AID P - 1833

Teploenergetika, 3, 37-44, Mr 1955

Card 2/2 Pub. 110-a - 10/16

Institution: Central Scientific Research Institute of Aircraft Engine Construction (TsIAM) im. P. I. Baranov

Submitted : No date

MASLENNIKOV, M.M., prof., red.; SUVOROVA, I.A., izdat.red.; ROZHIN, V.P., tekhn.red.

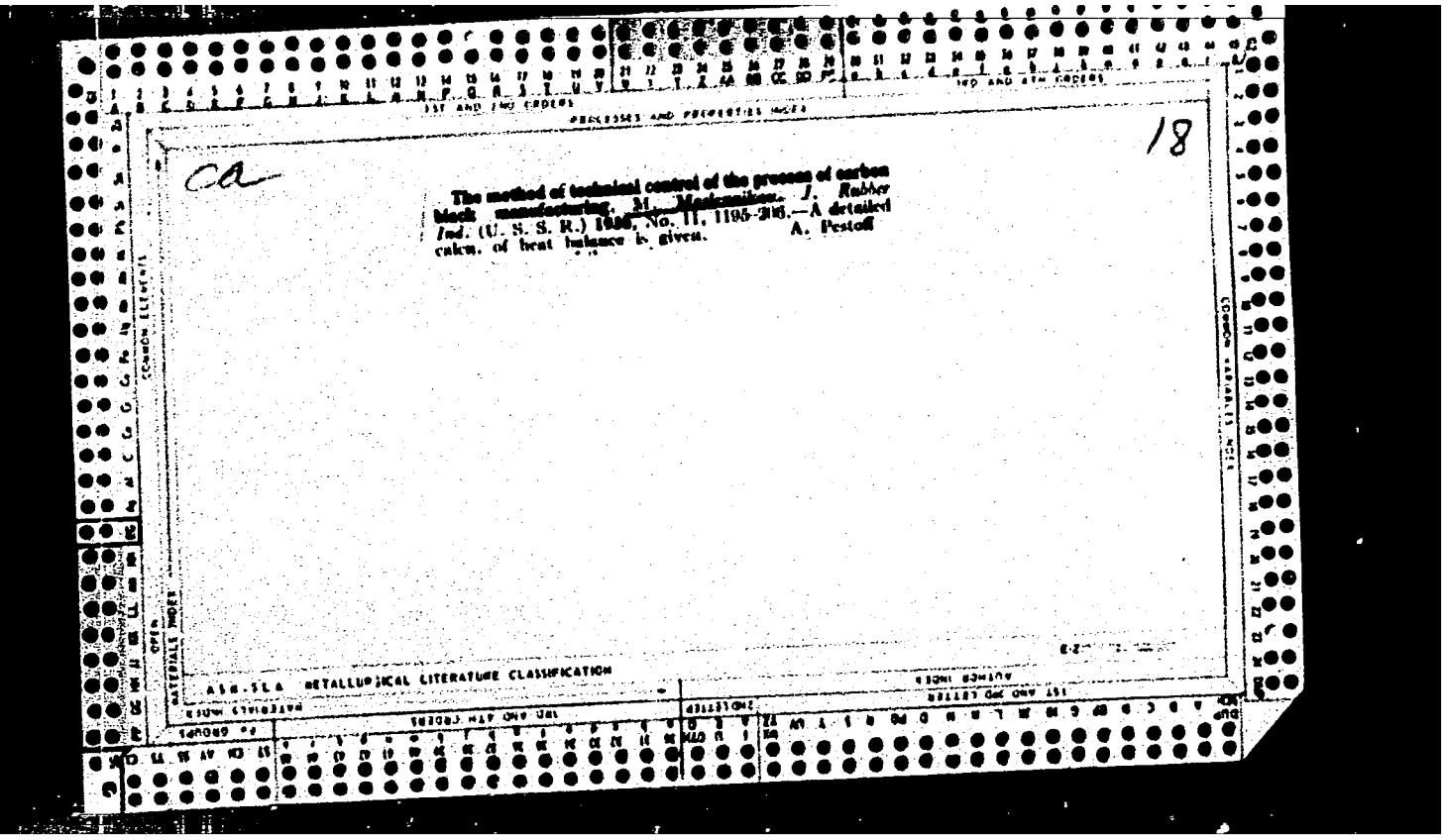
[Power units of helicopters; collection of articles] Silovye ustanovki vertoletov; sbornik statei. Moskva, Gos.izd-vo obor. promyshl., 1959. 184 p. (MIRA 12:11)
(Helicopters)

BEKHLI, Yuriy Georgiyevich; MASLENNIKOV, M.M., prof., doktor tekhn. nauk, retsenzent; TOKAR', V.M., red.; KOZHIN, V.P., tekhn.red.

[Air injection system of the jet drive of a helicopter rotor; investigation of basic properties and characteristics] Kompressornaia sistema reaktivnogo privoda nesushchego vinta vertoleta; issledovanie osnovnykh svoistv i osobennostei. Moskva, Gos. nauchno-tekhn.izd-vo Oborongiz, 1960. 98 p. (MIRA 13:10)
(Rotors (Helicopters))

SHEVYAKOV, Aleksey Andreyevich; MASLENNIKOV, M.M., prof., doktor tekhn. nauk, retsenzent; ZLATOUSTOV, S.V., dotsent, retsenzent; KONONOV, P.A., dotsent, retsenzent; YANOVSKIY, I.L., inzh., red.; MOROZOVA, P.B., izdat.red.; ROZHIN, V.P., tekhn.red.

[Automatic control of airplane power plants] Avtomatika aviatsionnykh silovykh ustanovok. Moskva, Gos.izd-vo obor.promyshl., 1960. 372 p. (MIRA 13:2)
(Airplanes--Engines) (Automatic control)

