POSTOLOVSKIY, S. N.

GOTGEL'F, I.M. kand.tekhn.nauk; POSTOLOVSKIY, S.N., inzhener.

Choice of type of blowers for power stations. Energomashinostroenie 3 no.8:20-23 Ag '57. (MIRA 10:10)
(Electric power plants--Ventilation)

GOTGEL'F, I.M., kand.tekhn.nauk; POSTOLOVSKIY, S.N., inzh.

Prospects for the development of blast-draft machines. Elek. sta. 31 no.12:20-24 D '60. (MIRA 14:5)
(Electric power plants--Equipment and supplies)
(Boilers)

POSTOLOVSKIY, S.N.

114-8-6/16

AUTHOR: Gotgel'f, I.M., Candidate of Technical Sciences, and Postolovskiy, S.N., Engineer.

TITLE: The selection of type of forced and induced draught equipment for power installations. (Vybor tipa tyago-dut'yevykh mashin dlya energeticheskikh ustanovok)

PERIODICAL: "Energomashinostroyeniye" (Power Machinery Construction) 1957, Vol.3, No.8, pp. 20 - 23 (U.S.S.R.)

ABSTRACT: In evaluating the effectiveness of a fan, in addition to the maximum efficiency under optimum conditions, it is necessary to consider the shape of the relationship between the efficiency and the output. In particular, draught-producing equipment used in power stations has to work under varying conditions depending on the load on the boiler set. The operating efficiency of the equipment, which governs the power consumption in operation, depends to a considerable extent on the efficiency of regulation.

A brief analysis is made of the economy of regulation of fans and it is concluded that it is most economic to regulate them by altering the speed. In actual fact the hydraulic couplings or motors with rheostats in the rotor circuit that are necessary to achieve speed control are themselves rather inefficient and require considerable auxiliary equipment. An

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The selection of type of forced and induced draught equipment for power installations. (Cont.) 114-8-6/16

throttle but also economy in regulating properties. The influence of fan load factor on design is briefly considered.

At present all the draught-producing equipment manufactured for boiler sets with outputs up to 230 t/h employs the standard aerodynamic scheme 0.7 - 37 with forward bent blades. In connection with the development of larger boilers in 1955 the Moscow Division of the Central Boiler Turbine Institute developed a new aerodynamic scheme 0.8 - 37 with forward bent blades running at higher speeds than the standard machines. The operating characteristics are shown in Fig. 1 and the regulation characteristics in Fig.2. Fig. 3 gives the relationship between the operating efficiency of the new equipment and the load on the boiler set when using regulation by axial guide vanes combined with a two-speed motor.

The Institute has recently developed and tested on a model some modifications of the aerodynamic scheme 0.7 - 60 with backward bent blades. Fig. 4 gives the characteristics for this scheme with 12 unprofiled blades. Questions of fan design including the best number of blades are discussed. Analysis of the merits of the different designs show that the 0.7 - 160 scheme is advantageous for boilers operating on constant load

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GOTGEL'F, I.M., kandidat tekhnicheskikh nauk; POSTOLOVSKIY, S.N., inzhener.

Arrangement of a fan with axial guide vanes and an inlet box.
Elek.sta. 27 no.1:8-10 Ja '56. (MLRA 9:6)
(Fans, Mechanical)

LEVIN, Izrail' Moiseyevich; BOTKACHIK, Iosif Azar'yevich; RODDATIS, K.F., kand. tekhn. nauk; IVYANSKIY, S.I., kand. tekhn. nauk; BRAUDE, I.Ye., inzh.; GOTGEL'F, I.M., kand. tekhn. nauk, retsenzent; POSTOLOVSKIY, S.N., inzh., retsenzent; KOMAROV, A.M., inzh.; LARIONOV, G.Ye., tekhn. red.

[Flue exhaust and ventilating fans for high capacity electric power plants] Dymososy i ventiliatory moshchnykh elektrostantsii. Moskva, Gos. energ. izd-vo, 1962. 183 p. (MIRA 15:4)
(Electric power plants--Ventilation)

86476

S/104/60/000/006/003/004
E194/E484

26.2122

AUTHOR: Postolovskiy, S.N., Engineer

TITLE: An Investigation of the Aerodynamics of the Flow Parts of Centrifugal Fans

PERIODICAL: Elektricheskiye Stantsii, 1960, No.6, pp.28-33

TEXT: It is very difficult to make an experimental or theoretical study of the aerodynamics of the flow parts of centrifugal fans. The modelling method is the one mainly used to develop new types of fans but this method suffers from the difficulty that it is impossible to assess the distribution of losses between individual components of the flow part and so to be able to improve the aerodynamics of the system rationally. The flow in centrifugal fans is characterized by periodic changes in static pressure and vector speed, the reasons for which are discussed. Accordingly, flow in the fans is usually pulsating. Experimental work on fans has usually made use of the well-developed aerodynamic method of pneumometric measurements but in principle this method is only capable of measuring mean values of pressure with time, and so its use for the study of pulsating phenomena is limited. Electronic methods of measurement could well be developed if suitable

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An Investigation of the Aerodynamics of the Flow Parts of Centrifugal Fans

transducers were available. Visual methods of observation occupy a special place in experimental aerodynamics. The luminous particle method is used to study flow with a high degree of turbulence. It is of special interest to develop this method to give quantitative as well as qualitative data. The essence of the method is that insoluble particles are included in the flow which is then illuminated with a narrow beam of light pulsating at a predetermined frequency. Particles illuminated by the beam of light shine and their position may be photographed. The speed of the particles may be calculated from the distance between successive appearances in pulsating light. An advantage of the method is that it is possible to obtain a picture of the speed of flow at any given instant over the entire section of the flow part. It is much easier to use the method of visual observation if the air is replaced by water. In tests on centrifugal fans, this is usually quite permissible because compressibility of the air may be neglected. The governing criterion is that the Reynolds number

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An Investigation of the Aerodynamics of the Flow Parts of Centrifugal Fans

must be maintained constant, which involves reducing the speed of the runner. For example, in a particular case, if the runner speed is 1000 to 3000 rpm in air, the speed with water should be 70 to 210 rpm. This slowing down of the speed makes it easier to photograph the moving particles. On the basis of these considerations, the Moscow Department of the Central Boiler Turbine Institute designed and made a special rig for investigating the aerodynamics of centrifugal fans. The equipment is described; it is a closed circuit arrangement in which appropriate parts are made of transparent plastic material to permit of illumination and photography. Fluorescent tubes were used as light sources and gave light pulsating at a frequency of 100 cycles/sec. The instrumentation and experimental procedure are described. To make the flow visible, nitrogen bubbles are introduced into it, this has the disadvantage that nitrogen and water are of different specific gravity and so the centrifugal effect might distort the results somewhat, however, this is found to be unimportant provided

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An Investigation of the Aerodynamics of the Flow Parts of Centrifugal Fans

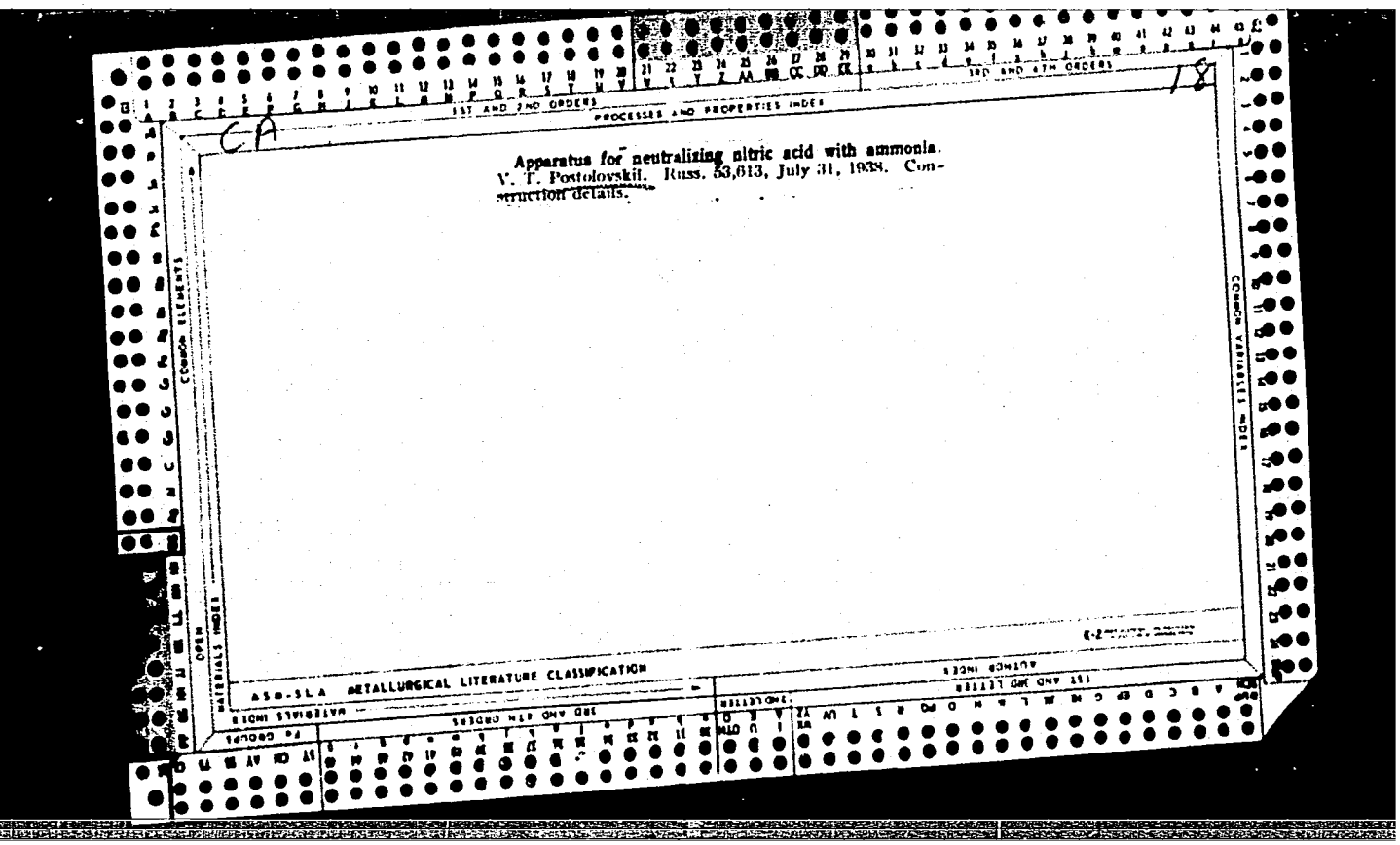
of dotted lines consisting of four or five streaks, the exposure being 1/25 sec with 100 flashes per second. The distance between the neighbouring light spots corresponds to the path traversed by the bubbles in 1/100 sec and, accordingly, the speed of flow may be calculated. The photographs show the presence of swirling in the inter-blade channels and also the zone of active motion of the flow where, due to the high speed, the distance between the light spots of each trajectory is greater and the brightness is reduced. It is shown that with blades that bend forward or are radial the channels are not well filled with active flow, the bent back blades are much better in this respect. This kind of observation could be used to improve blade design. A number of other questions arising during the development of new and aerodynamically improved blading could be studied in this way. The photographs given are only an illustration of the possibilities of the method which could be extended to many other kinds of investigation provided that the experiments are appropriately designed in each particular case. There are 3 figures.

Card 5/5

ZORIN, L.F., gornyy inzh.; POSTOLOVSKIY, V.I., gornyy inzh.

Advanced technology, mechanization, and automatization in the Lvov-Volyn' Basin mines. Ugol' Ukr. 5 no.9:17-19 S '61.
(MIRA 14:9)

(Lvov-Volyn'Basin--Coal mines and mining)



POSTOLOVSKIY, Ye.Z.

Standardization of plastic machine-tool parts. Stan. i instr. 36 no.11:28-30 N '65. (MIRA 18:11)

Card 1/1

POSTOLSKI, J.

Preservation of sugar beets in a coating of ice. p. 64.

GAZETA CUKROWNICZA. (Stowarzyszenia Naukowo-Technicgne Inzynierow i Techników Przemyslu Rolnego i Spozywczego i Centralny Zarzad Przemyslu Cukrowniczego) Warszawa, Poland. Vol. 61, no. 2, February 1959

Monthly List of East European Accession (EEAI) LC, Vol. 8, no. 7, July 1959

Uncl.

