekhn. in-t svyazi (Moscow Electrotechnical Institute of Communications)

Card 1/1

VINOGRADOV, G. V.; NAMETKIN, N. S.; NOSOV, M.

"Antiwear & antifric properties of polyorganosiloxanes and their mix with hydro."

report submitted to Intl Lubrication Conf, Washington, D.C., 13-16 Oct 64.

MOSOV, M.A., inzhener.

Experience in increasing the productivity of excavating machinery.
Transp.stroi. 6 no.5:5-8 My '56. (MLRA 9:8)
(Excavating machinery)

NOSOV, M.A.

NOSOV, M.A., insh.

Mechanized finishing operations on embankments of deep excavations.
Transp.stroi. 7 no.6:29-30 Je '57. (MIRA 10:11)
(Railroads—Earthwork) (Excavating machinery)

MOSOV, M.A.

MOSOV, M., inzh.

Using machines for washing potatoes and root crops. Nauka i pered. op. v sel'khoz. 8 no.1:67-68 Ja '58. (MIRA 11:2)
(Potatoes) (Root crops) (Agricultural machinery)

VINOGRADOV, G. V.; NAMETKIN, N. S.; NOSOV, M. I.

"Antiwear and antifriction properties of polyorganosiloxanes and their mixtures with hydrocarbons."

report presented at the Intl Lubrication Conf, Washington, D.C., 13-16 Oct 64.

Inst of Petrochemical Synthesis, AS USSR, Moscow.

ACCESSION NO: AP4024413 S/0204/64/004/001/0170/0175

AUTHOR: Vinogradov, G. V.; Nametkin, N. S.; Nosov, M. I.

TITLE: Synergetic lubricating action of polysiloxanes and hydrocarbons

SOURCE: Neftekhimiya, v. 4, no. 1, 1964, 170-175

TOPIC TAGS: lubrication, synergism, polysiloxanes, hydrocarbons, antiwear lubricant, antifriction lubricant, antiwear test, antifriction test, petroleum product lubricant, silicon lubricants

ABSTRACT: The previously reported synergism in lubricant mixtures of polysiloxanes with some petroleum lubricants enriched with aromatic hydrocarbons has been further investigated by determining antiwear and antifriction properties of the following individual hydrocarbons and mixtures of them with polyethylsiloxanol liquid: diphenylmethane (isomeric mixture) (I), di-o-xylylmethane (II), 4,4'-diisopropyldiphenylmethane (III), 1,1-di-o-xylylethane (IV), 4-mono-isopropyldiphenyl (V), cumene (VI), and 2,6-di-tert.-butylmethyl benzene (VII). The tests were carried out on the four-ball MT-4 friction apparatus at

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ACCESSION NO: AP4024413

50C and a sliding speed of 23 cm/sec. The results (shown graphically) indicate that low-molecular-weight aromatic hydrocarbons (such as III and VI), which are readily oxidized to form hydroperoxides, possess high antiwear and antifriction lubricating properties. Sharp synergism was observed for the mixtures of III and VI with the polyethylsiloxanol liquid over a wide range of concentration of components. The role of atomic oxygen in the improvement of the lubricating properties of hydrocarbon lubricants and the role of hydroperoxides in transporting molecular oxygen to the metal surface is discussed in detail. The effectiveness of molecular oxygen as an additive to lubricants depends on the nature of the hydrocarbons which constitute the lubricant and on the ability of the hydrocarbons to form hydroperoxides. Orig. art. has: 4 figures.

ASSOCIATION: Institut neftekhimicheskogo sinteza AN SSSR im. A. V. Topchiyeva (Institute of Petrochemical Synthesis, AN SSSR)

SUBMITTED: 27Jun63 DATE ACQ: 17Apr64 ENCL: 00

SUB CODE: CH NO REF SOV: 011 OTHER: 001

Card 2/2

ACCESSION NR. AP4032519 S/0204/64/004/002/0345/0350

AUTHOR: Vinogradov, G. V.; Namatkin, N. S.; Kosov, M. I.

TITLE: Effect of the nature of polysiloxanes on their function as additives to hydrocarbon lubricants

SOURCE: Neftekhimiya, v. 4, no. 2, 1964, 345-350

TOPIC TAGS: lubrication, synergism, polysiloxane lubricant additive, hydrocarbon lubricant, antiwear lubricant, antifriction lubricant, silicon lubricant, antiwear, antifriction, polysiloxanes, hydrocarbon

ABSTRACT: This is the third article in a series on synergism in polysiloxane-hydrocarbon lubricant mixtures. Previous studies showed that the antiwear and antifriction properties of polysiloxane-hydrocarbon lubricants depend on the nature of the hydrocarbon. In the present article, experimental data are presented on the effect of the nature of polysiloxanes on the synergism in polysiloxane-hydrocarbon lubricants. Tests were made of the antiwear and antifriction properties of mixtures of 1,1-di-xylylethane with