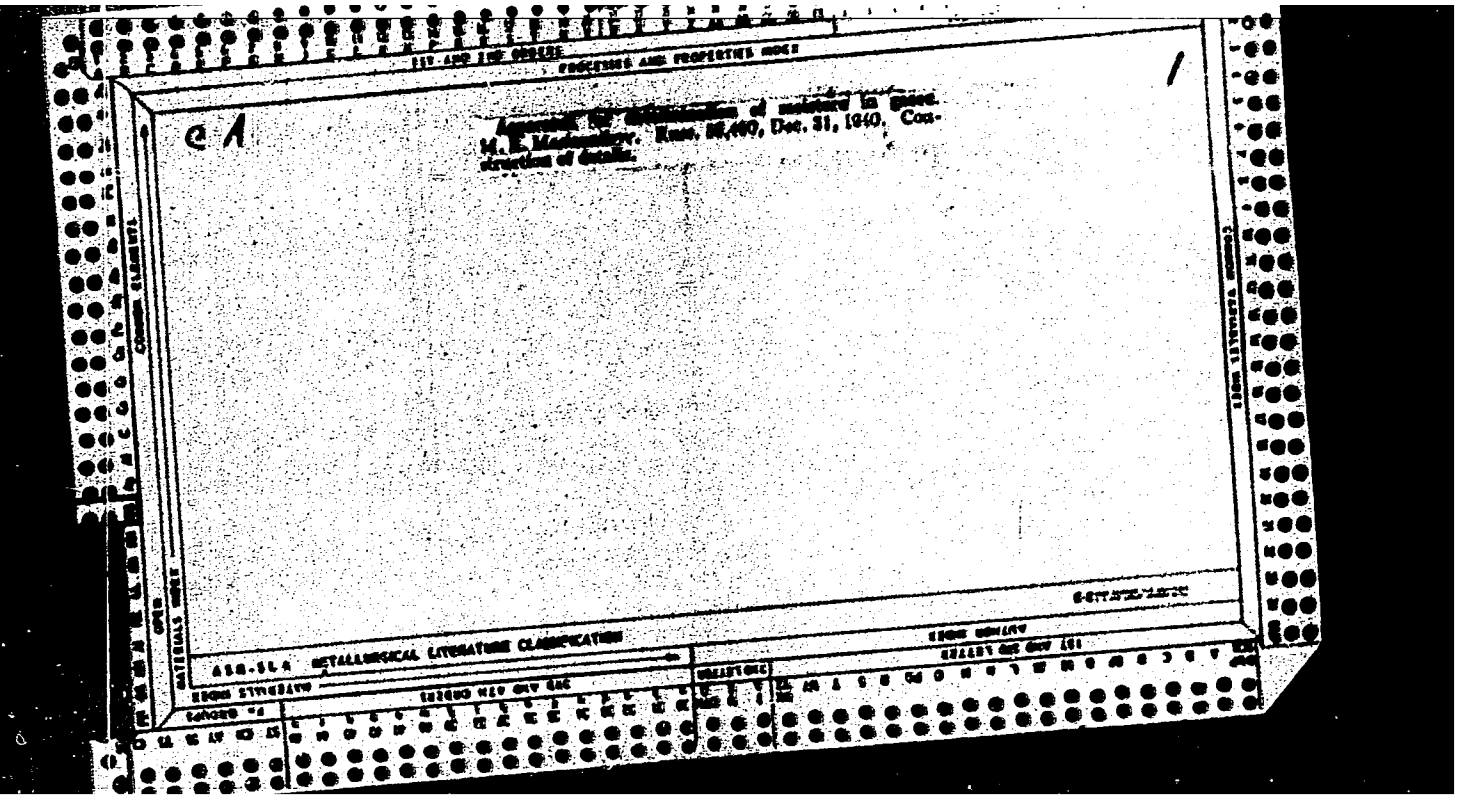


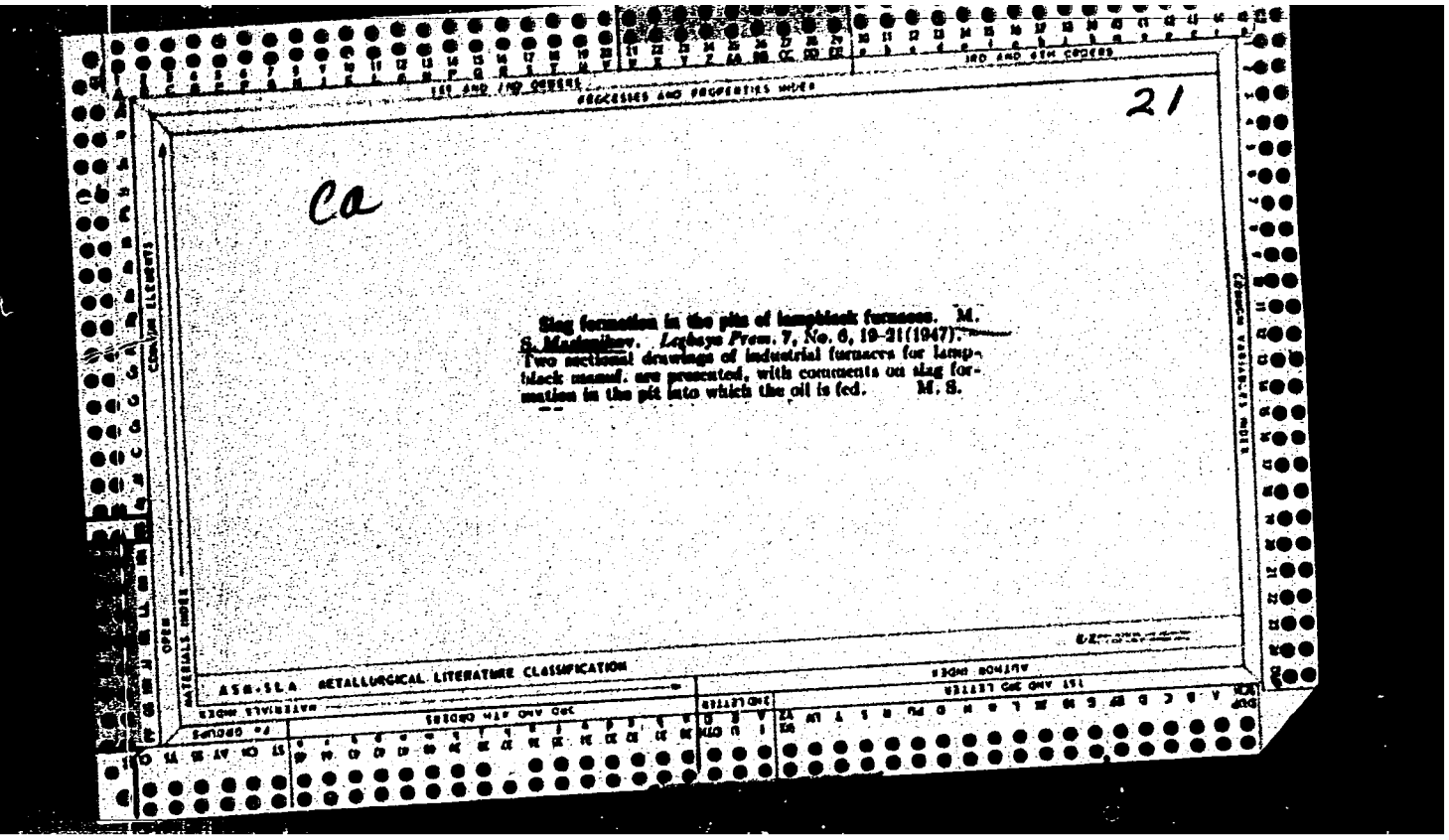
18

CA

The method of technical control of the process of carbon black manufacturing. M. Medvedkin. *J. Rubber Ind.* (U. S. S. R.) 1936, No. 11, 1195-210.—A detailed calcn. of heat balance is given. A. Pestoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



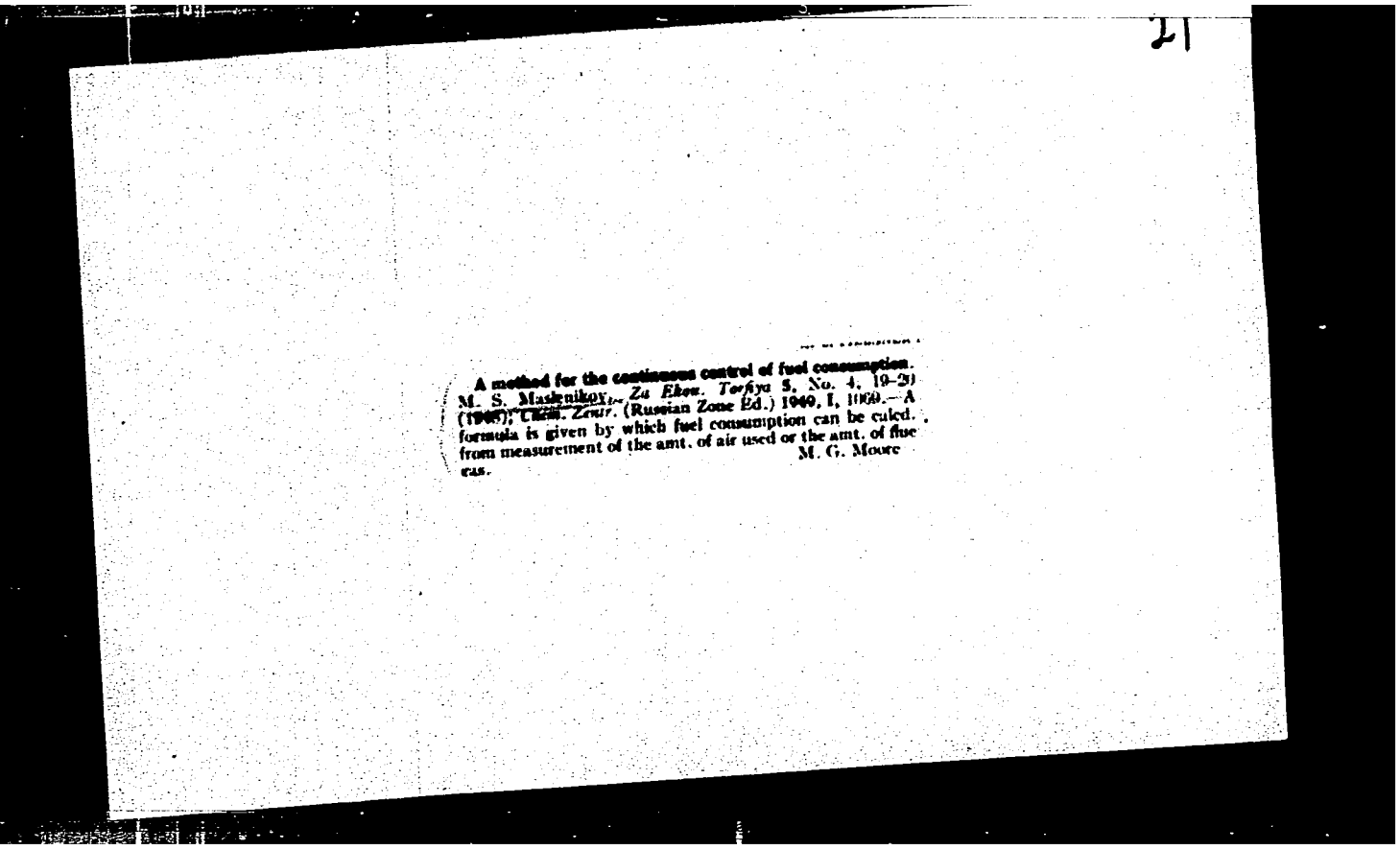


21

Ca

Slag formation in the pits of lampblack furnaces. M. S. Maslennikov. *Lakokras Prom.* 7, No. 6, 19-21(1947). Two sectional drawings of industrial furnaces for lampblack manuf. are presented, with comments on slag formation in the pit into which the oil is fed. M. S.

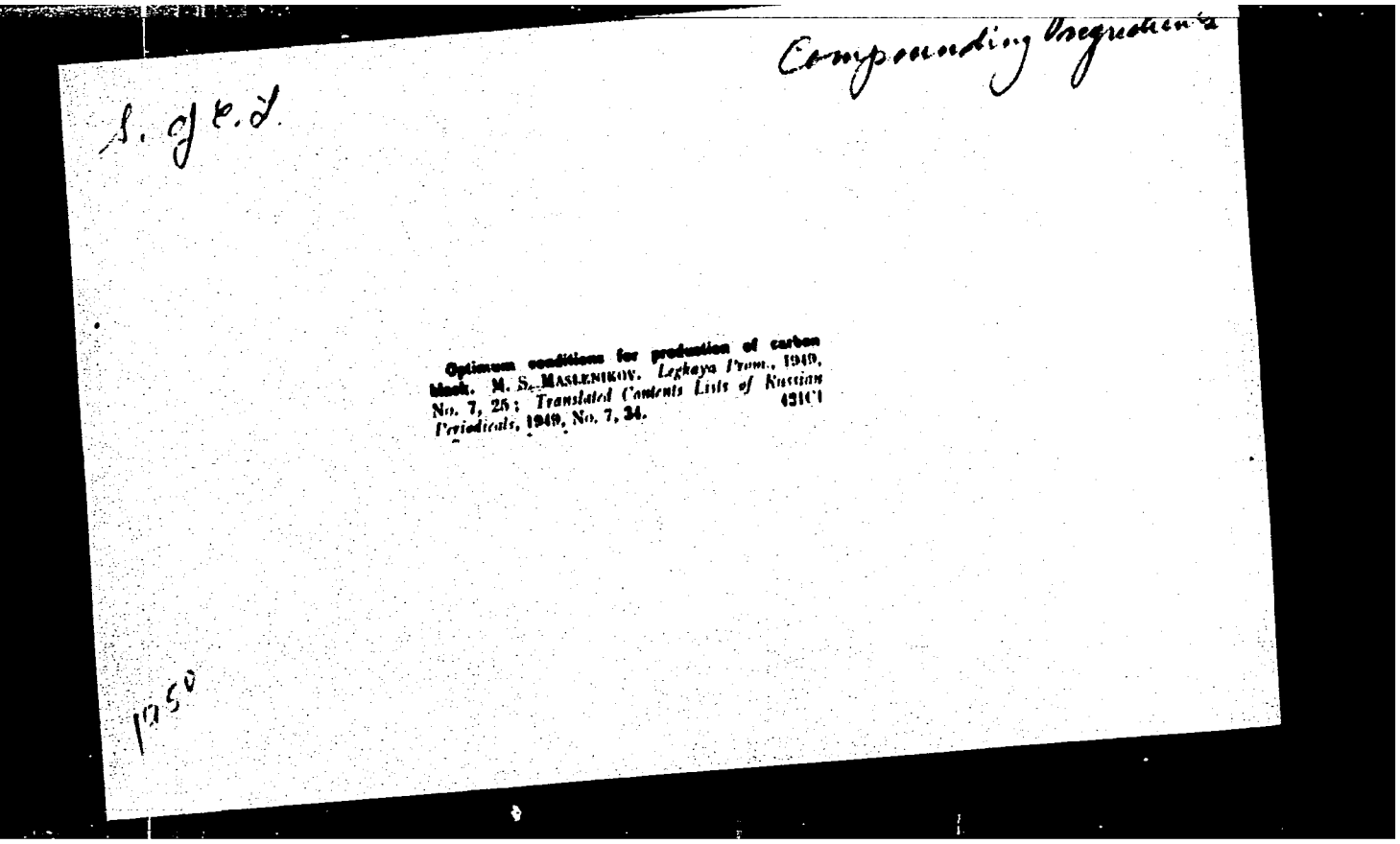
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



21

A method for the continuous control of fuel consumption. M. S. Maslenikov. *Za Ekon. Toplya* 5, No. 4, 19–20 (1949). *Chem. Zentr.* (Russian Zone Ed.) 1949, I, 1069.—A formula is given by which fuel consumption can be calcd. from measurement of the amt. of air used or the amt. of flue gas.

M. G. Moore



Compounding Ingredients

S. ge. d.

Optimum conditions for production of carbon black. M. S. MASLENNIKOV. *Lekhnya Prom.*, 1949, No. 7, 25; *Translated Contents Lists of Russian Periodicals*, 1949, No. 7, 34. 4310'1

1950

[illegible]SLENIKOV, M. S.