POLAND / Chemical Technology, Chemical Products and Their Application. Food Industry.

Abs Jour : Ref Zhur - Khimiya, No 5, 1959, No. 17391

Author : Postolski, J.
Inst : Not given
Title : Refrigerated Storage of Dry Milk

Orig Pub : Przegl. mleczarski, 1957, 5, No 10, 18-19

Abstract : For the determination of the effect of packing on storageability of dry milk (DM) in paper and metal foil packages, experiments were conducted at 0.5° and at relative humidity of 74-80%. In the course of the first 2 months DM packed in paper retained their qualities better than DM packed in metal foil. The latter acquired a slight oily and metallic taste which were not intensified, though, upon prolonged storage. DM in paper packages deteriorated rapidly after 4 months storage and

Card 1/2

POSTOLSKI, J.

POSTOLSKI, J. Freezing and preservation of tomatoes. p. 467
Vol. 10 no. 11, Nov. 1956
PRZEMYSL SPOZWCZY, Warszawa Poland

SOURCE: East European Accessions List (EEAL) Vol. 6 No. 4 April 1957

POSTOLSKI, J.

POSTOLSKI, J. Glazing of frozen fish is an important factor in the prolongation of its preservation. p. 12. Vol. 7, no. 9, Sept. 1955, GOSPODARKA RYBNA. Warszawa, Poland.

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957

POSTOLSKI, J.

POSTOLSKI, J. The influence of the postslaughter changes and of the cooling process on the expansion and the amount of juice in unfrozen meat tissue. p. 12

Vol. 8, no. 10, Oct. 1956
GOSPODARKA MIESNA
POLITICAL SCIENCE
Warszawa, Poland

So: East European Accession Vol. 4, No. 3, March 1957

POMYLSKI, J.

"Natural Shrinkage in Meat During Freezing and Cold Storage.", p. 331, (GOSPODARKA MIESNA, Vol. 6, No. 11, Nov. 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 5, May 1955, Uncl.

H-28

Country : POLAND
Category : Chemical Technology. Food Industry
Postolski, J.
Abs. Jour : Ref Zhur-Khimiya, No 14, 1959, No 51494

Author : Postolski, J.
Institute :
Title : Freezing and Storage of Fruits and Vegetables

Orig Pub. : Przetwor. owoc.- warz. i koncentr., 1958, 2, No 2, 56-58

Abstract : Presented are data that characterize optimum conditions of freezing for various fruits and vegetables as well as their physical and chemical function of conditions and the duration of cold storage. -- Z. Fabinsliy

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POSTONEN, U.M.

The 3A150 semiautomatic high-precision circular grinding machine. Biul. tekh.-ekon. inform. Gos. nauch.-issl. inst. nauch. i tekh. inform. 17 no.4:30-31 Ap '64. (MIRA 17:6)

MURZIN, G.A.; POSTONOGOB, A.A.; KRALIN, V.A.; BESKLUBOV, V.P.; PLEKHANOV, G.V.

Device for charging deep blast holes. Gor. zhur. no.1:59-62 Ja '64.
(MIRA 17:3)

1. Nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut gornogo i obogatitel'nogo mashinostroyeniya (for Murzin, Postonogov, Kralin, Besklubov). 2. Vysokogorskoye rudoupravleniye (for Plekhanov).

POSTONOGOV, Yu.A., inzh.

Rolling of angle iron in a system of open passes. Stal' 25 no.8:738-739 Ag '65. (MIRA 18:8)

1. Cherepovetskiy metallurgicheskiy zavod.

KUKURECHENKO, I.S.; SUKHAREV, N.G.; SHOKIN, I.N.; KRASHENINNIKOV, S.A.; PODOSINKIN, P.A.; POSTORONKO, A.I.; TROYNIK, G.C.

Decarbonization of sodium bicarbonate in a semi-industrial column with submerged packing. Trudy MKHTI no.40:186-190 '63. (MIRA 18:12)

SAVITSKAYA, M.M. [Savyts'ka, M.M.]; KHOLODOVA, Yu.D.; POSTORONKO, A.I.; GRIZODUB, A.P. [Hryzodub, A.P.]

New coagulating agents for the acceleration of brine purification in the production of soda. Khim. prom. [Ukr.] no.3:32-35 Jl-S '63. (MIRA 17:8)

1. Ukrainskiy nauchno-issledovatel'skiy institut fiziologii rasteniy (for Savitskaya, Kholodova). 2. Slavyanskim sodovyy kombinat (for Postoronko, Grizodub).

PODOSYNKIN, P.A.; POSTORONKO, A.I.; GRIZODUB, A.P. [Hryzodub, A.P.]; KAL'NA, Z.P.; LYAPINA, A.G. [Liapina, A.H.]

Purification of waste waters from the washing of the electric filters of lime kilns. Khim. prom. [Ukr.] no.3:82-84 Jl-S '63. (MIRA 17:8)

1. Slavyanskiy sodovyy kombinat.

Postotskiy, I.B.

USSR/Medicine - Licensure, Medical Aug/Sep 1947
Medicine - Societies, Medical

"The Systematization of Soviet Medical Sciences,"
I. I. Prirov, I. B. Postotskiy, 8 pp

"Sovetskoye Zdravookhraneniye" No 6

The author tells of the more than 300 research and investigation institutes and the 80 medical institutes under the jurisdiction of the Academy of Medical Sciences, which did much for the organization of Russian medical sciences. The Soviet Medical Science Institute recognizes some 2000 doctors and 6000 candidates among its members. Article gives

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USSR/Medicine - Licensure, Medical Aug/Sep 1947
Medicine - Societies, Medical (Contd)

Lengthy list of Russian scientists and doctors and their affiliated sciences and fields of practice.

22753

POSTOTSKIY, V. and Rufanov, I. G.

"War and the Doctor (Voyna i vrach)", 1940

Khirurgiya No 2, pp 65-68, Feb 1954

POSTOVALOV, V., inzhener po ratsionalizatsii

We do not have such enterprises. Izobr.i rats. no.12:9 D '60.
(MIRA 13:12)

1. Arkhangel'skiy sovnarkhoz.
(Archangel Province--Technological innovations)

L 31173-66 EWT(l)/EWT(m)/EWA(d)/EWP(t) IJP(c) JD
ACC NR: AP6006826 SOURCE CODE: UR/0181/66/008/002/0437/0442

AUTHOR: Irkhin, Yu. P.; Postovalov, V. G.

ORG: Institute of Physics of Metals AN SSSR, Sverdlovsk (Institut fiziki metallov AN SSSR)

TITLE: Types of spin-orbital interaction and the spontaneous Hall effect at low temperatures

SOURCE: Fizika tverdogo tela, v. 8, no. 2, 1966, 437-442

TOPIC TAGS: Hall effect, spin wave theory, spin orbit coupling, low temperature effect, ferromagnetic material

ABSTRACT: The authors use the spin wave approximation for calculating the spontaneous Hall effect due to the natural spin orbital interaction between magnetic electrons in ferromagnetic metals. The corresponding component of the spontaneous Hall coefficient is proportional to the cube of the temperature. This mechanism is compared with that of classical interaction between the orbital moment of the conduction electrons and the spins of magnetic electrons to explain the experimentally

Card 1/2

VOLOSHKEVICH, G.Z., doktor tekhn. nauk; SUSHCHUK- SLY SARENKO, I.I., inzh; LYCHKO, I.I., inzh.; POSTOVALOV, Yu.I., inzh.

Electric slag welding with a self-melting tip. Avtom. svar. 17 no.11:82-85 N '64 (MIRA 18:1)

1. Institut elektrosvarki imeni Ye.O. Patona AN UkrSSR (for Voloshkevich, Sushchuk- Slyusarenko, Lychko). 2. Ural'skiy zavod tyazhelogo mashinostroyeniya imeni Sergo Ordzhonikidze (for Postovalov).

ROSTOVTSOV, Yu.I., inzh.

Application of electric slag welding at the Ural Machinery Plant. Sbor. st. NIITS UMASHa Uralmashzavoda no. 3:3-16 '64. (MIRA 17:7)

SUSHCHUK-SLYUSARENKO, I.I.; POSTOVALOV, Yu.I.

Manufacture of welded cylinders for 7,000-ton hydraulic presses. Avtom. svar. 14 no.8:62-64 Ag '61. (MIRA 14:9)

1. Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki imeni Ye.O.Patona AN USSR (for Sushchuk-Slyusarenko). 2. Ordenov Lenina, Krasnogo Znameni i Trudovogo Krasnogo Znami zavod Uralmash (for Postovalov).

(Hydraulic presses--Welding)

S/125/61/000/008/006/014
D040/D113

AUTHORS: Sushchuk-Slyusarenko, I.I., and Postovalov, Yu.I.

TITLE: The manufacture of a welded cylinder for a 7000-ton hydraulic press

PERIODICAL: Avtomaticheskaya svarka, no. 8, 1961, 62-64

TEXT: On account of the frequent breakdown and consequent pre-schedule withdrawal of the cylinder of a 7000-ton press installed at the Nizhne-Tagil'skiy metallurgicheskiy kombinat (Nizhniy Tagil Metallurgical Combine), efforts were made to improve the system used for preparing these cylinders. In order to increase the life of the cylinders, it was decided to join the shell to the insert bottom by electroslag welding and to use 35 steel for the preparation of both parts. Previously employed 35HM(35NM) steel was found to be insufficient for this purpose. Close attention was paid to the condition of the welding equipment; in order to prevent deformation of the copper tube through heating and to guarantee the accurate positioning of the electrode in the gap during welding, the copper current-conducting part of the tip of the welding torch was fitted with steel strips. A water-cooled slide

Card 1/3

The manufacture of a welded cylinder...

bar made of copper was used to hold the slag and metal baths in position. Welding was started in a pocket which was enlarged in accordance with the welding up of the seam. This pocket helped to reduce metal wastage, and to cut down on time used at the beginning of the weld. In the welding process, particular attention was paid to keeping the slag bath at a certain depth, which was considerably reduced owing to the reduction in the gap due to metal contraction. After welding 2.5-3 m of the weld, the slag bath was removed for the withdrawal of iron oxides. The welding of the circular weld was carried out with the aid of an СВ -10Г2 (Sv-10G2) electrode wire under an АН-8 (AN-8) flux. The following system was used: voltage-46-48 v; feed rate of electrode wire - 195-200 m/hr; number of electrodes -3; slag bath depth-45-50 mm; speed of transverse oscillations of the electrode - 39 m/hr; time in which the electrodes were held near the rims - 5 sec; duration of the entire welding process - 23 hrs. After a year's operation, a crack appeared in the welded cylinder. It was decided to have the cylinder repaired at the Ural'skiy zavod tyazhelogo mashinostroyeniya (Ural Heavy Machinery Plant) and then put back into operation. The repair work on the cylinder helped economize more than 50,000 rubles and considerably reduced the idle time of the press.

Card 2/3

S/125/61/000/008/006/014
D040/D113

The manufacture of a welded cylinder...

There are 3 figures.

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im. Ye.O. Patona AN USSR (Electric Welding Institute "Order of the Red Banner of Labor" im. Ye.O. Patona AS UkrSSR) (Sushchuk-Slyusarenko, I.I.); Ordenov Lenina, Krasnogo Znameni i Trudovogo Krasnogo Znameni zavod Uralmash ("Orders of Lenin, of the Red Banner and the Red Banner of Labor", Uralmash Plant)

SUBMITTED: January 31, 1961

Card 3/3

PADALKA, B.Ya., prof.; POSTOVIT, V.A., dotsent

Diagnosis and treatment of tetanus. Vrach.delo no.12:105-110 D '62. (MIRA 15:12)

1. Kafedra infektsionnykh bolezney (zav. - prof. B.Ya.Padalka) Kiyevskogo meditsinskogo instituta.
(TETANUS) (SERUM THERAPY)

POSTOVIT, V.A., dotsent; SHEMONAYEV, V.I.