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ACCESSION NR. AP4032519

polymethylsiloxane (I), polyethylsiloxane (II), and polymethylphenylsiloxane liquids with an average content of phenyl groups, called polymer 1 (III), and with a high content of phenyl groups, called polymer 2 (IV). The results (expressed in graphs and diagrams) showed that the synergetic action of polysiloxanes in the lubricating mixtures is greatly dependent on the nature of the polysiloxane. Effectiveness of the latter as hydrocarbon lubricating oil additives decreased in the order II>I>III>IV. This decrease is attributed to the increasing thermo-oxidative stability in the polysiloxane series on substitution of the side ethyl groups in the polysiloxane chain for methyl and phenyl groups. The synergism was observed not only in the mutually soluble mixtures of polysiloxanes and hydrocarbons, but also in polysiloxane-hydrocarbon emulsions. Orig. art. has: 1 table and 4 figures.

ASSOCIATION: Institut neftekhimicheskogo sinteza AN SSSR im. A. V. Topchiyeva(Institut of Petrochemical Synthesis, AN SSSR)

Card 2/3

ACCESSION NR: AP4040605 S/0204/64/004/003/0510/0517

AUTHOR: Vinogradov, G. V.; Nametkin, N. S.; Nosov, M. I.

TITLE: Effect of oxygen and oxidation initiators (hydroperoxides) on the antiwear and antifriction properties of polysiloxanes

SOURCE: Neftekhimiya, v. 4, no. 3, 1964, 510-517

TOPIC TAGS: lubricant, polysiloxane, polysiloxane lubricant, antiwear property, antifriction property, oxidation, polyethylsiloxane, polymethylphenylsiloxane, methane, 4.4'diisopropyl-, hydroperoxide, oxidation initiator, isopropylbenzene hydroperoxide, seizing, friction coefficient

ABSTRACT: The effect of the oxidative activity of the ambient gas phase and the agents which intensify the oxidation on the antiwear and antifriction properties of polysiloxane fluids under heavy loads was studied at the Institute of Petrochemical Synthesis imeni A. V. Topchiyev, AS USSR. A polymethylsiloxane, a polyethylsiloxane, and two polymethylphenylsiloxanes with a medium and a high content of phenyl groups in the molecule, designated Polymer 1 and Polymer 2

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ACCESSION NR: AP4040605

respectively, were used; in some experiments 4,4'-diisopropyldiphenylmethane was added to the polysiloxane fluids to determine the effect of the presence of an easily oxidizable hydrocarbon. The experiments were conducted on a four-ball machine. Variations in the oxidative activity of the ambient gas phase were achieved by conducting the experiments in vacuum, in the air, and by blowing oxygen at the rate of 12 l/hr through the lubricant in the four-ball chamber. In some experiments, varying amounts (0.5—3%) of isopropylbenzene hydroperoxide were added to the lubricating fluids as the oxidation initiator. The dependence of the wear on the load, friction-vs.-time diagrams, and dependence of the friction coefficients on the load were obtained for temperatures of 50, 120, and 200C. It was found that the oxidizing agents and easily oxidizable hydrocarbons exert the same effect in polysiloxane fluids as in hydrocarbon lubricants, namely, a decrease in seizing, which becomes degenerated and is terminated. This effect on the lubricating properties of polysiloxanes increases with the decrease of the thermoxidative stability of the latter, e.g., in the sequence:

polyethylsiloxane → Polymer 1 → Polymer 2.

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ACCESSION NR: AP4040605

The effect is weaker than that observed in hydrocarbon lubricants. The antifriction properties of the polisiloxanes are more susceptible than their antiwear properties to the effect of the ambient gas phase and the composition of the lubricating medium. Orig. art. has: 5 figures.

ASSOCIATION: Institut neftekhimicheskogo sinteza AN SSSR im. A. V. Topchiyeva (Institute of Petrochemical Synthesis, AN SSSR)

SUBMITTED: 25Jun63 DATE ACQ: 06Jul64 ENCL: 00

SUB CODE: FP,GC NO REF SOV: 010 OTHER: 007

Card 3/3

ACCESSION NR: AP4043281 S/0065/64/000/008/0050/0053

AUTHOR: Nosov, M. I.; Vinogradov, G. V.

TITLE: The effect of additives on the antiwear and antifriction properties of polysiloxanes

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 8, 1964, 50-53

TOPIC TAGS: organosulfur additive, organochlorine additive, organophosphorus additive, polysiloxane, polyethylsiloxane, polymethylphenylsiloxane, triphenyl phosphate, antiwear property, steel seizing, lubricant

ABSTRACT: The effect of certain organosulfur, organochlorine, and organophosphorus compounds as additives in various polysiloxanes was studied for the purpose of determining the specific action of additives on the boundary friction, establishing the relationship between the activity of additives and the nature of polysiloxanes, and determining the effect of molecular oxygen on the activity of the additives. The polysiloxanes used were polyethylsiloxane (PES) liquid, polymethylphenylsiloxane liquid with a low-phenyl group

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