PA 43/49T13

USSR/Chemistry - Carbon Black Apr 49
Chemistry - Chemical Industry

"Operative Control of Carbon Black in Carbon Black Factories," M. S. Maslenikov, Ivanovo Power Inst, 4 pp

"Zavod Lab" Vol XV, No 4

Basic problem of operational control in any production process is determination of product yield per unit of expended raw material at any moment. Derives formula showing that, to determine yield of carbon black at any moment, it is sufficient to analyze stack gases and calculate value of coef-

[redacted]

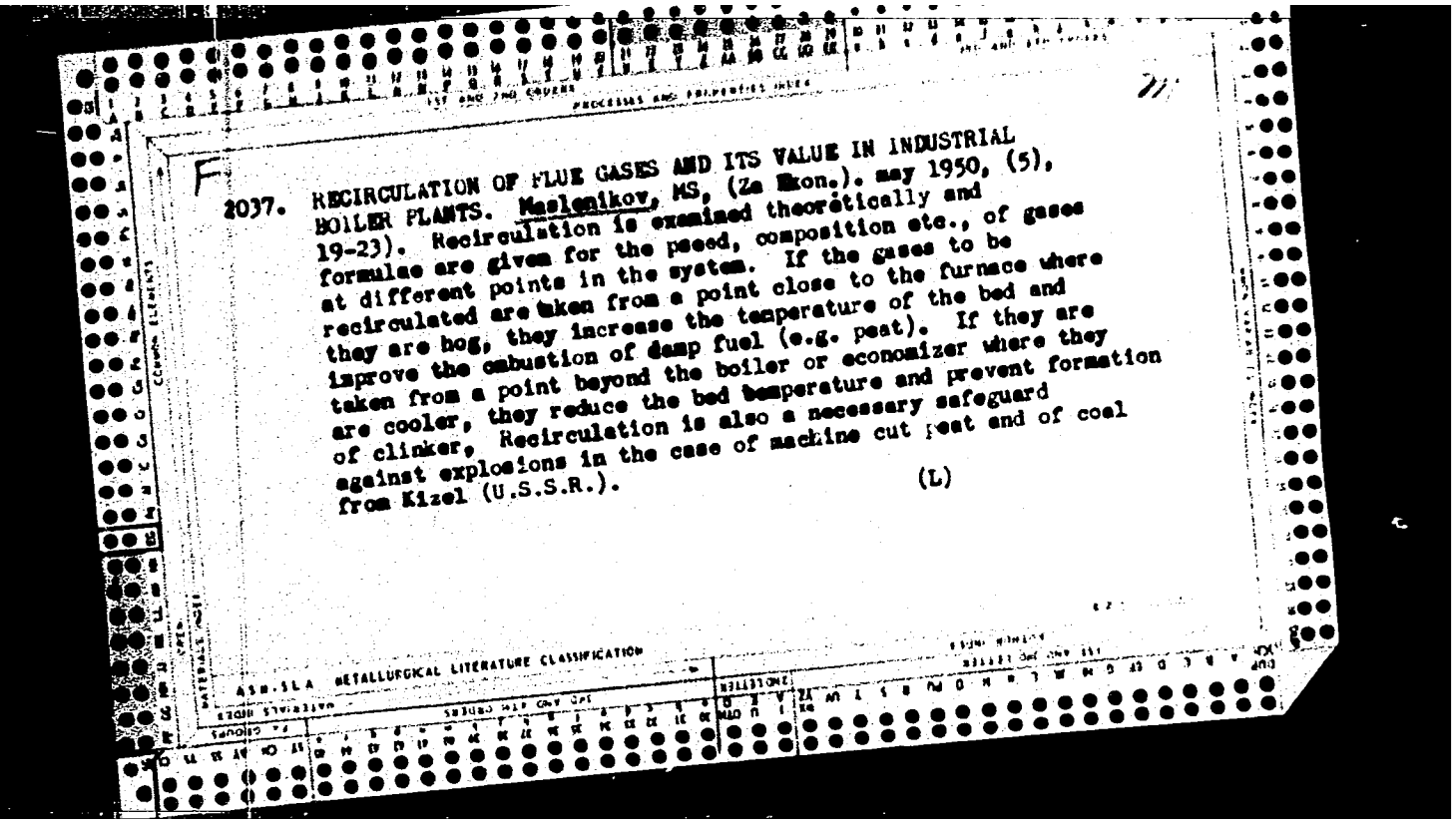
43/49T13

USSR/Chemistry - Carbon Black (Contd) Apr 49

ficient B' in Bunte's equation. Simplifies method so that complete analysis of stack gases is unnecessary.

[redacted]

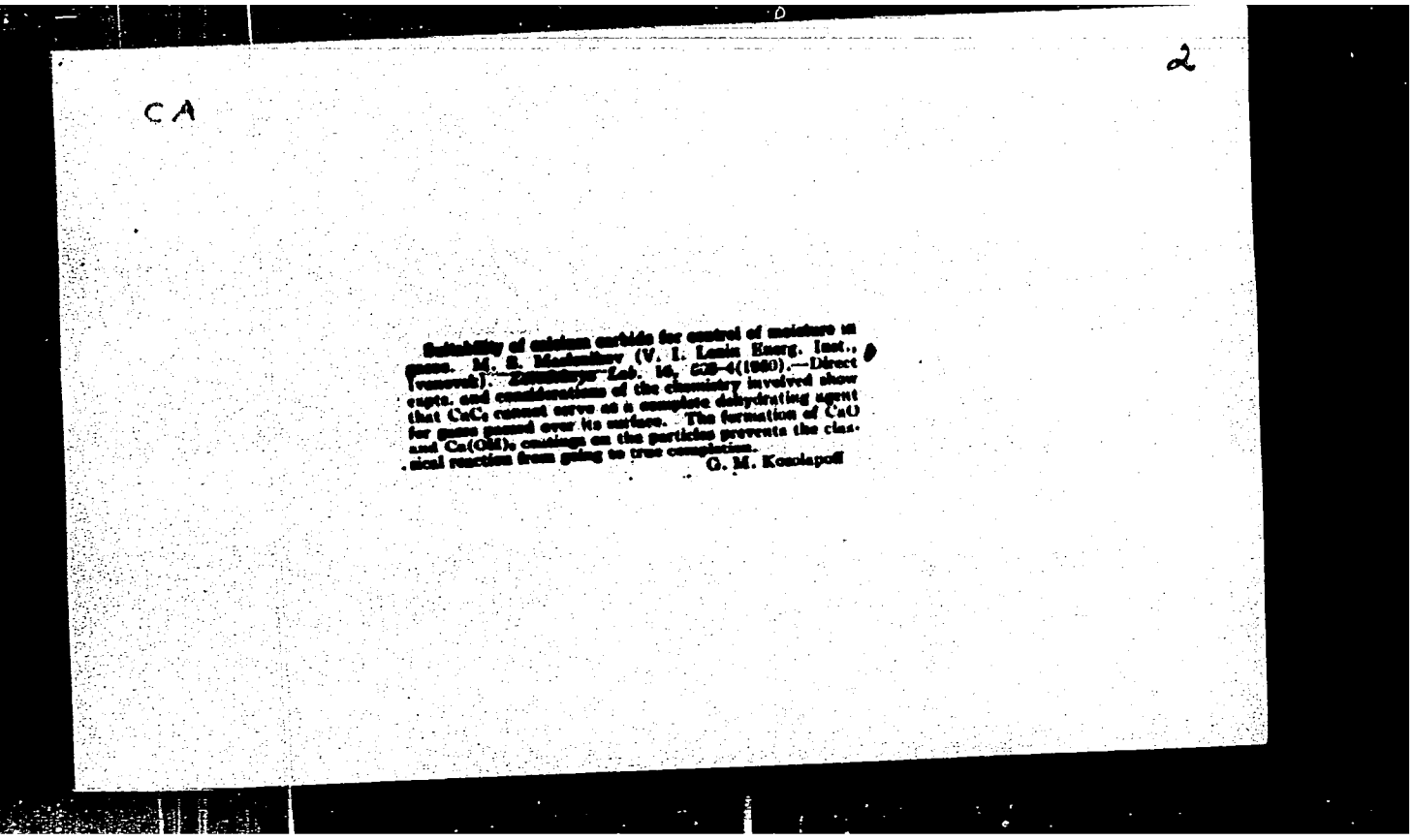
43/49T13



F

2037. RECIRCULATION OF FLUE GASES AND ITS VALUE IN INDUSTRIAL BOILER PLANTS. Maslenikov, MS, (Za Mkon.). may 1950, (5), 19-23). Recirculation is examined theoretically and formulae are given for the speed, composition etc., of gases at different points in the system. If the gases to be recirculated are taken from a point close to the furnace where they are hog, they increase the temperature of the bed and improve the combustion of damp fuel (e.g. peat). If they are taken from a point beyond the boiler or economizer where they are cooler, they reduce the bed temperature and prevent formation of clinker. Recirculation is also a necessary safeguard against explosions in the case of machine cut peat and of coal from Kizel (U.S.S.R.). (L)

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA

2

Suitability of calcium carbide for control of moisture in gases. M. S. Mashenkov (V. I. Lenin Energ. Inst., Moscow). Zavodskaya Lab. 16, 528-4(1950).—Direct [removal]. Experiments and considerations of the chemistry involved show that CaC_2 cannot serve as a complete dehydrating agent for gases passed over its surface. The formation of CaO and $Ca(OH)_2$ coatings on the particles prevents the chemical reaction from going to true completion.

G. M. Kosolapoff

MASLENIKOV, M.

Technology

Moisture control of fuel, smoke gases and dew point. Moskva, Gos. energ. izd-vo, 1951.

Monthly List of Russian Accessions, Library of Congress, April 1952. UNCLASSIFIED.

F

0

[illegible]. TECHNICAL COMBUSTION OF LOW MOISTURE PEAT. Kalenikov, N.S. (Zh. Khim. Topliva (Fuel Chem.), Dec. 1951, 7-19). Peat often less than 35% moisture, in furnaces designed for that and higher values, causes excess furnace temperatures, which are counteracted by (1) recirculating furnace gases, (2) using excess air, (3) wetting the peat, or (4) reducing air preheat. The effects are calculated and methods (3) and (4) are pronounced uneconomical. In chain grate furnaces quicker combustion may necessitate restricting the combustion zone by adding brickwork over the front of the grate. In one method the brickwork forms a sloping wall bridging the front of the grate and throwing the incoming fuel towards the back. When wet peat is received again, a hole in the wall is opened by moving a steel shutter, and some of the peat falls through and burns in the antechamber formed under the sloping wall. This is useful for starting up and for maintaining combustion in the main chamber. (L).

MASLENNIKOV, M. S.