Clinical aspect and diagnosis of trichinosis. Vrach.delo no.3:
97-100 Mr '63. (MIRA 16:4)

1. Kafedra infektsionnykh bolezney (zav. - prof. B.Ya.Padalka)
Kiyevskogo meditsinskogo instituta.
(TRICHINA AND TRICHINOSIS)

POSTOVIT, V.A., kand.med.nauk

Differential diagnosis of tuberculous peritonitis and typhoid fever.
Vrach.delo no.11:1181-1183 N'58 (MIRA 12:1)

1. Klinika infektsionnykh bolezney (zav. - prof. B.Ya. Padalka)
Kiyevskogo meditsinskogo instituta.
(PERITONEUM--TUBERCULOSIS)
(TYPHOID FEVER)

POSTOVIT, V.A.

Blood complement in erysipelas. Medych.zhur.24 no.5:81-84 '54.
(MLRA 8:10)

1. Kiivskiy medichniy institut, klinika infektsionnykh khvorob.
(ERYSIPELAS, immunology,
complement)
(COMPLEMENT,
in erysipelas)

POSTOVIT, V.A. (Kiyev, ul. Kreshchatik, d.15, kv. 138)

Prognostic role of high permeability of the blood vessels in erysipelas. Nov.khir.arkh. no.2:71-72 Mr-Ap '57. (MLRA 10:8)

1. Kafedra infektsionnykh bolezney (zav. - prof. B.Ya. Padalka) Kiyevskogo meditsinskogo instituta
(PERMEABILITY) (ERYSIPELAS)

POSTOVIT, V. A. Cand Med Sci -- (diss) "On the permeability of blood capillaries of patients [redacted]h erysipelas." Kiev, 1957. 16 pp (Kiev Order of Labor Red Banner Med Inst im Academician A. A. Bogomolets), 200 copies (KL, 3-58, 99)

POSTOVIT, V.A.

Capillary permeability in erysipelas. Vrach.delo no.4:379-382 Ap '57.
(MLRA 10:7)

1. Kafedra infektsionnykh bolezney (zav. - prof. B.Ya.Padalka) Kiyevskogo meditsinskogo instituta.

(ERYSIPELAS) (CAPILLARIES)

POSTOVIT, V.A., dotsent (Kiyev)

Case of toxic encephalopathy caused by helminthic infestation.
Ped., akush. i gin. 23 no.6:28-29 '61. (MIRA 15:4)
(BRAIN—DISEASES) (WORMS, INTESTINAL AND PARASITIC)

UGRYUMOV, Boris Leont'yevich, doktor med. nauk; POSTOVIT, V.A., red.; GITSHTEYN, A.D., tekhn. red.

[Clinical aspects of hemorrhagic fevers] Klinika gemorragicheskikh likhoradok. Kiev, Gos. med. izd-vo USSR, 1961. 98 p. (MIRA 15:3)

(HEMORRHAGIC FEVER)

POSTOVIT, V.A.; KAZATSKAYA, G.G.

Clinical aspects and diagnosis of paratyphoid C. Vrach.delo no.10: 1093 O '59. (MIRA 13:2)

1. Kafedra infektsionnykh bolezney (zaveduyushchiy - prof. B.Ya. Padalka) Kiyevskogo meditsinskogo instituta.
(PARATYPHOID FEVER)

POSTOVOYT, S.N.

Soils within the natural boundaries of the Dzhaushangoz Valley (Pamirs). Trudy SAGU no.25:83-106 '51. (MLRA 9:5)
(Pamirs--Soils)

22(1) SOV/27-59-4-17/28

AUTHOR: Postovoytov, V.

TITLE: Organizational Points in Conducting Propaganda by Lecture

PERIODICAL: Professional'no-tekhnicheskoye obrazovaniye, 1959, Nr 4, pp 24-25 (USSR)

ABSTRACT: A certain system of preparing lectures and reports has been developed in many Labor Reserve schools of the Rostov Oblast'. It eliminates the possibility of wrecking a lecture for organizational reasons and has justified itself. In most schools propaganda by lecturing is conducted on a long-term plan, providing that every student should hear 2 to 3 lectures monthly. The plan is coordinated with the respective section of the Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy (Society for the Dissemination of Political and Scientific Knowledge), and the lecturers are chosen by common consent. The Rostov Oblast' and Municipal Sections of the above-mentioned society have a group of lecturers at their disposal who know the specific character of the Labor Reserve schools. The following are active

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Organizational Points in Conducting Propaganda by Lecture

members of the society who deliver lecturers systematically: I.G. Tatarchenko and V.P. Nartov, Deputy Chiefs of the Oblastnoye upravleniye trudovykh rezervov (Oblast' Administration of Labor Reserves); A.K. Martirosov, Chief of the Oblast' Methodological Workshop; I.A. Kazachenko, Director of Tekhnicheskoye uchilishche (Technical School) Nr 14, and others. The author mentions several themes on which lectures are delivered, and furnishes some details on the practice of lecturing at various schools. In this connection, reference is made to the Stroitel'noye uchilishche (Construction School) Nr 9 and the Remeslennoye uchilishche Nr 2 (Trade School Nr 2), Taganrog, and Sergey Vasil'yevich Shcherbakov, Deputy Director of the former. Other schools mentioned are the Technical School Nr 9, Trade Schools Nr 1 and 11, Zheleznodorozhnoye uchilishche (Railroad School) Nr 2 and its Deputy-Director V.F. Melent'yev, and the Tekhnicheskoye uchilishche khimikov (Technical School of Chemists) Nr 1, Kamensk.

POSTOVOYTOV, V.

Against the dope of religion. Prof.-tekh.obr. 19 no.2:23-24 F '62. (MIRA 15:2)

(Atheism--Study and teaching)

22: (1) SOV/27-59-2-15/30

AUTHOR: Postovoytov, V.

TITLE: Educating Atheists (Vospityvat' ateistov)

PERIODICAL: Professional'no-tekhnicheskoye obrazovaniye, 1959, Nr 2, pp 23 - 24 (USSR)

ABSTRACT: The author urges instructors in Labor Reserve Schools to pay much more attention to the scientific-atheistic propaganda as a basic Communist form of educating young people, and inculcating them with materialistic ideology. He mentions a few instances where religious beliefs persist among students of the Zheleznodorozhnoye uchilishche Nr 3 (Railroad School Nr 3) and the Stroitel'noye uchilishche Nr 2 (Construction School Nr 2) of Novorossiysk (Krasnodar Kray). He indicates ways of overcoming religious prejudices, and preventing students from taking time off, under various pretexts, tocelebrate important religious holidays. The students should be studied under various aspects: while at work and at rest, the instructor should know their sentiments and thoughts, with whom they are on friendly terms, the places they visit and how they spend their time;

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who their parents are, their views, and attitudes toward their children. The instructor should not forget to exert individual influence on the student.

Card 2/2

SOV-27-58-10-29/31

AUTHOR: Postovoytov, V.

TITLE: Masons' Evening (Vecher kamenshchika)

PERIODICAL: Professional'no-tekhnicheskoye obrazovaniye, 1958, Nr 10, pp 32-33 (USSR)

ABSTRACT: The club of the Building School Nr 1 in Frunze organized an evening of recreation devoted to the mason profession.

1. Construction 2. Personnel—Organization

Card 1/1

KARPOVA, Ye.; POSTOVOYTOVA, L.; TUMANOVA, L.

Let's give high qualifications to sewers. Prof.-tekh. obr. 22 no.3: 22-23 Mr '65. (MIRA 18:7)

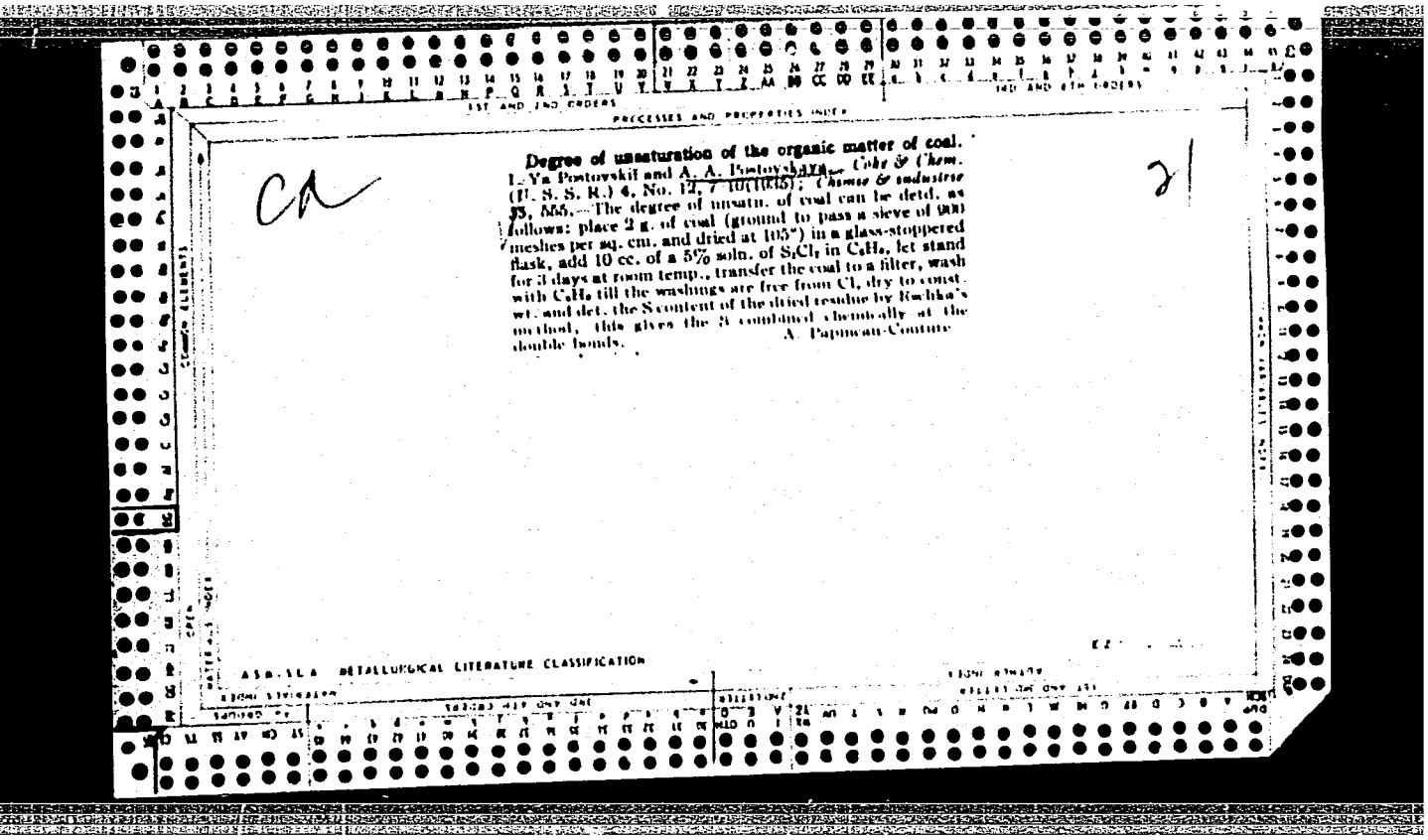
POSTOVOYTOVA, L.; SINITSKAYA, N., metodist

Toward active participation of students. Prof.-tekh. obr. 20 no.9:19-20 S '63. (MIRA 16:11)

1. Zaveduyushchaya laboratoriyey professiy legkoy promyshlennosti TSentral'nogo uchebno-metodicheskogo kabineta, Moskva (for Postovoytova).

POSTOVOYTOVA, L.

Let's carry out the decisions of the June Plenum of the Central Committee of the CPSU. Prof.-tekh. obr. 20 no.8:3 Ag '63.
(Vocational education)



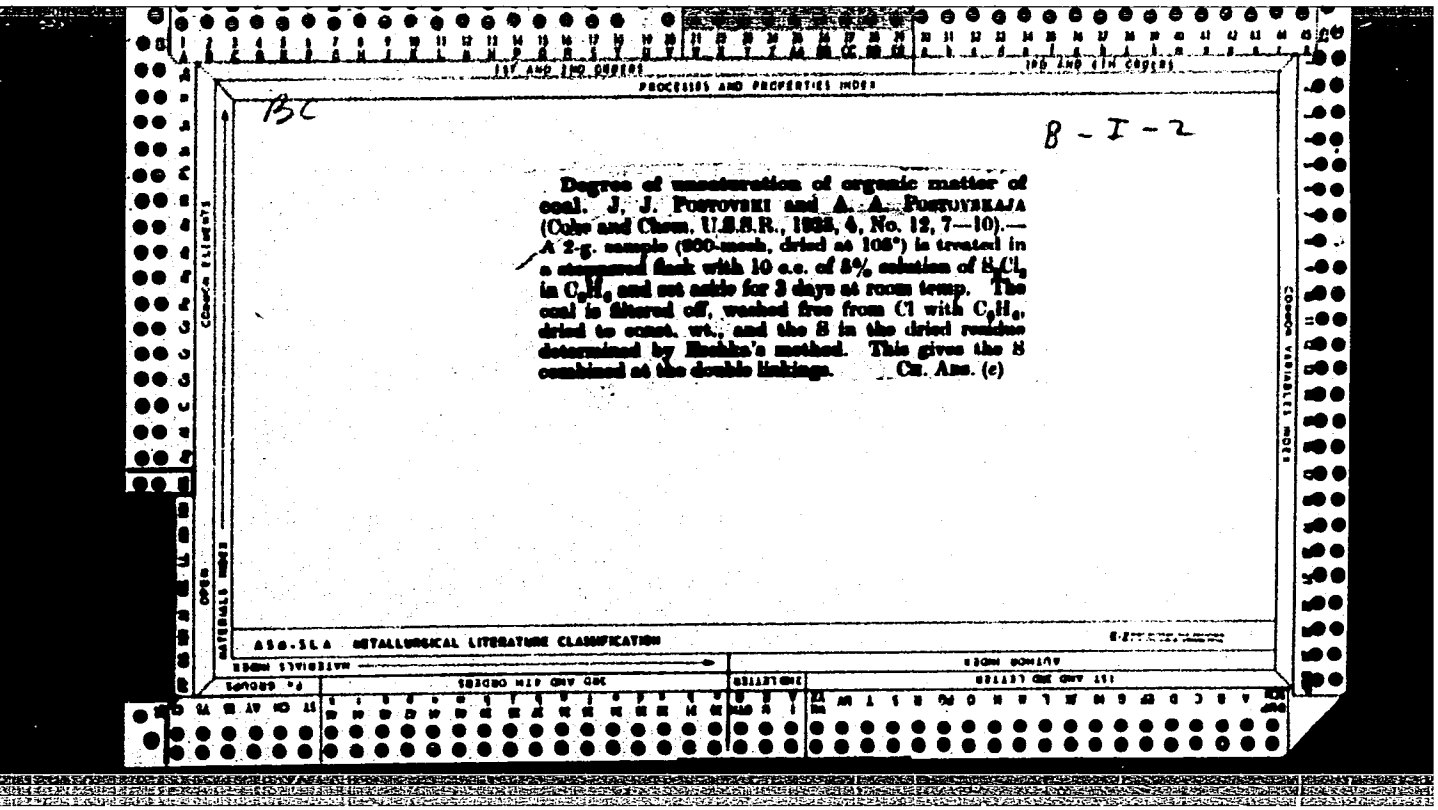
CA

21

Degree of unsaturation of the organic matter of coal. I. Ya Postovskii and A. A. Postovskaya. *Coke & Chem.* (U. S. S. R.) 4, No. 12, 7-10(1935); *Chimie & industrie* 35, 855.—The degree of unsatn. of coal can be detd. as follows: place 2 g. of coal (ground to pass a sieve of 900 meshes per sq. cm. and dried at 105°) in a glass-stoppered flask, add 10 cc. of a 5% soln. of S_2Cl_2 in C_6H_6, let stand for 3 days at room temp., transfer the coal to a filter, wash with C_6H_6 till the washings are free from Cl, dry to const. wt. and det. the S content of the dried residue by Rechka's method; this gives the S combined chemically at the double bonds.

A. Papineau-Couture

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

BC

B - I - 2

Degree of unsaturation of organic matter of coal. J. J. Postovskii and A. A. Postovskaya (Coke and Chem. U.S.S.R., 1955, 4, No. 12, 7—10).—A 2-g. sample (200-mesh, dried at 105°) is treated in a stoppered flask with 10 c.c. of 5% solution of S_2Cl_2 in C_6H_6, and set aside for 3 days at room temp. The coal is filtered off, washed free from Cl with C_6H_6, dried to const. wt., and the S in the dried residue determined by Eschka's method. This gives the S combined at the double linkings. Chr. Abs. (e)

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

2

The kinetics of the hydrogenation of ethylene over platinized silica gel. A. F. Postovskaya (Ya. V. Samoilov Inst. Fertilizers, Insecticides, Fungicides, Moscow). *Zhur. Fiz. Khim.* 24, 1083-9(1950).—The kinetics over various structures of platinized silica gels were studied at 100° and a surface concn. of Pt of 0.1%. The rate of the reaction at 100° is proportional to the concn. of the H_2 is not relative to the C_2H_4 concn. as long as that concn. is above 3%, nor to the C_2H_4 concn. The energy of activation of the reaction in the temp. range 44-138° equals 4300 ± 300 cal./mol. Varying the Pt concn. in the range 0.1-0.01%, and the silica gel structure did not change the energy of activation.

Paul W. Howerton

CA

30

Action of light on Buna rubber. A. F. Postovskaya and A. S. Kuz'minskii. *Zhur. Fiz. Khim.* 25, [illegible]. The structural changes of films of Na butadiene polymers following ultraviolet irradiation at 25° were studied as a function of the time of irradiation. The expts. were carried out *in vacuo* (10^{-4} mm.) in order to eliminate the action of O_2, and the gases evolved were collected and analyzed. The fraction of the latter which was not condensed at −191° was 85% of the total; its compn. was 64% H_2 and 32% CH_4. Thus C—C as well as C—H bonds are broken during the photoprocess, which has not a chain character as shown by the low quantum yield (2×10^{-3}) calcd. on the basis of the amt. of light absorbed by the polymer (cf. Bateman, *C.A.* 41, [illegible]d, where the quantum yield was detd. without measuring the absorption). The degree of unsatn. of the polymer according to the method of Vasil'ev (*C.A.* 42, 2[illegible]c) decreased during irradiation. From infrared spectra it is seen that the no. of double bonds in the main chains decreases markedly more rapidly than that in the sidechains. The viscosity of the polymer in benzene soln. decreased, especially during the 1st hr. of irradiation. The solv. of the polymer also dropped with time, owing to the interaction of the free radicals produced as a result of rupture of the bonds.

Michel Boudart

POSTOVSKAYA, A.F.

(a)

Kinetics of oxidation of rubbers under influence of light. A. F. Postovskaya and A. S. Kuz'minskii (*Dokl. Akad. Nauk. S.S.S.R.*, 1953, 90, 209—212).—Oxidation of thin films of rubber (50, 100 and 200 μ. thick) illuminated by light of $\lambda < 2960$ A. and in darkness is investigated at 40, 60, and 70°. Photo-oxidation is completed after 12 to 14 hr. and the reaction appears to be of zero-order as its rate is independent of O_2 concn. Photo- and thermal-oxidation of rubber are two quite different processes as shown by their initiation rates (that of the photo-oxidation being much higher). The rates differ by a factor of $\sim 10^8$ and the activation energies are 5—6 and 21—22 kg.-cal. per mol. for photo- and thermal-oxidation, respectively.

S. K. Lachowicz.

Sci-Res. Inst. Rubber Protection

Postavskaya, A. F.

1079. Behaviour of cross-links forming three dimensional network in vulcanisate under the action of light. A. F. Postovskaya and A. S. Kuz'minskii. *Doklady Akad. Nauk S.S.S.R.*, 1956, 106, No. 5, 866–9; *Chem. Abs.*, 1956, 50, 14261. Three types of sodium butadiene rubber differing in their cross-bonding were investigated: (*a*) a vulcanisation product with polysulphide bonds (–C–S_n–C–), (*b*) with monosulphide bonds (–C–S–C–), and (*c*) a thermally vulcanised product with C–C bonds. The vulcanisation conditions were selected to produce equal values of the equilibrium modulus (a characterisation of the lattice density, *i.e.* the number of cross-bonds formed). The photooxidation was studied. The thermal stability of the different vulcanisates was determined by the bond energies, which were 32.7 kcal/mole for (*c*), 51.4 kcal/mole for (*b*) and 27.5 kcal/mole for (*a*). The light effects do not follow the same rule, and the photoenergies may cause breakdown of the strongest bonds. Thus (*b*) was the most light-resistant, and (*c*) the least.

3S2D21.66324

Sci-Res-Inst-Rubber Industry

20-114-3-37/60

AUTHORS: Postovskaya, A. F., Salimov, M. A., Kuz'minskiy, A.S.

TITLE: On the Changes in the Degree of Sulphidity of Sulphur Structures in Vulcanized Products When Exposed to Light (Ob izmenenii stepeni sul'fidnosti sernykh struktur v vulkanizatakh pri svetovom vozdeystvii)

PERIODICAL: Doklady Akademii Nauk SSSR,1957,Vol 114,Nr 3,pp 586-589(USSR)

ABSTRACT: The authors of the paper under review have demonstrated in an earlier paper that sulphur vulcanized products of sodium butadiene rubber (polysulphide and thiuram products) differing from each other by the structure of their transverse-bonds, are of different stability to light. The polysulphide vulcanized product is more stable. If it is exposed to ultraviolet light this exposure is accompanied by the decomposition of the sulphur compounds and by the formation of free sulphur which, unlike elemental sulphur, does not take part in the processes of photovulcanization, i.e. remains "inactive". It was not determined of what kind the structure of this inactive sulphur is, neither was the question clarified just how the degree of sulphidity of sulphur in these vulcanized products

Card 1/4

On the Changes in the Degree of Sulphidity of Sulphur Structures in Vulcanized Products When Exposed to Light

changes when exposed to light. Therefore it is not possible to give an answer to the very important question of why one vulcanized product should be more resistant to light than another. The paper under review is devoted to the investigation of this question. Research as to the type of sulphur compounds is hindered by different obstacles. For instance, it is possible that polysulphide structures had been overlooked in the thiuram vulcanized product. Because of several reasons, ultraviolet spectroscopy was applied to the investigation of the change in the degree of sulphidity of sulphur structures of both kinds of vulcanized products when exposed to ultraviolet light. The results of this investigation are compiled in tables Nr 1 - 3 in the paper under review. Figure Nr 1 shows that, if compared to pure rubber, the absorption in polysulphide vulcanized rubber is intensified in the interval of 2200 - 5400 Å. This can be explained by the existence of sulphur structures of different degrees of sulphidity. If polysulphide vulcanized rubber is exposed to light, the intensity of the absorption is reduced. This is explained by the decomposition of polysulphide bonds,

On the Changes in the Degree of Sulphidity of Sulphur Structures in Vulcanized Products When Exposed to Light

with the sulphide of higher order having a higher stability to light. Figure Nr 2 shows for thiuram vulcanized rubber a maximum of absorption in the interval between 2500 and 2600 Å corresponding to the presence of di- and trisulphides. Higher sulphides are present in smaller quantities. Exposure to light of thiuram vulcanized rubber is accompanied by the decomposition mainly of the hexa-sulphides and of the still higher sulphides. Comparing figure Nr 1 and Nr 2, as contained in the paper under review, it is seen that thiuram vulcanized rubber, in spite of the fact that its contents of bound sulphur are only 1/4 of the contents in polysulphide vulcanized rubber, shows more intense absorption in the ultraviolet and in the visible range. This is probably caused by the different distribution of the bound sulphur upon the different sulphur structure. Analysis of the material obtained from these experiments leads to the conclusion that the higher stability to light of the polysulphide vulcanized rubber as compared to the vulcanized rubber must be explained by the difference in the absorption in the ultraviolet range

On the Change in the Degree of Sulphidity of Sulphur Structures in Vulcanized Products When Exposed to Light

and by the relevant sulphur structures. There are 3 figures and 12 references, 4 of which are Soviet.

ASSOCIATION: Scientific Research Institute of Rubber Industry (Nachno-issledovatel'skiy institut rezinovoy promyshlennosti)
Moscow State University imeni M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova)

PRESENTED: November 22, 1956, by P. A. Rebinder, Member of the Academy

SUBMITTED: November 22, 1956

AVAILABLE: Library of Congress

Card 4/4

SOV/81-59-9-33456

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 9, p 563 (USSR)

AUTHORS: Zuyev, Yu.S., Kuz'minskiy, A.S., Postovskaya, A.F.