Equipment and cutting tools for metalworking, Moskva, Trudrezervizdat, 1952.
149 p. (53-32055)

TJ230.M33

Fuel Abstracts

Steam Raising & Steam Engines 11/1952

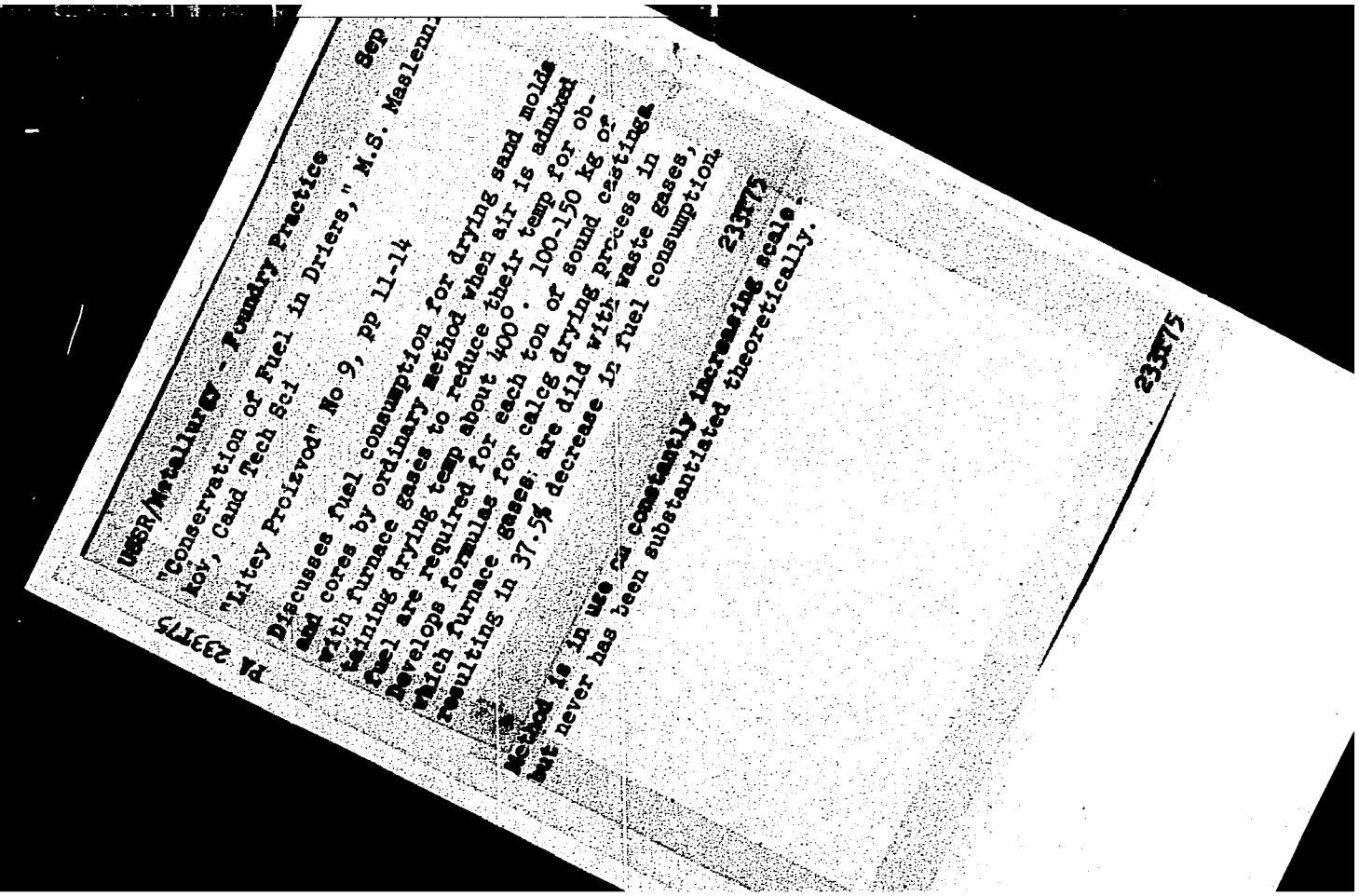
4670. MECHANIZATION OF POKING OF FUEL BED IN FURNACES WITH CHAIN GRATES. Maslennikov, M. S. (Za Ekon. Topliva (Fuel Econ.), July 1952, 18-21). Existing devices, all with disadvantages, are described (lifting or tilting firebars, a water-cooled "saw" across the bed, camshafts at front or back of bed, or a reciprocating poker worked by a continuous chain). Use of a modified scraper bar arrangement, now used with fixed grates (Fuel Abstr., Apr. 1951, n. s. 9, 2586), is suggested. (L)

MASLENIKOV, M. S.

Furnaces

Economy in burning dry peat. Rab. energ. 2 no. 4, 1952.

Monthly List of Russian Accessions, Library of Congress, July 1952. UNCLASSIFIED.



USSR/Metallurg - Foundry Practice Sep
"Conservation of Fuel in Driers," M.S. Maslenn
kov, Cand Tech Sci
"Litey Proizvod" No 9, pp 11-14
Discusses fuel consumption for drying sand molds
and cores by ordinary method when air is admixed
with furnace gases to reduce their temp for ob-
taining drying temp about 400°. 100-150 kg of
fuel are required for each ton of sound castings
Develops formulas for calcs drying process in
which furnace gases are did with waste gases,
resulting in 37.5% decrease in fuel consumption.
Method is in use at constantly increasing scale;
but never has been substantiated theoretically.
23375
23375

MASLENIKOV, M. S.

Furnaces - Grates

Mechanizing the stirring of a fuel layer in furnaces with chain grates. Za ekon. top. 9 no. 7, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED.

MASLENIKOV, M. S.

Combustion. Fuel.

Operating control of the moisture of burning fuel., Elek. sta., 23, No. 2, 1952.

Kand. Tekhn. Nauk.

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

MASLENNIKOV, M.S.

Equalization of heat exchange between the calorimeter and surroundings (calorimeter jacket). Torfyanaya Prom. 29, No.8, 21-3 '52. (MLRA 5:9)
(CA 48 no.2:405 '54)

1. V.I.Lenin Energetics Inst., Ivanovo.

MASLENIKOV, M. S.

SHITSMAN, S.Ye., inzhener.

"Controlling the humidity of fuel, fluegases and of the condensation point." M.S.Maslenikov. Reviewed by S.E.Shitsman. Elek.sta. 25 no.5:63-64 My '54. (MLRA 7:6)

(Maslenikov, M.S.) (Steam boilers)

MASLENIKOV, M.

"Control of humidity of burning fuel." Tr. from the Russian. p. 22.

TECHNICKA PRACA. (Rada vedeckych technickych spolocnosti pri Slovenskej akademii vied). Bratislava, Czechoslovakia, Vol. 7, No. 1, 1955,

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
Uncla.

MASLENIKOV, M.S.

MASLENIKOV, M.S., inzhener.

Control of fuel clogging in bunkers. Elek.sta.28 no.7:15-17 Jl '57. (MLRA 10:9)

(Fuel) (Electric power stations)

MASLENNIKOV, M.S., kand.tekhn.nauk

Preventing freezing of brown coal during railroad transportation. Elek. sta. no.4 Supplement:28-29 Jl-Ag '58. (MIRA 11:10)
(Germany, East--Lignite)
(Germany, East--Railroads--Cold weather operation)

MASLENIKOV, M.S.

AUTHOR: Maslenikov, M.S., Cand.Tech.Sc. 96-4-18/24

TITLE: Methods of countering low-temperature gas corrosion in boilers. (Mery bor'by s nizkotemperaturnoy gazovoy korroziyey v kotel'nykh ustanovkakh).

PERIODICAL: Teploenergetika, 1958, No.4, pp.86-89 (USSR).

ABSTRACT: The general process of low-temperature corrosion in furnace flues is considered. The corrosive action of flue gases containing oxides of sulphur and water is plotted as a function of surface temperature in Fig.1. Data about the temperature necessary to prevent corrosion, obtained from a questionnaire sent to German boiler users, are tabulated. Five methods of keeping up the temperature of the furnace walls are listed and discussed. The use of various kinds of protective coatings on metal surfaces is then described, with particular reference to American practice. Work of the British Petroleum Company's laboratories at Sunbury and of the Fuel Research Station of the Department of Scientific and Industrial Research is described. Particular attention is given to the use of ammonia injection and to the employment of various additives in fuel oil.

Card 1/2

96-4-18/24

Methods of countering low-temperature gas corrosion in boilers.
There are 2 tables, 5 figures and 3 references -
2 German, 1 English.

AVAILABLE: Library of Congress.

Card 2/2

MASLENIKOV, M. S.

96-1-20/31

AUTHOR: Maslenikov, M.S., Candidate of Technical Sciences.

TITLE: The Burning of Carry-over Grit During Chamber Combustion of Fuel in Boilers. (Dozhiganiye unosa pri kamernom szhiganii topliva v kotel'nykh ustanovkakh)

PERIODICAL: Teploenergetika, 1958, Vol.5, No.1, pp. 76 - 77 (USSR)

ABSTRACT: In some foreign power stations burning pulverised fuel, fuel carried over is re-circulated and burned. This measure may be used either to increase the efficiency or to reduce the amount of ash discharged to atmosphere.
This practice has been employed at the Dendre Power Station in Belgium for more than 20 years. A brief description of the Dendre experience is given and test results displayed in Table 1. The installation at the Zwartberg Power Station is briefly described; test data are given in Table 2. The proportion of ash trapped at Zwartberg is less than at Dendre because the furnaces are of different design. The conditions necessary for success when returning carry-over in installations with dry ash removal are briefly stated.
In some foreign power stations, carry over return is also used along with liquid ash removal mainly in order to reduce the amount of fly ash discharged to atmosphere. Experience in a

Card1/2

96-1-20/31

The Burning of Carry-over Grit During Chamber Combustion of Fuel in Boilers.

number of American and German power stations is briefly cited, the latter being rather unsatisfactory. There are 2 tables and 5 non-Slavic references.

AVAILABLE: Library of Congress.

Card 2/2

AUTHOR: Maslenikov, M.S. Candidate of Technical Sciences. 96-1-21/31

TITLE: Furnaces with Fluidised Beds of Fuel (Topki s kipyashchim sloyem)

PERIODICAL: Teploenergetika, 1958, Vol.5, No.1, pp. 77 - 80 (USSR)

ABSTRACT: The principle of burning fuel in a fluidised bed emerged before the end of the Second World War. A fluidised bed is a stable aerodynamic suspension of granulated material through which gas is made to flow: the theory is briefly explained. The French "Activit" Company has been developing the use of fluidised beds in furnaces. Trouble was experienced with slagging of the furnace walls but an improved furnace made in 1953 gave good results when burning fine coke of Lorraine bituminous coal and dust of brown coal. Experience with a furnace at Vernon is described. The first industrial installation with the new type of furnace was built in the second half of 1954 at the small power station of La Motte d'Aveillans. The boiler, illustrated diagrammatically in Fig. 2, is described and its operation explained. Test results are given in Table 2.

rdl/2 The various tests that have been made with this kind of furnace show that it is able to burn a wide range of fuels. The future prospects of this type of furnace are difficult to

Furnaces with Fluidised Beds of Fuel. 96-1-21/31

foresee, but it looks as though it could be used in very large sizes. It seems to be intermediate between stoker- and pulverised-fuel-firing.
There are 3 figures, 2 tables and 4 non-Slavic references.

AVAILABLE: Library of Congress.

Card 2/2

MASLENNIKOV, M.S., kand. tekhn. nauk.

Control measures for low-temperature gas corrosion in boiler units. Teploenergetika 5 no.4:86-89 Ap '58. (MIRA 11:5)
(Corrosion and anticorrosives) (Boilers)

MASLENNIKOV, M.S., kand.tekhn.nauk

Evaluating the heat loss by a boiler unit into the surrounding medium. Teploenergetika 5 no.9:89-92 S '58. (MIRA 11:10)
(Boilers)

MASLENIKOV, M.S., kand.tekhn.nauk

Construction of fuel bunkers (from "Brennstoff--Warme--Kraft," no. 9, 1957). Energokhoz.za rub. no.6:12-16 N-D '58. (MIRA 12:4)

(Coal)

SOV/96-58-9-19/21

AUTHOR: Maslenikov, M.S. (Candidate of Technical Science)

TITLE: The Evaluation of Heat Loss from a Boiler Set to the Surroundings (Ob otsenke poteri tepla kotloagregatom v okruzhayushchuyu sredu)

PERIODICAL: Teploenergetika, 1958, Nr 9, pp 89 - 92 (USSR)

ABSTRACT: Of all the heat losses of a boiler set, the amount lost to the surroundings is the most indeterminate and is usually taken as the remnant term in the heat balance. Values of this heat loss recommended by various organisations are compared in Fig 1 and it will be seen that agreement between Soviet, German and American standards is reasonably good. A general formula is then given for the determination of heat lost to the surroundings, with particular formulae for several different types of boilers. Reference is made to the new standard of the American boiler and affiliated industries standards committee; here the method of determining the heat lost to the surroundings is represented by the nomogram of Fig 2. Soviet and American practice are compared in a Table and it will be seen that agreement is not very good.

Card 1/2

The Evaluation of Heat Loss from a Boiler Set to the Surroundings SOV/96-58-9-19/21

It is advisable to consider whether Soviet standards for this loss are not in fact too high. Hitherto, heat lost to the surroundings has been treated as a total loss, but in fact an appreciable proportion of it heats air that is later consumed in the furnaces. Considerations of this kind suggest new methods of determining the heat loss to the surroundings. The heat required to warm and ventilate the boiler-house can be measured. When one or two additional boilers are started up, the boiler-house heating load is reduced by an amount equal to the heat lost to the surroundings of the additional boilers.

There are 2 figures, 1 table, 1 literature reference (English)

1. Boilers--Test results 2. Heat--Measurement 3. Mathematics --Applications

Card 2/2

MASLENIKOV, M.S., kand. tekhn. nauk

Experience in the continuous controlling of coal moisture. Energokhoz. za rub. no.6:14-18 N-D '59. (MIRA 13:3)
(Coal preparation)

SEMENENKO, Nikolay Aleksandrovich, prof., doktor tekhn.nauk; SIDEL'KOVSKIY, Lazar' Naumovich; YURNEV, Vladimir Nikolayevich; MASLENNIKOV, M.S., retsenzent; SHUMAYEV, F.G., retsenzent; SHUKHER, S.M., red.; LARIONOV, G.Ye., tekhn.red.

[Industrial boiler systems] Kotel'nye ustanovki promyshlennykh predpriiatii. Pod red. N.A.Semenenko. Moskva, Gos.energ.izd-vo, 1960. 391 p. (MIRA 13:11)
(Boilers)

MASLENIKOV, M.S., kand.tekhn.nauk

Checking creep in superheated steam supply lines during use.
Energokhoz.za rub. no.3:20-23 My-Je '60. (MIRA 13:7)
(Creep of metals)
(Steampipes)

MASLENIKOV, M.S., kand.tekhn.nauk

Control methods for primary and secondary steam superheating.
Teploenergetika 7 no.2:82-85 F '60. (MIRA 13:5)
(Steam, Superheated)

MASLENNIKOV, M.S., kand.tekhn.nauk; YERSHOV, L.V., inzh.

Laboratory tests of bunker cushions. Elek.sta. 31 no.2:11-15 F '60. (MIRA 13:5)
(Fuel--Storage)

S/096/61/000/003/012/012
E194/E155

AUTHOR: Maslenikov, M.S., Candidate of Technical Sciences

TITLE: Pulsating Burning

PERIODICAL: Teploenergetika, 1961, No. 3, pp. 74-78

TEXT: This is a review, almost entirely of German work. The first chambers with pulsating burning appeared in France early on in the century. In the 1930's Schmidt developed a tube for the V-1 weapon, interest in which later diminished because the V-1 does not meet the requirements of modern warfare. After the war one German company continued to study pulsating burning in tubes of up to 100 mm diameter, with the object of combustion or gasification. After many tests it was decided to try a Schmidt tube on an industrial scale and a furnace of 1 to 2 tons per hour was installed with a boiler. The method of operation of a tube with pulsating combustion is explained. A description is given of tests with benzene and with solid fuel, firstly lignite and later coal. Some of the tests were mainly concerned with producing generator and synthetic gas.

Card 1/2

S/096/61/000/003/012/012
E194/E155

Pulsating Burning

The factors that govern the intensity of pulsations are discussed, including the fuel consumption, the type of fuel, the excess-air factor and the temperature in the tube. The influence of tube shape is reviewed. An experimental furnace with a tube of 400 mm diameter was later constructed; the combustion chamber was 4.5 m long. The first tests were made in 1954-55, first with gas and later with coal dust. It was finally concluded that further work would be required to improve the combustion, ash removal, and heat transfer. The investigations indicated that finer pulverisation of the fuel and heating of the air and coal would help.

There are 6 figures, 1 table and 10 references: 8 German, 1 English and 1 French.

Card 2/2

MASLENIKOV, M.S., kand.tekhn.nauk

Regeneration of energy for operational needs in the system of a boiler unit. Energostroenie 7 no.12:38-39 D '61. (MIRA 14:12)
(Boilers)

MASLENIKOV, M.S., kand.tekhn.nauk

Pulsating combustion. Teploenergetika 8 no.3:74-78 Mr '61.
(MIRA 14:9)
(Combustion)

MASLENNIKOV, Mikhail Semenovich; MOROZOV, V.I., red.

[Manual for the mechanization, automation, and equipping of trade enterprises and warehouses] Spravochnik po mekhanizatsii, avtomatizatsii i oborudovaniiu torgovykh predpriiatii i skladov. Moskva, Izd-vo TSentrosoiuza, 1963. 149 p. (MIRA 17:5)

L 10998-66

ACC NR: AP6001979 SOURCE CODE: UR/0105/65/000/003/0091/0091

AUTHOR: Veshenevskiy, S. N.; Voronetskiy, B. B.; Gus'kov, P. S.; Klimov, D. Yu.; Maslennikov, L. V.; Pashkov, M. V.; Petrov, I. I.; Sokolov, I. I.; Stepanov, Yu. V.; Turovskaya, P. G.; Khechumyan, A. P.; Tsein, V. S.; Shteyn, I. M.

ORG: none

TITLE: Professor K. V. Urnov

SOURCE: Elektrichestvo, no. 3, 1965, 91

TOPIC TAGS: scientific personnel, academic personnel

ABSTRACT: Konstantin Vasilevich Urnov died on 11 December 1964 after a serious illness. He was a distinguished scientist and one of the oldest electro-polygraphists. He was born in 1907 and graduated from the Ivanovskiy Polytechnic Institute in 1929, after which he continued to work on the Board of Electric Installations for the next 25 years. His outstanding contribution was to relate successfully the activities of industry with those of the higher educational institutions. His name is closely linked to the development of domestic polygraphic machinery. He was imaginative, creative and bold. Since 1935 he was also engaged in teaching and scientific research work at the Moscow Power Institute and the Moscow Polygraphic Institute where he set up a course on "Electric Drives and Automation of Polygraphic Machines". He is the author of over 30 inventions and published works, including one book. He was a scientist-communist, a man of great knowledge, a good colleague and friend. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 05 / SUBM DATE: none

UDC: 621.313.1/3

Card 1/1

MASLENNIKOV, M. V.

Engineering geology, hydrogeology and drainage of deposits, Moskva, Ugletekhizdat, 1951. 210 p. (52-36374)

GB1003.M33

MASLENNIKOV, M.V.

57-27-7-24/40

AUTHORS: Vereshchagin, L. F., Semerchan, A. A., Maslennikov, M. V., Sekoyan, S. S.

TITLE: Concerning the Problem of the Friction of a Water Jet on the Nozzle Wall at Supersonic Velocities (K voprosu o trenii strui vody o stenki sopla pri sverkhzvukovoy skorosti).

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1957, Vol. 27, Nr 7, pp. 1589-1590 (USSR)

ABSTRACT: Reference is made to the earlier papers by the authors in Zhurnal Tekhnicheskoy Fiziki, 1956, Vol. 26, Nr 11; Zhurnal Tekhnicheskoy Fiziki, 1957, Vol. 27, Nr 1 and Nr 2, in which was stated that in the case of a 6 liter (volume) the fluctuations of pressure in front of the nozzle at a total pressure of 2000 atmospheres do not exceed 10 %. But at a high velocity of jet, about 500-600 m/sec, an estimation of the friction produced on the metal wall is very difficult. For this purpose the attempt was made to determine by experiment the dependence of the water-jet friction at the nozzle wall on the diameter and on the quantity of pressure in front of the nozzle. The experiments showed that the

Card 1/2

Concerning the Problem of the Friction of a Water Jet on the Nozzle Wall at Supersonic Velocities 57-27-7-24/40

water temperature is highly dependent as well on the diameter of the nozzle as on the pressure. Based on the tests it may be said that from a diameter of 1,25 mm and more and a pressure below 700 atmospheres the frictions on the nozzle wall may be disregarded in the outflow of water from the nozzle. There are 2 figures and 3 references, all of which are Slavic.

ASSOCIATION: Physics Laboratory of Ultrahigh Pressures AS USSR, Moscow (Laboratoriya fiziki sverkhvysokikh davleniy AN SSSR, Moskva)

SUBMITTED: January 26, 1957

AVAILABLE: Library of Congress

1. Nozzles-Performance 2. Water-Friction-Supersonic velocity 3. Water jet-Nozzle friction-Supersonic velocity 4. Friction-Water-Supersonic velocity

Card 2/2

MASLENNIKOV, M.V., Cand Phys Math Sci -- (diss) "Certain mathematical problems of the theory of the ~~slowing down~~ deceleration and diffusion of neutrons." Mos, 1958, 10 pp (Acad Sci USSR. Department of Applied Mathematics. Math Inst im V.A. Steklov) 120 copies (KL, 27-58, 102)

Maslennikov, M. V.