TITLE: Some Peculiarities of the Light Aging of Rubbers and Vulcanizates

PERIODICAL: Tr. N.-i. in-ta rezin. prom-sti, 1956, Nr 3, pp 102 - 113

ABSTRACT: The action of light on rubber differs from the action of a high temperature. In the action of light on vulcanizates the role of the optical properties of ingredients is essential, it is necessary therefore to separate the optical and chemical action of the age resistors for establishing an interconnection between the chemical structure of these substances and their chemical light-protective action. Some age resistors and dyestuffs cause a photosensitization in the vulcanizates. The suppression of the sensitizing action and the manifestation of the efficiency of the sensitizers can be obtained using vigorously light-absorbing ingredients.

Card 1/1

V. Glagolev

ZUYEV, Yu.S.; POSTOVSKAYA, A.F.

Effect of tetramethyl thiuram disulfide on the ozone and photoozone aging of rubber. Kauch. i rez. 24 no.5:18-20 My '65. (MIRA 18:9)

1. Nauchno-issledovatel'skiy rezinovoy promyshlennosti.

L 52718-65 EWT(m)/EPF(c)/EWP(j) Pc-4/Pr-4 RM

ACCESSION NR: AP5013734 UR/0138/65/000/005/0018/0020
678.063:678.044.46:678.019.36

AUTHOR: Zuyev, Yu. S.; Postovskaya, A. F.

TITLE: Effect of tetramethylthiuram disulfide on light-and-ozone- and ozone-induced aging of vulcanizates

SOURCE: Kauchuk i rezina, no. 5, 1965, 18-20

TOPIC TAGS: light induced cracking, ozone induced cracking, sulfur vulcanizate, tetramethylthiuram disulfide vulcanizate

ABSTRACT: A comparative study has been made of the resistance to light-and-ozone- and ozone-induced cracking of rubbers vulcanized with tetramethylthiuram disulfide (thiuram) or with sulfur. The study was undertaken on the assumption that oxidation processes play a considerable role in ozone-induced and, particularly, in light-and-ozone-induced cracking, and that inhibition of these processes by an antioxidant should prevent cracking. The experiments were conducted with natural, sodium butadiene (SKB), butadiene-styrene (SKS-30) and nitrile (SKN-40) rubbers both unfilled and reinforced with carbon black. Resistance to aging was estimated from the time to the appearance of cracks and to failure of stressed specimens subject-

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L 52718-65
ACCESSION NR: AP5013734

to accelerated aging in a light-and-ozone apparatus developed by Zuyev (ozone concentration, 0.001% by volume; elongation, 15%). The effect of light was determined from changes in the stiffness of nondeformed specimens in the illumination process. The results of the study, given in tabular form, indicate that the resistance of vulcanizates to cracking increases in the presence of thiuram (SKS-30 and SKN-40, by a factor of 1.5; SKB, by a factor of 4 to 15). Although the mechanism of the inhibition of ozone cracking by antioxidants remains unclear, the results of the study appear to confirm the role of oxidation processes in cracking of vulcanizates. Orig. art. has: 3 tables. [BO]

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti (Scientific Research Institute of the Rubber Industry)

SUBMITTED: 00 ENCL: 00 SUB CODE: MT

NO REF SOV: 007 OTHER: 001 ATD PRESS: 4012

Card 2/2

ZUYEV, Yu.S.; POSTOVSKAYA, A.F.; PODCHUFAROVA, G.M.

Role of light in the light and ozone aging of rubber. Kauch. i rez. 22 no.7:14-17 Jl '63. (MIRA 16:8)

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti.
(Rubber—Testing)

L 14418-63
ACCESSION NR: AP3004253

modulus of undeformed vulcanizates. Resistance to ozone cracking and LOC was determined from data on the time elapsed at the onset of cracks and the failure of vulcanizates at 15% elongation. The results of the study, presented in the form of tables, indicate that the activating effect of light on LOC is due both to photooxidation and to an increase in the mobility of degraded rubber molecules. The resistance of vulcanizates to LOC can be improved by retarding oxidation with antioxidants, antiozonants, and "anti-light-aging agents," by suppressing the photosensitizing effect of ingredients, and by checking the adverse effect of strong light absorbers with such substances as nickel diethyldithiocarbamate. Orig. art. has: 5 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy prom*shlennosti (Scientific Research Institute of the Rubber Industry)

SUBMITTED: 00 DATE ACQ: 21Aug63 ENCL: 00

SUB CODE: CH, PH NO REF SOV: 009 OTHER: 001

Card 2/2

S/189/60/000/003/003/003
B016/B056

AUTHORS: Postovskaya, A. F., Salimov, M. A.

TITLE: Investigation of Processes Developing in Vulcanized Products Under the Action of Nitric Acid

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya 2, khimiya, 1960, No. 3, pp. 24 - 30

TEXT: In technical literature no analyses are given of the functional groups of transformation products of vulcanizates under the action of nitric acid with which they often come into contact in practice. However, HNO_3 causes considerable changes in the polymer structure, and this impairs the mechanical properties of the vulcanizates. Knowledge of the aforementioned transformation products facilitates the determination of the processes mentioned in the title. Moreover, they explain the mechanism of these processes. The authors investigated the effect produced by HNO_3 on vulcanizates of different structure, viz., I) upon the thermovulcanizate of sodium-butadiene rubber (СКБ, SKB); II) upon

Card 1/3

Investigation of Processes Developing in Vulcanized Products Under the Action of Nitric Acid

S/189/60/000/003/003/003
B016/B056

sodium-butadiene-sulfur vulcanizate (SKB); III) upon the thermovulcanizate of divinyl-styrene rubber (SKS-30, SKS-30); IV) upon the X-ray vulcanizate of III. The vulcanizing conditions were selected so that the vulcanizates I) and IV) had the same equilibrium modules. The authors acted upon 30 μ thick vulcanizate films by means of 25% and 50% HNO_3 at 25 and 80°C. They investigated the aforementioned transformations by the physico-chemical method and by means of infrared spectroscopy. In the latter case the ИКС-2 (IKS-2) spectrometer was used. Figs. 1-5 show the results obtained. On the basis of the latter, the authors arrived at the following conclusions: 1) In vulcanizates, the following main processes occur under the action of HNO_3: nitration and oxidation. Both processes are highly intensified by an increase of the acid concentration and temperature. As a consequence of these processes, the vulcanizates lose their physico-mechanical properties completely. 2) In nitration, the formation of a structure is the leading process, whereas in oxidation this is done by destruction. 3) The vulcanizates investigated may be classed within the following series with respect to their acid

Card 2/3

Investigation of Processes Developing in Vulcanized Products Under the Action of Nitric Acid

S/189/60/000/003/003/003
B016/B056

resistance: thermovulcanizate of SKS-30 > sulfur vulcanizate; thermovulcanizate SKB > X-ray vulcanizate SKS-30. The authors thank V. M. Tatevskiy for his valuable advice in the interpretation of infrared spectra. There are 5 figures and 12 references: 5 Soviet, 3 US, and 1 US-Canadian.

ASSOCIATION: Moskovskiy universitet; Kafedra fizicheskoy khimii (Moscow University; Chair of Physical Chemistry)

Card 3/3

7(3), 24(7) SOV/48-23-10-16/39

AUTHORS: Postovskaya, A. F., Kuz'minskiy, A. S.

TITLE: Investigation of the Structural Variations of Vulcanizates Under the Effect of Mineral Acids

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 10, pp 1213-1216 (USSR)

ABSTRACT: As in practice rubber parts frequently come into contact with mineral acids, an investigation of the influence exercised upon structure was of interest. The authors investigated the structural changes caused by nitric- and hydrochloric acid in thermo-vulcanizates of sodium butadiene rubbers (SKB) and in the thermo-vulcanizates of divinyl styrene rubber (SKS-30). The investigation was carried out by means of infrared spectroscopy within the range of 3800-600 cm^{-1} by using a spectrometer of the type IKS-2. Action of the acids (25-50%) took place at 25 and 80° on vulcanizate films having a thickness of 30μ. The results are shown by figures 1 and 2. The following absorption bands were found in SKB rubber: 680, 720, 910, 965, 992, 1300, 1360, 1437, 1457, 1640, 1825, 1856, 2926, 2979, 3019 and 3080 cm^{-1}. As a result of thermal vulcanization the following

Card 1/3

Investigation of the Structural Variations of Vulcanizates Under the Effect of Mineral Acids

bands had been newly added: 1700-1710, 1240 and 3450 cm^{-1}. They corresponded to the groups

$>C=O$, $-\overset{O}{\overset{\|}{C}}-O-R$, $-OOH$ and OH. Treatment with nitric acid led to the occurrence of the bands 759, 854, 1360, 1550 and 1672 cm^{-1}. This treatment led to the formation of oxygen-containing and nitrogen-containing groups in the vulcanizate. A spectroscopic analysis of the SKS-30-film treated with 25% hydrochloric acid at 25° resulted in no structural changes and no addition of chlorine, even in the case of acid being active for 6 days. This agrees with data obtained by another method. Only after an action lasting 14 days a chlorination effect (occurrence of bands at 600, 650, 700-750 cm^{-1}) was found. At higher temperatures the clorination process developed more rapidly.

The authors finally thank V. M. Tatevskiy and M. A. Salimov for promoting this work and for their participation in it.

There are 2 figures and 11 references, 1 of which is Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti (Scientific Research Institute of Rubber Industry). Komiteta Soveta Ministrov SSSR po khimii (of the Committee of the USSR

SOV/48-23-10-16/39

Investigation of the Structural Variations of Vulcanizates Under the Effect of Mineral Acids

Council of Ministers for Chemistry)

Card 3/3

POSTOVSKAYA, A.F.; KUZ'MINSKIY, A.S.

Investigation of structural changes in vulcanized rubber due to action of nitric acid [with summary in English]. Zhur.fiz.khim. 33 no.2:447-451 F '59. (MIRA 12:4)

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti Ministerstva khimicheskoy promyshlennosti.
(Rubber--Testing) (Nitric acid)

SOV/76-33-2-33/45

5(4)

AUTHORS: Postovskaya, A. F., Kuz'minskiy, A. S.

TITLE: Studies on the Structural Changes of Vulcanised Rubber Caused by the Action of Nitric Acid (Issledovaniye strukturnykh izmeneniy vulkanizatov kauchuka pod deystviyem azotnoy kisloty)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 2, pp 447 - 451 (USSR)

ABSTRACT: Despite the fact that many rubber products are exposed to the action of nitric acid (I) no systematic investigations have been carried out in regard to this action. In the present paper structural differences were studied in the following vulcanisates: I) a thermovulcanisate of sodium butadiene rubber (produced from SKB rubber); II) a sulfur-containing sodium butadiene vulcanisate (from SKB); and III) a thermovulcanisate of a divinyl styrene rubber (from SKS-30). The investigations were carried out using an infra-red spectroscope. The spectra were recorded using an IKS-2 spectrograph at 3800-650 cm^{-1} in the MGU in the laboratoriya molekulyarnoy spektroskopii prof. V. M. Tatev-

Studies on the Structural Changes of Vulcanised Rubber Caused by the Action of Nitric Acid SOV/76-33-2-33/48

skiy (Laboratory for Molecular Spectroscopy of Professor V. M. Tatevskiy), and were made by M. A. Salimov. Vulcanisate films 30μ thick were exposed to the action of 10-50% nitric acid at 25 and 80°. The adsorption spectra obtained show (Figs 1-3) that in the action of the nitric acid upon the SKB thermovulcanisate two processes occur: an oxidation in which oxygen-containing compounds are formed (peroxide, hydroxyl, carbonyl groups, etc) and a nitration yielding nitro compounds. The nature of the reaction products depends to a large extent upon the concentration and upon the temperature. Both processes are markedly accelerated by an increase in temperature. It was found that in a nitration a "structuration" preponderantly takes place (Table), while in oxidation a destruction occurs. Professor V. M. Tatevskiy and M. A. Salimov are thanked in closing. There are 3 figures and 8 references, 2 of which are Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti MKhP(Scientific Research Institute of the Rubber Industry of the MKhP)

SUBMITTED: July 23, 1957

Card 2/2

POSTOVSKAYA, A.F.