AUTHOR: Maslennikov, M. V., 20-2-14/60

TITLE: On the General Problem in the Theory of Slowing Down Neutrons (Ob obshchey zadache teorii zamedleniya neytronov)

PERIODICAL: Doklady AN SSSR, 1958, Vol. 118, Nr. 2, pp. 259-262 (USSR)

ABSTRACT: The state of a neutron is determined in the theory of slowing down by indicating the adequate phase point $Q = (\vec{r}, \vec{\Omega}, u)$. The signs mean: $\vec{r}$ - the spatial coordinate of the neutron, G - a coherent domain of the three dimensional space S_3, in which the process, which is to be examined, takes place. Further $\vec{r} \in G$ is valid. That part of the space S_3, which does not belong to G, is occupied by black bodies. Slowing down takes place at various sorts of nuclei, which fill the domain G in any way however. G, for sake of simplicity, is supposed to consist of several parts, each of which only contains nuclei of one and the same mass. For the phase density of the collisions of neutrons an integral equation is set up. The free term of this integral rquation depends on the boundary conditions and on the distribution of sources. The integral equation here is solved under various assumptions about the coefficients, occurring in this

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On the General Problem in the Theory of Slowing Down Neutrons 20-2-14/60

equation. In case of most of the here given presumptions the integral equation has exactly one solution, which is a Neumann (Neyman) series and which is unique. Finally the special case of the elastic scattering shortly is discussed.

ASSOCIATION: Department for Applied Mathematics of the Mathematical Institute imeni V.A. Steklov of the AN USSR (Otdeleniye prikladnoy matematiki Matematicheskogo instituta im. V.A. Steklova Akademii nauk SSSR)

PRESENTED: August 13, 1957, by M.V. Keldysh, Academician

SUBMITTED: August 8, 1957

AVAILABLE: Library of Congress

Card 2/2

20-118-5-13/59

AUTHOR: Maslennikov. M. V.

TITLE: Miln's Problem With an Arbitrary Indicatrix
(Problema Milna s proizvol'noy indikatrisoy)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 118, Nr 5, pp. 895-898 (USSR)

ABSTRACT: Miln's problem of the propagation of radiation in a plane-parallel scattering and absorbing medium which fills the half space $z > 0$ of the three-dimensional space leads to following integral equation: $\psi(\tau,\mu) = \hat{A}\psi(\tau,\mu) + F(\tau,\mu)$

$\hat{A}f(\tau,\mu) = \int_0^\infty e^{-\rho}\gamma(\tau-\rho\mu)\,d\rho \int q_0(\vec{\Omega}\,\vec{\Omega}')\,f(\tau-\rho\mu,\mu')\,d\vec{\Omega}$

Here τ denotes the optical thickness computed from the limit of the medium;

$\vec{\Omega}$ the unit vector of the propagation direction of the radiation; furthermore applies

$\mu = \vec{\Omega}\vec{k}$, $\mu' = \vec{\Omega}'\vec{k}$ and $\vec{k}$

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here denotes the end point of the axis Oz. $\Psi(\tau,\mu)$ here denotes the phase density of the radiation at the point (τ,μ). The above mentioned equation can be reduced to an integral equation with respect to the function

$$\Psi_0(\tau) = \int_{-1}^{1} \Psi(\tau,\mu)\,d\mu$$

and investigated with the method of Hopf-Wiener (Khopf-Viner). This method can, however, in general not be realized, and therefore the above mentioned equation with an arbitrary indicatrix was not investigated. For this reason, it is expedient to immediately investigate the initially given equation. The hereby made conditions are given. The initially given equation is closely connected with a characteristic equation given here; the following can be proved for it: This characteristic equation admits a nontrivial non negative:

$$\lambda = \pm\lambda_0,\ \lambda_0 \in [0,1)$$

only in the case of two values of the parameter λ. The solutions corresponding to these values are then discussed. Some further conclusions are then given with an almost exclusive application of mathematical formulae.

Miln's Problem With an Arbitrary Indicatrix 20-118-5-13/59

There are 4 references, 0 of which are Soviet.

ASSOCIATION: Otdeleniye prikladnoy matematiki Matematicheskogo instituta im. V. A. Steklova Akademii nauk SSSR (Department for Applied Mathematics of the Mathematical Institute imeni V. A. Steklov AS USSR)

PRESENTED: August 13, 1957, by M. V. Keldysh, Member, Academy of Sciences, USSR

SUBMITTED: August 8, 1957

Card 3/3

SOV/2o-12o-1-14/63

AUTHOR: Maslennikov, M. V.

TITLE: On Wick's Problem (K probleme Vika)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 12o, Nr 1, pp.59 - 62 (USSR)

ABSTRACT: This paper discusses the steady problem of the moderation and diffusion of neutrons which are emitted by a plane source into an infinite homogeneous isotropic medium. This moderator has the nuclear mass M and the parameters of the moderator are assumed not to depend on neutron energy. The thermal motion of the nuclei and their chemical binding are assumed to be negligably small and the scattering of the neutrons on nuclei is elastic and isotropic in the system related to the centre of gravity of the neutron and the nucleus. Some papers concerning this problem are mentioned. In this paper, however, the most important features of the exact solution of Wick's theorem are discussed and an asymptotic formula is derived. The author proceeds from the Fourier (Fur'ye)-Laplace (Laplas)-transformation of the principal equation

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On Wick's Problem

SOV/12o-12o-1-14/63

$$\psi(z, u, \mu) = h\hat{A}\,\psi(z, u, \mu) + \int_0^\infty e^{-Q} S(z - Q\mu, u, \mu)\,dQ.$$

By analyzing the transformed equation it is possible to avoid using the method of catenary fractions. Moreover, the problem is generalized as follows: The author investigates also anisotropic sources and tries to find the asymptotic value of the collision density $\psi(z,u,\mu)$ as a whole (and not only of its momentum $\psi_0(z,u) = 2\pi \int_{-1}^{1} \psi(z,u,\mu)\,d\mu$). The calculations are performed step by step. At the end of this paper the author gives a mathematical theorem. There are 8 references, 1 of which is Soviet.

ASSOCIATION: Otdeleniye prikladnoy matematiki Matematicheskogo instituta im. V. A. Steklova Akademii nauk SSSR
(Department of Applied Mathematics of the Institute of Mathematics imeni V. A. Steklov, AS USSR)

PRESENTED: January 15, 1958, by M. V. Keldysh, Member, Academy of Sciences, USSR

On Dick's Problem

SOV/ 20-120-1-14/63

SUBMITTED: January 9, 1958

1. Neutrons--Diffusion --Applications 2. Neutrons--Masses 3. Mathematics

Card 3/3

S/044/62/000/001/033/061
C111/C222

AUTHOR: Maslennikov, M.V.

TITLE: On the theory of the spherical problem of Miln

PERIODICAL: Referativnyy zhurnal. Matematika, no. 1, 1962, 55, abstract 1 B 261. ("Nekotoryye matem. zadachi neytron. fiz.M., MGU", 1960, 56- 79)

TEXT: The determination of the density of neutrons in a medium can, under some natural physical assumptions, be reduced to the integral equation

$$rB(r) = \Lambda(\varsigma B(\varsigma))_r + \phi(r)$$

where

$$\Lambda(f)_r = \int_a^\infty f(r')Q(r,r_1)B(r_1)dr_1$$

and $Q(r,r_1)$ is a symmetric kernel of a special form and singularity. Using the properties of this kernel, it is possible to show that the non-trivial

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solutions of the corresponding homogeneous equation are continuous. The existence of a non-trivial solution for this equation is proven under additional physical assumptions regarding the probability densities of neutron collisions with the nucleus of the medium. If one takes a solution not identical to ∞ as the non-trivial solution of the inhomogeneous equation, then the necessary and sufficient conditions for the existence of non-trivial solutions for the complete equation are given under the same physical conditions. Some other cases are also considered. For the physical aspects of the questions, see RZh. Fiz., 1961, 4 B 583.

[Abstracter's note : Complete translation.]

Card 2/2

MASLENNIKOV, M.V. (Moskva)

One method of solution of the characteristic equation of the theory of radiative transfer. Zhur. vych. mat. i mat. fiz. 1 no.2:255-266 Mr-Ap '61. (MIRA 14:8)
(Differential equations) (Heat--Radiation and absorption)

MASLENNIKOV, M.V. (Moskva)

One numerical method of the solution of the reactor kinetics equation.
Zhur. vych. mat. i mat. fiz. 1 no.3:470-480 My-Je '61. (MIRA 14:8)
(Integrodifferential equations) (Nuclear reactors)

31114
S/208/61/001/006/013/013
B108/B112

21.1000

AUTHOR: Maslennikov, M. V. (Moscow)

TITLE: On asymptotic lawfulness in the theory of the slowing-down of neutrons

PERIODICAL: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 1, no. 6, 1961, 1136-1139

TEXT: The author studied the time-energy distribution of neutrons (time t, lethargy u) in a homogeneous moderator whose nuclei have the mass M (in neutron-mass units). It is assumed that the macroscopic cross section of the interaction of a neutron with a nucleus of the moderator be $\sigma_t(u)$ and that the scattering cross section be $\sigma_s(u)$. h(u) is the quotient $\sigma_s(u)/\sigma_t(u)$. The neutron collision density is

$$\psi(u,t) = \hat{A}\psi(u,t) + F(u,t), \quad (u,t)\in D, \qquad (1),$$

$$\hat{A}f(u,t) = \alpha v(u)\int_0^t e^{-(t-\tau)\nu(u)}\,d\tau \int_{\Delta(u)}^{u} h(u')\,e^{-(u-u')}f(u',\tau)\,du'. \qquad (2),$$

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On asymptotic lawfulness in the ...

where $\nu(u) = v(u)\sigma_t(u)$, $v(u)$ = magnitude of neutron velocity, $\alpha = (M+1)^2/4M$, $\Delta(u) = 0$ for $M = 1$; $\Delta(u) = \max\{0, u - q\}$ for $M > 1$; $q = -\ln(1 - 1/\alpha)$. The free term $F(u,t)$ in Eq. (1) is given by the initial collision density distribution and source density $S(u,t)$. Eq. (1) is considered in a class V of functions $f(u,t)$ for which $\operatorname{vrai\,sup}_{(u,t)\,P} |f(u,t)| < \infty$ for every limited part P of the quadrant $D = \{(u,t) \mid u > 0,\ t > 0\}$. Specially, the case $\chi(u,t) = e^{t\nu(u)}\psi(u,t)$ is investigated. Under the postulate that the Laplace transform

$$\bar{\chi}(u,s) = s^{-[\alpha k(u)+1]}(N(u) + \varepsilon(u,s)), \quad 0 < N(u) < \infty, \quad \lim_{s \to +0} \varepsilon(u,s) = 0. \qquad (A)$$

of $\chi(u,t)$ be finite at $s > 0$ for almost every $u > 0$ it is possible to apply Tauber's theorem of the theory of Laplace transformations to the function $\chi(u,t)$ and, consequently, also to $\psi(u,t)$. The result is

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On asymptotic lawfulness in the ...

$$\psi(u,t)=\frac{\gamma^{\alpha k(u)}e^{-t\nu(u)}}{\Gamma(\alpha k(u)+1)}\,[N(u)+\eta(u,t)],\qquad \lim_{t\to\infty}\eta(u,t)=0. \tag{B}$$

for almost every $(u,t)\in D$. $0<N(u)<\infty$. $k(u)$ is defined, as being

$$-h(u)\left[\frac{d}{du}\ln\nu(u)\right]^{-1}.$$

There are 8 references: 2 Soviet and 6 non-Soviet. The three most recent references to English-language publications read as follows: O Olsson. Arkiv Fys., 1956, 10, 129-144; K. E. Eriksson. Arkiv. Fys., 1959, 16, 1-14; N. Svartholm. Chalmers tekn. högskol. handl., 1955, no. 164.