PRIKHOT'KO, A.F.

24(7) p 3 PHASE I BOOK EXPLOITATION SOV/1365

L'vov. Universytet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii. t. 1: Molekulyarnaya spektroskopiya (Papers of the 10th All-Union Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy) [L'vov] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies printed. (Series: Its: Fizychnyy zbirnyk, vyp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii. Ed.: Jazer, S.L.; Tech. Ed.: Saranyuk, T.V.; Editorial Board: Landsberg, G.S., Academician (Resp. Ed., Deceased), Neporent, B.S., Doctor of Physical and Mathematical Sciences, Fabelinskiy, I.L., Doctor of Physical and Mathematical Sciences, Fabrikant, V.A., Doctor of Physical and Mathematical Sciences, Kornitskiy, V.G., Candidate of Technical Sciences, Rayskiy, S.M., Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K., Candidate of Physical and Mathematical Sciences, Miliyanchuk, V.S., Candidate of Physical and Mathematical Sciences, and Glauberman, A. Ye., Candidate of Physical and Mathematical Sciences.

Card 1/30

Card 27/30

SOV/138-58-7-3/19

AUTHORS: Postovskaya, A.F., Kuz'minskiy, A.S. and Mikhaylova, G.N.

TITLE: Means of Determining the Permeability of Rubber and Rubber Compositions to Acids (Metodika opredeleniya kislotopronitsayemosti kauchukov i rezin)

PERIODICAL: Kauchuk i rezina, 1958, Nr 7, pp 11 - 13 (USSR)

ABSTRACT: The acid permeability of rubber is important in connection with components such as sealing rings, gaskets, diaphragms, etc.
A method is described which gives consistent results and depends upon the measurement of the concentration of acid which has diffused through a diaphragm. The acid concentration is determined from its conductivity, using a Wheatstone bridge and current at frequencies in the range 1 000 to 4 000 cps, in order to prevent errors through polarisation at the electrodes.
The measuring vessel is shown in Figure 1. The right-hand portion contains two platinised-tin electrodes, connected to the bridge circuit shown in Figure 2. This portion is filled with distilled water and is divided from the left-hand part of the vessel by the membrane under test. The left-hand part is filled with an acid solution - in an example given - with 27% nitric acid. Constants for the vessel were determined by calibration with a calcium chloride solution of known specific resistance.

Card1/3

Means of Determining the Permeability of Rubber and Rubber Compositions to Acids

Calibration curves could then be constructed for specific conductivity against acid concentration, as in Figure 3, which plots both experimental findings and standard reference data, showing good agreement. The fact that the curve passes through a maximum is due to changes in the degree of dissociation of the acid at higher concentrations.
Determination of diffusion through three different membranes of SKS rubber is shown in Figure 4. After a short time, the rate of diffusion falls off, apparently because reaction products between membrane and acid block the surface. After some further time, diffusion again increases through the formation of cracks and change in the structure of the vulcanised membrane.
There are 4 figures and 14 references, 12 of which are English and 2 Soviet.

SOV/138-58-7-3/19

Means of Determining the Permeability of Rubber and Rubber Compositions to Acids

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy oromy-shleanosti (Scientific-Research Institute of the Rubber Industry)

1. Rubber--Physical properties 2. Rubber--Test results
3. Nitric acid--Properties

Card3/3

POSTOVSKAYA, A.F.; SALIMOV, M.A.; KUZ'MINSKIY, A.S.; TATEVSKIY, V.M.

Structural changes of sodium-butadiene rubber in the process of light oxidation. Fiz. sbor. no.3:423-427 '57. (MIRA 11:8)

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti i Khimicheskiy fakul'tet Moskovskogo ordena Lenina i ordena Trudovogo Krasnogo Znameni gosudarstvennogo universiteta im. M.V. Lomonosova. (Rubber--Spectra) (Oxidation)

POSTOVSKAYA, A.P.; KUZ'MINSKIY, A.S.; MIKHAYLOVA, G.N.

Method for determining the acid permeability of crude and vulcanized rubbers. Kauch. i rez. 17 no. 7:11-13 Jy '58.(MIRA 11:7)

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti.
(Rubber--Testing)

L.

POSTOVSKAYA, A.F.

USSR / Chemistry of High Molecular Compounds.

Abs Jour : Ref. Zhur. - Khimiya, No.2, 1958, 6761.

Author : Salimov, N.A., Postovskaya, A.F., Kuz'minskiy, A.S., Tatevskiy, V.M.

Inst : Moscow University

Title : Investigation of Structural Changes of Sodium Butadiene Caoutchouc in the Thermal Oxidation Process using Infra-Red Spectroscopy Method.

Orig Pub : Vesti. Mosk. un-ta. Ser. matem., mekhan., astron., fiz., khimiya, 1957, No.1, 164-169.

Abstract : By studying the IK (infra-red) spectra of thermally oxidized sodium butadiene caoutchouc at 140° (60 min. oxidation), it has been established that during the oxidation process the following oxygen-containing groups were formed:

Card : 1/3

USSR / Chemistry of High Molecular Compounds. L.

Abs Jour : Ref. Zhur. - Khimiya, No.2, 1958, 6761.

Abstract : hydroperoxides, alcohols, esters, ethers, aldehydes, ketones and acids. After 20 minutes of oxidation there appeared an absorption band of -OOH and -OH groups at 3380 cm^{-1} the intensity of which increased with time of oxidation, while the maximum of absorption shifted to 3450 cm^{-1} (after 60 min.); the intensity of the absorption band of the carbonyl groups C = O at 1700 cm^{-1} increased, while in the range of 1000-1400 cm^{-1} there appeared absorption bands of the groups R_1-C(=O)-OR at 1240 cm^{-1} and of the R_1-O-R (ethers) at 1165 cm^{-1}. It was established that the newly appearing absorption bands at 810 and 880 cm^{-1} belong not to the peroxide, as it has been previously supposed, but to olefins having a structure 1,1,2-trialkylethylene $R_1R_2C=CHR_3$ and 1,1 dialkylethylene $R_1R_2C=CH_2$. In the course of oxidation, the intensity of the absorption bands of double bonds C = C 1,2 (910 and 992 cm^{-1}) 1,4 - trans (965 cm^{-1}) and 1,4 - cis (680 cm^{-1}) was significantly decreased; an

Card : 2/3

USSR / Chemistry of High Molecular Compounds. L.

Abs Jour : Ref. Zhur. - Khimiya, No. 2, 1958, 6761.

Abstract : analogous decrease of intensities was also observed for absorption bands of double bonds C = C at 1640 cm^{-1} and for valence oscillation C-H of double bonds at 2979, 3019 and 3080 cm^{-1}; a decrease of absorption bands of methylene groups -CH at 720, 2856 and 2929 cm^{-1} showed that O atoms in addition to double bonding attach themselves also to C atoms located in α position to the double bonds. An increase in intensity of the absorption band at 3400 cm^{-1} is linked to the formation of hydroxyl rather than hydroperoxide groups as it was confirmed by the results of the iodometric method.

Card : 3/3

Distr: 4E2c(j)/4E4j

Study of the effect of phenyl-2-naphthylamine on the light oxidation of sodium butadiene rubber by the method of infrared spectroscopy. M. A. Silimov, A. F. Postovskaya, V. M. Tutevskii, and A. S. Kuz'minskii (Sci.-Research Inst. Rubber Ind., Moscow). *Vestnik Moskov. Univ. 12, Ser. Mat., Mekh., Astron., Fiz., Khim.* No. 3, 259-63(1957). —Films of purified polybutadiene rubber 20-100 μ thick contg. 0-3% phenyl-2-naphthylamine (I) were irradiated up to 15 hrs. in an O atm. at 70° with a quartz lamp and filter giving only light waves above λ = 2900 A. Curves of their infrared absorption, O absorption, and unsaturation *vs.* time show that 1% I acts as a light sensitizer, causing more change than with no I; with 1% I more acids, ketones, and esters (but less hydroperoxide and -OH groups) are formed. Raising the I to 3% removes the light sensitization and gives protection against O.

Malcolm Anderson

POSTOVSKAYA, A. F.

USSR / Physics of High Molecular Substances. D-9

Abs Jour : Ref Zhur - Fizika, No 4, 1957, No 9105

Author : Postovskaya, A.F., Kuz'minskiy, A.S.
Title : Behavior of Transverse Bonds, which Form a Three-Dimensional Grid of Vulcanized Rubber, when Exposed to Light.

Orig Pub : Dokl. AN SSSR, 1956, 106, No 5, 866-869

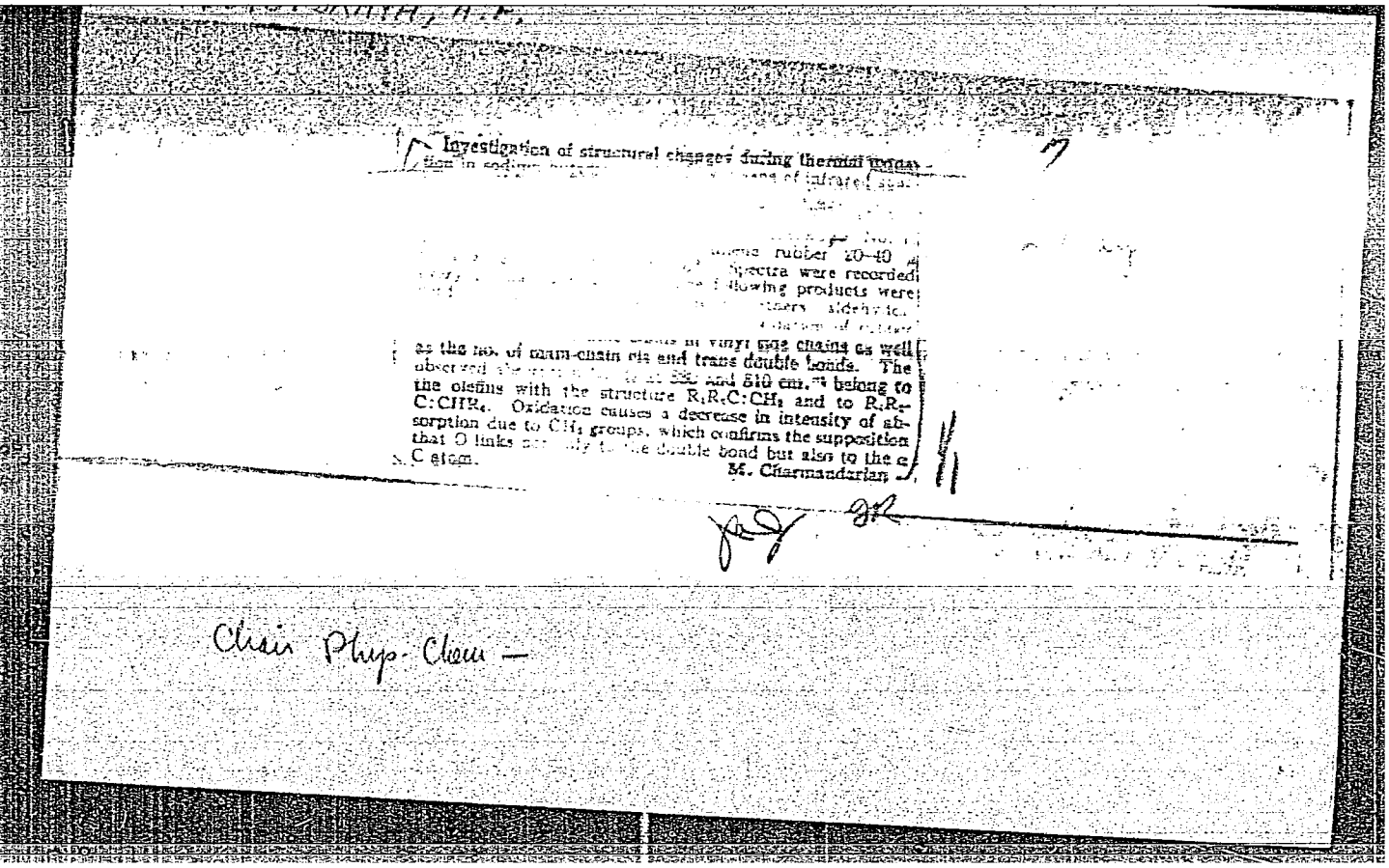
Abstract : No abstract.

Card : 1/ 1

POSTOVSKAYA, A. F.

Changes caused by light in the number of sulfur atoms in the sulfur structure of vulcanized products. A. F. Postovskaya, M. A. Salimaz, and A. S. Kuz'minskii (M. V. Lomonosov State Univ., Moscow). *Doklady Akad. Nauk S.S.S.R.* 114, 580–6(1957).—The polysulfide sodium butadiene rubber (S.B.R.) was more light-resistant than the thiuram product (*C.A.* 50, 14281d) which could not be explained by tests using radioactive S, thermomech. methods, nor infrared spectroscopy, but was explained by detg. ultraviolet light-absorption bands of the sulfide, disulfide, trisulfide, and tetrasulfide groups, which are characteristic for the structure, are well known, and little affected by the rest of the mols. The free S in the accelerators and their decompn. products in vulcanized samples, 10 μ thick, was extd. by a mixt. of MeOH and Me_2O for 100 hrs. in an atm. of N_2, and the absorption spectra in the 2200–7000 A. range were recorded. The extd. films were irradiated with light of the 2900 A. range for 6 hrs., reextd., and their absorption bands again recorded on the same film as above. Prior to the 6 hrs. irradiation the polysulfide-vulcanized films showed higher absorption than the unvulcanized SBR samples in the mono-, di-, hexa-, and higher sulfides. After irradiation the absorption was reduced, particularly in the higher sulfide absorption bands. The absorption with the thiuram-vulcanized SBR was higher than with the polysulfide product, although the latter contained 4 times less combined S; the proportion of the mono-, di-, tri-, and tetra-sulfides was higher in the thiuram product, but the proportion of the higher sulfides was lower.

W. M. Sternberg



Investigation of structural changes during thermal [illegible]

[illegible] rubber 20-40 [illegible]
Spectra were recorded [illegible]
lowing products were [illegible]
[illegible] aldehydic [illegible]

as the no. of main-chain cis and trans double bonds. The [illegible] and 810 cm.$^{-1}$ belong to the olefins with the structure $R_1R_2C{:}CH_2$ and to $R_1R_2C{:}CHR_4$. Oxidation causes a decrease in intensity of absorption due to CH_2 groups, which confirms the supposition that O links [illegible] to the double bond but also to the C atom.

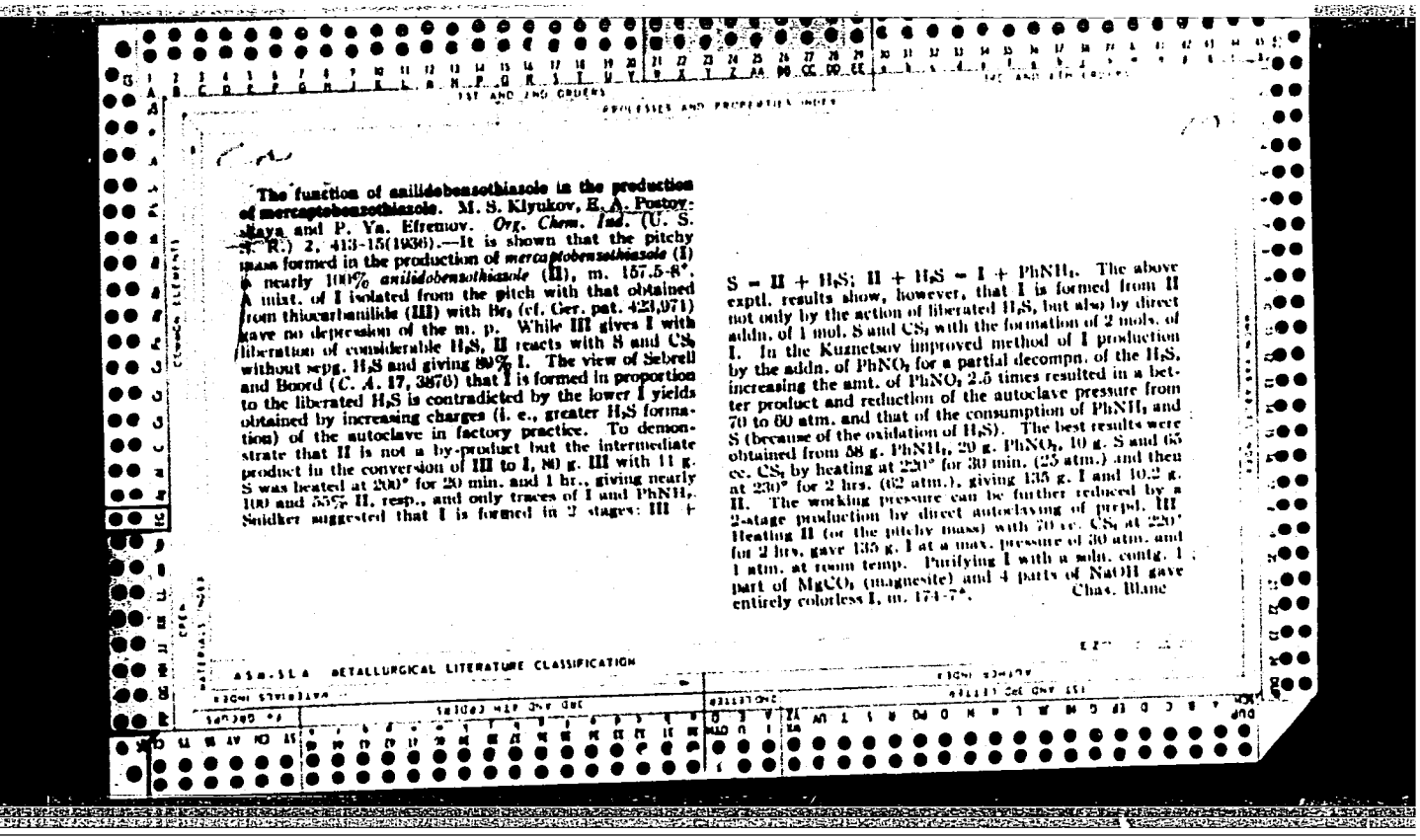
M. Chirmandarian

Chim Phys. Chem —

POSTOVSKAYA, A.F.; SALIKOV, M.A.; KUZ'MINSKIY, A.S.

Effect of light on the change of sulfur atom distribution in sulfur structures in vulcanized rubbers. Dokl. AN SSSR 114 no.3:586-589 My '57. (MIRA 10:8)

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti i Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova. Predstavleno akademikom P.A. Rebinderom.
(Sulfur) (Rubber)



The function of anilidobenzothiazole in the production of mercaptobenzothiazole. M. S. Klyukov, E. A. Postovskaya and P. Ya. Efremov. *Org. Chem. Ind.* (U. S. S. R.) 2, 413-15(1936).—It is shown that the pitchy mass formed in the production of *mercaptobenzothiazole* (I) is nearly 100% *anilidobenzothiazole* (II), m. 157.5-8°. A mixt. of I isolated from the pitch with that obtained from thiocarbanilide (III) with Br_2 (cf. Ger. pat. 423,971) gave no depression of the m. p. While III gives I with liberation of considerable H_2S, II reacts with S and CS_2 without evolv. H_2S and giving 80% I. The view of Siebrell and Boord (*C. A.* 17, 3876) that I is formed in proportion to the liberated H_2S is contradicted by the lower I yields obtained by increasing charges (i. e., greater H_2S formation) of the autoclave in factory practice. To demonstrate that II is not a by-product but the intermediate product in the conversion of III to I, 80 g. III with 11 g. S was heated at 200° for 20 min. and 1 hr., giving nearly 100 and 55% II, resp., and only traces of I and $PhNH_2$. Snidker suggested that I is formed in 2 stages: III + S = II + H_2S; II + H_2S = I + $PhNH_2$. The above expt. results show, however, that I is formed from II not only by the action of liberated H_2S, but also by direct addn. of 1 mol. S and CS_2 with the formation of 2 mols. of I. In the Kuznetsov improved method of I production by the addn. of $PhNO_2$ for a partial decompn. of the H_2S, increasing the amt. of $PhNO_2$ 2.5 times resulted in a better product and reduction of the autoclave pressure from 70 to 60 atm. and that of the consumption of $PhNH_2$ and S (because of the oxidation of H_2S). The best results were obtained from 58 g. $PhNH_2$, 20 g. $PhNO_2$, 10 g. S and 65 cc. CS_2 by heating at 220° for 30 min. (25 atm.) and then at 230° for 2 hrs. (62 atm.), giving 135 g. I and 10.2 g. II. The working pressure can be further reduced by a 2-stage production by direct autoclaving of purpl. III. Heating II (or the pitchy mass) with 70 cc. CS_2 at 220° for 2 hrs. gave 135 g. I at a max. pressure of 30 atm. and 1 atm. at room temp. Purifying I with a soln. contg. 1 part of $MgCO_3$ (magnesite) and 4 parts of NaOH gave entirely colorless I, m. 174-7°. Chas. Blanc

POSTOLSKI, JACEK.

POLAND/Chemical Technology, Chemical Products and Their Application, Part 3. - Food Industry. H-28

Abs Jour: Referat. Zhurnal Khimiya, No 10, 1958, 34289.

Author : Jacek Postolski.
Inst : Not given.
Title : Statistical Determination of Butter Stability Under Refrigeration.

Orig Pub: Przegl. mleczarski, 1957, 5, No 8-9, 33.

Abstract: It was established by the quality study of 1713 samples of butter stored in a refrigerator at -19° that the butter made in summer (May, June, July) had preserved its taste better.

Card : 1/1

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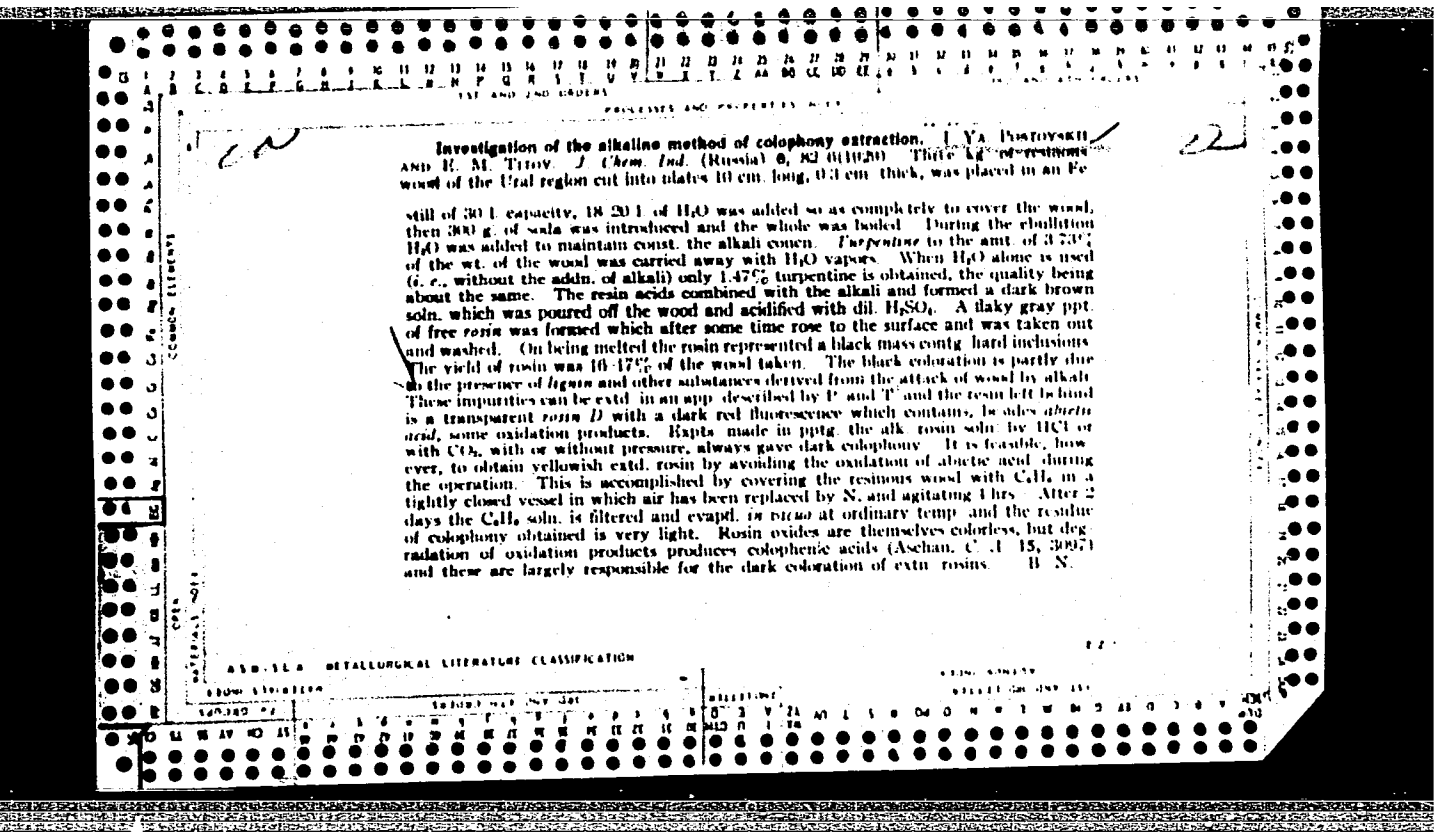
POSTOVOITOV, V.