SUBMITTED: May 23, 1961

X

MASLENNIKOV, M.V. (Moskva)

Uniqueness of the solution to the inverse problem of the asymptotic theory of radiation transport. Zhur.vych.mat.i mat fiz. 2 no.6:1044-1053 N-D '62. (MIRA 15:11)
(Radiation)

S/020/62/145/005/005/020
B112/B104

16.4500

AUTHOR: Maslennikov, M. V.

TITLE: A certain converse problem in the theory of radiation passage through matter

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 145, no. 5, 1962, 1019-1021

/B

TEXT: The author investigates the problem of finding the scattering indicatrix $g(x)$ for a given function $\varphi(\mu)$ which satisfies the equation

$$(1 + \lambda\mu)\varphi(\mu) = \int_{-1}^{1} g(\mu,\mu')\varphi(\mu')d\mu', \text{ where}$$

$$g(\mu,\mu') = \int_{0}^{2\pi} g(\mu\mu' + \sqrt{1-\mu^2}\sqrt{1-\mu'^2}\cos\varphi)d\varphi.$$ Under certain conditions concerning the expansion $\varphi(\mu) = \sum_{k=0}^{\infty} \varphi_k P_k(\mu)$, the coefficients g_k of the expansion $g(x) = \sum_{s=0}^{\infty} (2s+1)P_s(x)/4\pi$ are found to be

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A certain converse problem in ...

S/020/62/145/005/005/020
B112/B104

$g_k = 1 + \lambda_0(g)\left[k\varphi_{k-1}/(2k-1)\varphi_k + (k+1)\varphi_{k+1}/(2k+3)\varphi_k\right]$, where

$\lambda_0(g) = 2\alpha/(\alpha^2+1)$, $\alpha = -\lim_{k\to\infty}(\varphi_{k-1}/\varphi_k)$.

PRESENTED: March 29, 1962, by M. V. Keldysh, Academician

SUBMITTED: March 27, 1962

Card 2/2

S/0208/64/004/001/0023/0034

ACCESSION NR: AP4012001

AUTHORS: Maslennikov, M. V. (Moscow); Sushkevich, T. A. (Moscow)

TITLE: Asymptotic properties of the solution of the characteristic equation in the theory of radiation transfer in strongly absorbing media

SOURCE: Zhurnal vy*chisl. matem. i matem. fiz., v. 4, no. 1, 1964, 23-34

TOPIC TAGS: asymptotic property, characteristic equation, radiation transfer, absorbing medium, integral equation, nonnegative solution, eigenfunction, eigenvalue

ABSTRACT: The authors study the integral equation

$$M(\lambda)(1+\lambda\mu)\varphi_\lambda(\mu) = \hat{g}\varphi_\lambda(\mu), \quad (1)$$

where μ is an independent variable, $\mu \in [-1, 1]$, $\varphi_\lambda(\mu)$ is an unknown function, λ is a parameter,

$$\lambda \in [0, 1), \quad gf(\mu) = \int_{-1}^{1} g(\mu, \mu') f(\mu')\, d\mu', \quad g(\mu, \mu')$$

is a kernel defined later. This is the characteristic equation arising in asymp-

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ACCESSION NR: AP4012001

totic theory of radiation passage through thick layers of matter. Its nonnegative solutions, corresponding to the values of λ for which $M(\lambda) = 1$, uniquely determine the structure of the principal term of the spatial-angular distribution of radiation in the depth of a thick layer. For $\lambda \in [0,1]$ there exists only one nonnegative eigenfunction $\varphi_\lambda(\mu)$ of equation (1): it continuously depends on μ, $\mu \in [-1,1]$, and corresponds to the simple positive eigenvalue $M(\lambda)$. The authors establish the asymptotic behavior of the eigenvalue $M(\lambda)$ and the eigenfunctions $\varphi_\lambda(\mu)$ for values of λ close to unity. This type of problem arises in the theory of radiation passage through highly absorbent matter. Orig. art. has: 62 formulas.

ASSOCIATION: none

SUBMITTED: 190ct62 DATE ACQ: 14Feb64 ENCL: 00

SUB CODE: MM NO REF SOV: 003 OTHER: 001

Card 2/2

AUTHORS: Maslennikov, M. V.; Sigov, Yu. S.

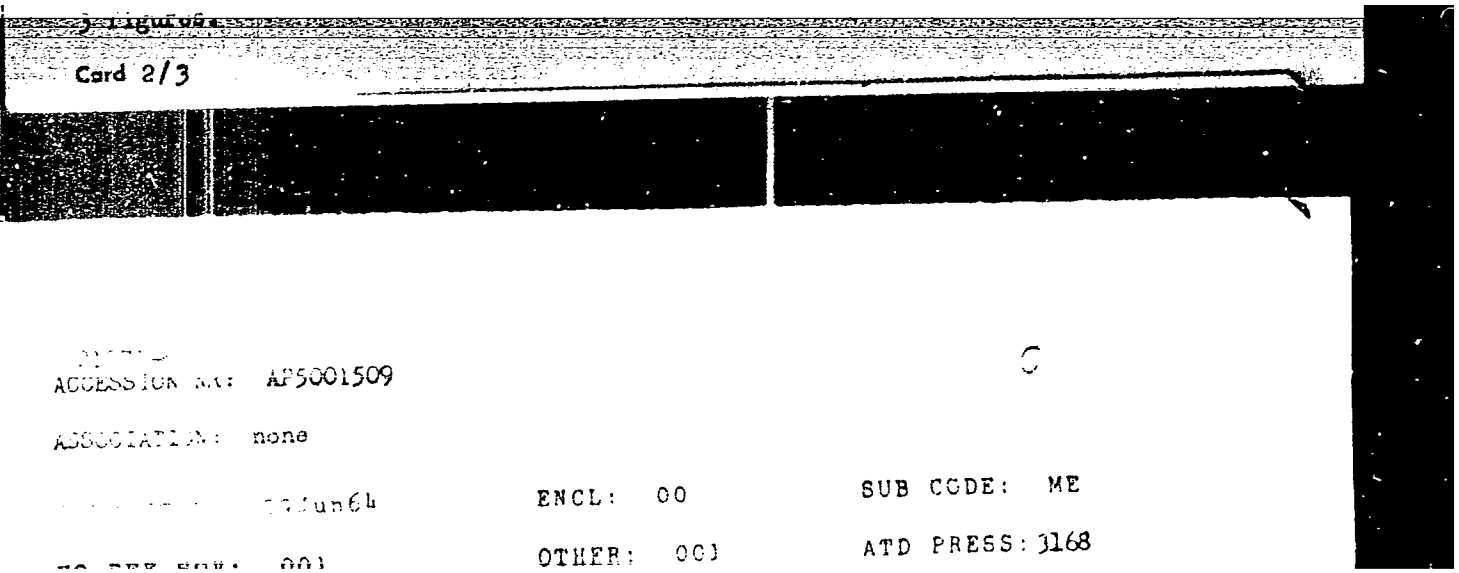
TITLE: Discrete model of matter in a problem of rarefied plasma flow around a body.

SOURCE: AN SSSR. Doklady, v. 159, no. 5, 1964, 1013-1016

TOPIC TAGS: rarefied plasma flow, electrostatic field, electron density, ion density, Debye length, Poisson equation

ABSTRACT: A discrete model method was used to calculate the self-consistent field around an axisymmetric body moving in a neutral, rarefied

with initial conditions $r_k(0) = r_k^o$, $r_k(C) = v$, $k = 1,2,....N$. The ion density



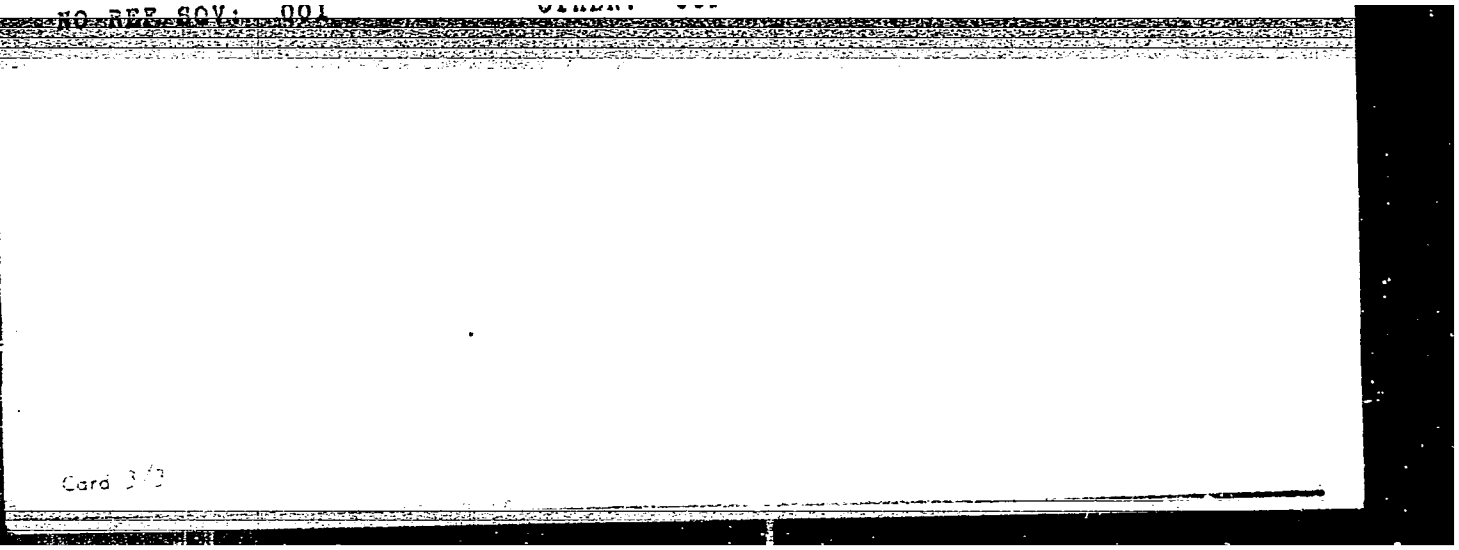
Card 2/3

ACCESSION NR: AP5001509

ASSOCIATION: none

ENCL: 00 SUB CODE: ME

OTHER: 001 ATD PRESS: 3168



L 2888-66 EWT(1)/ETC/EPF(n)-2/EWG(m)/FCC/EPA(w)-2/EWA(h) IJP(c) AT/GS/GW

ACCESSION NR: AT5023596 UR/0000/65/000/000/0270/0271

AUTHORS: Maslennikov, M. V.; Sigov, Yu. S. 44,55

TITLE: Discrete model of matter in the problem of the interaction between rapidly moying bodies and a rarefied plasma (Thesis)

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 270-271

TOPIC TAGS: rarefied plasma, moving plasma, electric potential

ABSTRACT: The steady state picture of a flux of rarefied plasma flowing around an axially symmetric body is considered. It is assumed that the thermal velocities of the electrons and ions are respectively much greater than and much less than the macroscopic velocity of the flux relative to the body, that the electron density at a point is uniquely determined by the self-consistent electrostatic potential and ion density at the same point, that there are no ions moving in finite trajectories in the vicinity of the body, and that ions incident on the surface of the body are absorbed without changing the electrostatic potential on the surface of the body. The discrete model of the plasma is used, and its

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L 2888-66

ACCESSION NR: AT5023596

plasma particle behavior is described by the equations of classical mechanics. Computations of the self-consistent potential are carried out for the case of a spherical body whose dimensions are of the order of the Debye radius of the plasma. Orig. art. has: 4 equations.