Initiative of the Communist Youth League. Prof.-tekh. obr. 15 no.4:26 Ap '58. (MIRA 11:5)

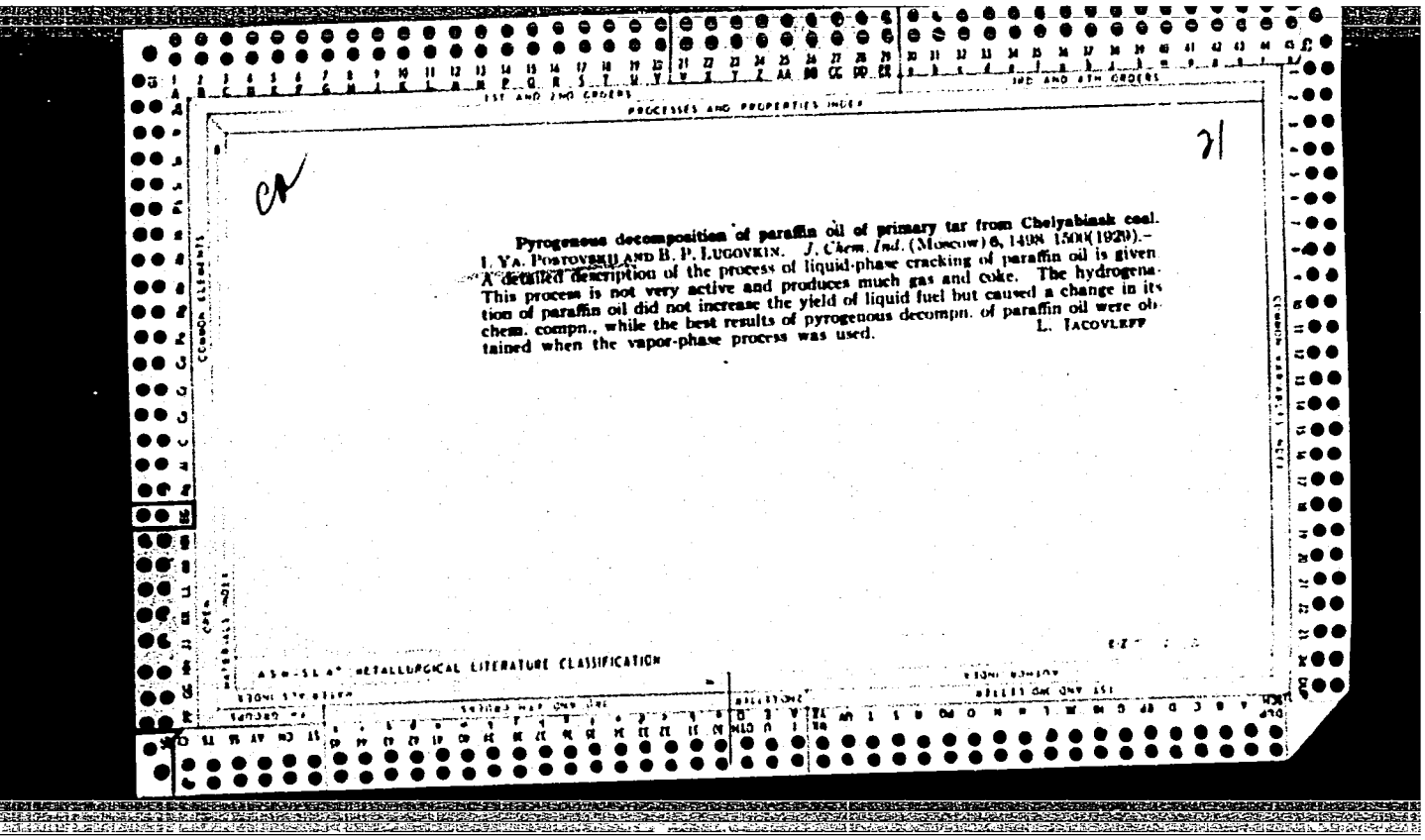
(Stalingrad--Gymnasiums)

VERESHCHAGINA, N.N.; POSTOVSKIY, I.Ya.

Gama-pyridyl hydrazine and its tuberculostatic effect. Trudy Ural. politekh. inst. no.94:24-33 '60. (MIRA 15:6)
(Hydrazine) (Tuberculosis)



Investigation of the alkaline method of colophony extraction. I. Ya. Postovskii and K. M. Titov. *J. Chem. Ind.* (Russia) 6, 82 (1929). Three kg. of resinous wood of the Ural region cut into slates 10 cm. long, 0.3 cm. thick, was placed in an Fe still of 30 l. capacity, 18.20 l. of H_2O was added so as completely to cover the wood, then 300 g. of soda was introduced and the whole was boiled. During the ebullition H_2O was added to maintain const. the alkali concn. *Turpentine* to the amt. of 3.73% of the wt. of the wood was carried away with H_2O vapors. When H_2O alone is used (*i. e.*, without the addn. of alkali) only 1.47% turpentine is obtained, the quality being about the same. The resin acids combined with the alkali and formed a dark brown soln. which was poured off the wood and acidified with dil. H_2SO_4. A flaky gray ppt. of free *rosin* was formed which after some time rose to the surface and was taken out and washed. On being melted the rosin represented a black mass contg. hard inclusions. The yield of rosin was 10–17% of the wood taken. The black coloration is partly due to the presence of *lignin* and other substances derived from the attack of wood by alkali. These impurities can be extd. in an app. described by P. and T. and the resin left behind is a transparent *rosin D* with a dark red fluorescence which contains, besides *abietic acid*, some oxidation products. Expts. made in pptg. the alk. rosin soln. by HCl or with CO_2, with or without pressure, always gave dark colophony. It is feasible, however, to obtain yellowish extd. rosin by avoiding the oxidation of abietic acid during the operation. This is accomplished by covering the resinous wood with C_6H_6 in a tightly closed vessel in which air has been replaced by N, and agitating 4 hrs. After 2 days the C_6H_6 soln. is filtered and evapd. *in vacuo* at ordinary temp. and the residue of colophony obtained is very light. Rosin oxides are themselves colorless, but degradation of oxidation products produces colophenic acids (Aschan, C. A. 15, 3097) and these are largely responsible for the dark coloration of extn. rosins. B. N.



PROCESSES AND PROPERTIES INDEX

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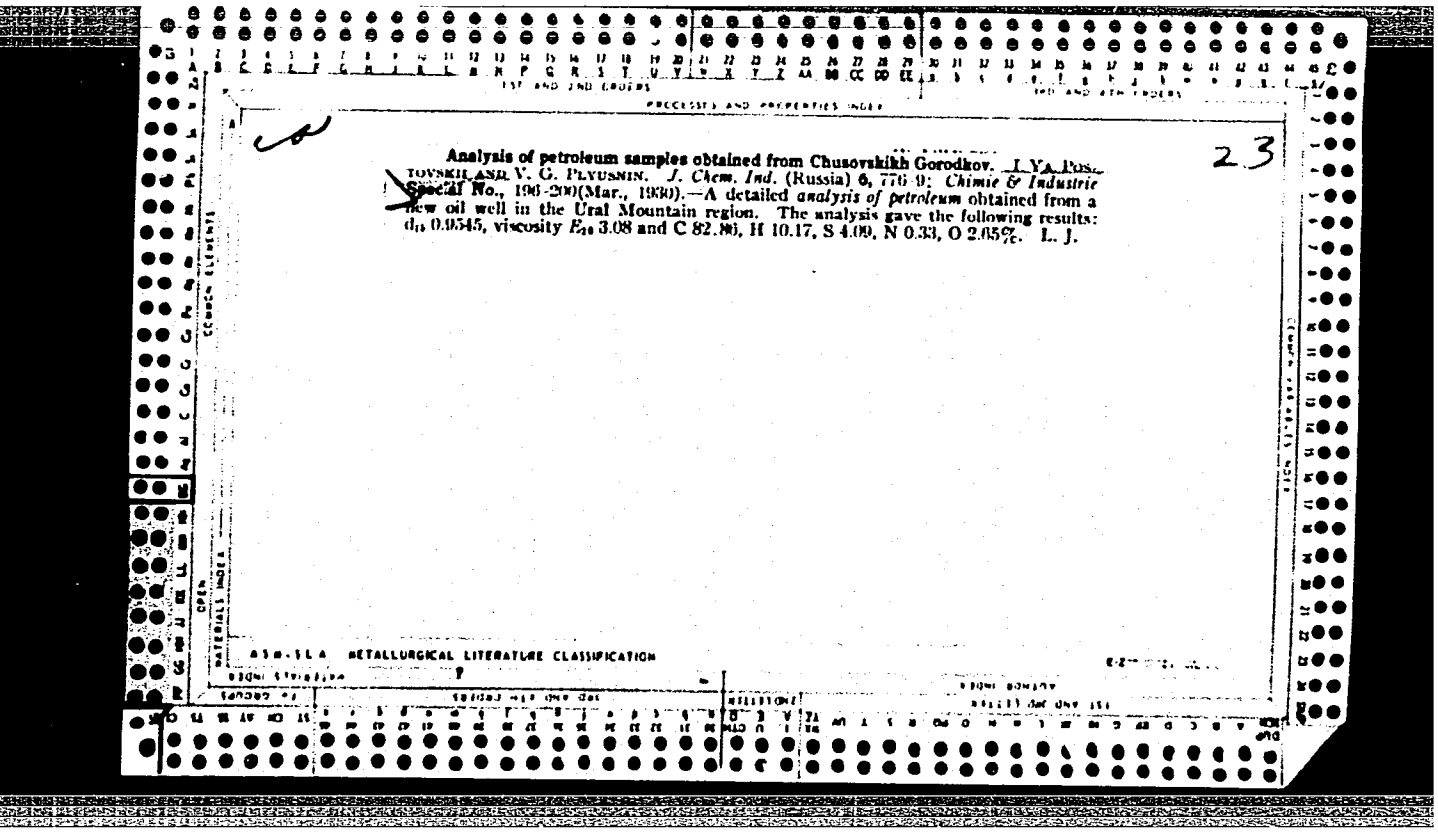
Pyrogenous decomposition of paraffin oil of primary tar from Cheliabinsk coal. I. Ya. Povrovskii and B. P. Lugovkin. *J. Chem. Ind.* (Moscow) 6, 1498-1500(1929).—A detailed description of the process of liquid-phase cracking of paraffin oil is given. This process is not very active and produces much gas and coke. The hydrogenation of paraffin oil did not increase the yield of liquid fuel but caused a change in its chem. compn., while the best results of pyrogenous decompn. of paraffin oil were obtained when the vapor-phase process was used. L. Iacovleff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Analysis of petroleum samples obtained from Chusovskikh Gorodkov. I. Ya. Pos., TOVSKII, and V. G. PLYUSNIN. *J. Chem. Ind.* (Russia) 6, 776-9; *Chimie & Industrie* Special No., 190-200(Mar., 1930).—A detailed *analysis of petroleum* obtained from a new oil well in the Ural Mountain region. The analysis gave the following results: d_{15} 0.9545, viscosity E_{20} 3.08 and C 82.86, H 10.17, S 4.09, N 0.33, O 2.05%. L. J.

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A 1930-31 A METALLURGICAL LITERATURE CLASSIFICATION