ASSOCIATION: none

SUBMITTED: 02Sep65 ENCL: 00 SUB CODE: ME

NO REF SOV: 000 OTHER: 000

Card 2/2

L 02902-67 EWT(1)
ACC NR: AP6019521 (A,N) SOURCE CODE: UR/0020/66/168/004/0747/0750

AUTHOR: Maslennikov, M. V.

ORG: none

TITLE: The characteristic equation of the theory of radiation transfer

SOURCE: AN SSSR. Doklady, v. 168, no. 4, 1966, 747-750

TOPIC TAGS: radiation, ~~energy~~, asymptotic stability, integral equation

ABSTRACT: The asymptotics of the spatial-angular distribution of radiation inside a thick plane layer of a substance is determined by a study of the equation

$$(1 + k\vec{\omega}\mathbf{n})\,\Phi(\vec{\omega}) = \hat{g}\Phi(\vec{\omega}). \quad (1)$$

where k is a parameter, $\vec{\omega}$ is a vector passing through a unit sphere Ω of Euclidean three-space, n is a fixed vector of Ω; $\hat{g}$ is an integral operator:

$$\hat{g}f(\vec{\omega}) = \int_{\Omega} g(\vec{\omega}\vec{\omega}')\, f(\vec{\omega}')\, d\vec{\omega}'.$$

The behavior of the parameter k is studied to determine for which values of this parameter non-trivial solutions of (1) exist, what form they may take, and how the solutions of the nonhomogeneous equation corresponding to (1) depend on k. Presented by

UDC: 517.947.32

Card 1/2

L 08882-67
ACC NR: AP6019521

Academician M. V. Keldysh on 16 September 1965. Orig. art. has: 4 formulas.

SUB CODE: 12/ SUBM DATE: 14Sep65/ ORIG REF: 005/ OTH REF: 001

Card 2/2

DUBASOV, B.M.; MASLENNIKOV, M.Ye.; PRETER, I.Kh., tekhn. red.

[Twenty years of Soviet Lithuania; statistical collection] 20 let Sovetskoi Litvy; statisticheskii sbornik. Vil'nius, Gosstatizdat, Litovskoe otd-nie, 1960. 351 p. (MIRA 15:3)

1. Lithuanian S.S.R. Statistikos valdyba. 2. Nachal'nik TSentral'nogo statisticheskogo upravleniya Litovskoy S.S.R. (for Dubasov).

(Lithuania—Statistics)

MASLENNIKOV, N. A.

YAKOVLEV, S.V., kandidat tekhnicheskikh nauk; KARELIN, Ya.A.; MASLENNIKOV, N.A.; SHTEKKER, G.A., inzhener, redaktor; GOLUBENKOVA, L.A., redaktor; DAKHNOV, V.S., tekhnicheskiy redaktor

[Auxiliary installations in sewage purification stations] Vspomogatel'nye ustroistva ochistnykh kanalizatsionnykh stantsii. Pod red. S.V.IAkovleva. Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1955. 176 p. (MLRA 8:7)
(Sewage--Purification)

BEZENOV, V.V., kand.tekhn.nauk; MASLENNIKOV, N.A., kand.tekhn.nauk;
POSTNIKOV, I.S., kand.tekhn.nauk.

Mechanical spray-jet-type aerator. Gor. khoz. Mosk. 32 no.9:26-27
S '58. (MIRA 11:9)
(Sewage--Purification)

MALYUSOVA, M.M.; MASLENNIKOV, N.A.; KHOVANSKIY, G.S.

Growth rate of methane-producing bacteria. Vod. i san.tekh. no.4:36-38 Ap '59. (MIRA 12:5)
(Sewage--Bacteriology) (Methane)

MASLENNIKOV, N.A.; ZHDANOVA, T.M.

Concentration of digested sludge by elutration and conditions for using this method. Sbor. nauch. rab. AKKH no.6:171-198 '61. (MIRA 15:3)

(Sewage--Purification)

MASLENNIKOV, N.A.; ZHDANOVA, T.M.

Concentration of excess activated sludge by electrolytic flotation. Sbor. nauch. rab. AKKH no.6:230-253 '61. (MIRA 15:3)
(Sewage--Purification)

MASLENNIKOV, N.A.

Fluid disinfection by electrolysis using magnetite electrodes.
Nauch. trudy AKKH no.20:97-111 '63. (MIRA 18:12)

MASLENNIKOV, N.A.

YAKOVLEV, S.V., dotsent, kandidat tekhnicheskikh nauk; MASLENNIKOV, N.A., kandidat tekhnicheskikh nauk.

Investigation of resistance to flow in glass pipes. Trudy Stroi. inst. Mosgorispolkoma no.4:104-115 '53. (MLRA 8:3)
(Fluid dynamics) (Pipe, Glass)

MASLENNIKOV, N.A.

Technical information at the Gor'kii Milling Machine Factory. Opyt rab. po tekhn. inform. i prop. no.4:16-17 '63. (MIRA 17:1)

1. Nachal'nik otdela tekhnicheskoy informatsii Gor'kovskogo zavoda frezernykh stankov.

MASLENNIKOV, N. A.

"Deep Stamping Drawing by Friction of Thin-Sheet Metal." Cand Tech Sci, Minsk Polytechnic Inst imeni I. V. Stalin, Min Higher Education USSR, Minsk, 1954. (KL, No 5, Jan 55)

Survey of Scientific and Technical Disertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

MASLENNIKOV, N. A.

6301. Maslennikov, N. A. Glubokaya shtampovka - vytyazhka treniyem tonkolistovogo metalla. Minsk, 1954. 18s. 21sm. (M-vo vyssh. obrazovaniya SSSR. Miniskiy politekhn. in-t im. i. v. Stalina). 100 ekz. B. Ts. 6[54-58204]

SO: Knizhamya Letopis' 1, 1955

AID P - 5086

Subject : USSR/Engineering

Card 1/2 Pub. 128 - 15/26

Author : Maslennikov, N. A., Kand. Tech. Sci.

Title : Punchless deep drawing of thin-sheet metal by using friction forces.

Periodical : Vest. mash., 5, 59-63, My 1956

Abstract : The author considers that the main defects of the present method of deep drawing of thin-sheet metals consist in using many successive operations which cause an excessive use of intermediate dies, and an additional heat treatments. For eliminating these unfavorable conditions the author tested a new process by using the forces of friction. This method reduces the number of intermediate operations and improves the process of drawing. The dies recommended for stamping and drawing by means of friction are of simple designs and can be

AID P - 5086

Vest. mash., 5, 59-63, My 1956

Card 2/2 Pub. 128 - 15/26

used on any press. 4 illustrations, 2 diagrams.

Institution : None

Submitted : No date

S/123/62/000/019/009/010
A006/A101

AUTHOR: Maslennikov, N. A.

TITLE: Deep extrusion of thin sheet metals by friction with the use of a punch

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 19, 1962, 16, abstract 19V69 ("Tr. Khar'kovsk. aviats. in-ta", 1960, no. 20, 29 - 136)

TEXT: (See also Ref. 19V68) Deep extrusion without a punch of thin-sheet metals by friction is based on changes in the force system of conventional extrusion by transforming the reactive friction forces in the clamp-blank plane into active positive forces. This process makes it possible to obtain for Al an extrusion coefficient as high as 6.5 - 7 instead of 2 - 2.5 as in conventional extrusion. The quality of products in punch-less extrusion depends on the kind of rubber, the geometry of the elastic friction element, and the press force. A closed die is recommended with an elastic friction element and a punch facilitating the operation of the elastic-friction element, which can be used for operation with a rubber and metal elastic-friction element. It is recommended to

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Deep extrusion of thin sheet metals by...

S/123/62/000/019/009/010
A006/A101

manufacture the elastic friction element of rubber having increased hardness, and the required friction properties, wear resistance and residual deformation magnitude. The optimum thickness of the rubber rings is 5 - 7 mm. Formulae are given to determine the internal diameter, specific pressure on the rubber (optimum pressure is 7- 9 kg/mm^2), ultimate punch pressure and the number of reductions. The gaps between the punch and the die are selected as in conventional extrusion without clamping. There are 6 figures and 1 reference.

S. Shirman

[Abstracter's note: Complete translation]

Card 2/2

MASLENNIKOV, N. D.

Dissertation: "Melting Method for Acid Electrical Steel for Shaped Castings With High and Stable Mechanical Properties." Cand Tech Sci, Khar'kov Polytechnic Institute, Khar'kov, 1953. (Referativnyy Zhurnal-Khimiya, No 11, Moscow, Jun 54)

SO: SUM 318, 23 Dec 1954

1.1500

31867
S/123/61/000/024/005/016
A004/A101

AUTHORS: Maslennikov, N.D., Voronina, V.A.

TITLE: On the problem of intergranular fractures in castings from alloyed steel (as a discussion)

PERIODICAL: Referativnyy zhurnal. Mashinostroyeniye, no. 24, 1961, 3-4, abstract 24G31 ("Sb. tr. Ukr. n.-i. in-t metallov", 1961, no. 7, 258 - 267)

TEXT: During the freezing and cooling of castings 90 x 90 and 110 x 110 mm in cross section, temperature conditions are produced in their peripheral zones which are similar to the temperature conditions in forged blanks during overheating, as a result of which intergranular fractures originate. In castings 70 x70 mm in cross section temperature conditions favoring the origination of intergranular fractures were not observed. Apparently, the temperature range from the freezing termination to 1,400°C is the most dangerous for creating conditions favoring the formation of intergranular fractures in the peripheral zones of castings, in respect to both temperature level and the time during which these zones are subjected to them. If the cross-section dimensions of the castings increase, the time, during which the peripheral zones remain in the dangerous

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temperature range, grows. The temperature conditions of the cooling of castings 90 x 90 mm and more in cross section in sand molds can be the cause of the origination of intergranular fractures in castings from alloyed steels disposed to overheating. A further investigation of this problem is essential, while special experiments have to be conducted.

[Abstracter's note: Complete translation]

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MASLENNIKOV, N.D., kand.tekhn.nauk; MYSHONKOV, N.I., kand.tekhn.nauk; ALEKSEYEV, B.I., kand.tekhn.nauk; SHUMOV, Ye.N., inzh.; MASLOV, A.A., inzh.; YANKELEVICH, V.M., inzh.; IZYUMSKIY, F.P., inzh.

Investigating gas saturation of cast iron smelted in a cupola furnace. Mashinostroenie no.6:33-36 N-D '62. (MIRA 16:2)
(Cast iron--Defects)

S/276/63/000/001/021/028
A006/A101

AUTHORS: Maslennikov, N. D., Voronina, V. A.

TITLE: Investigation of stony fractures in alloyed steel castings

PERIODICAL: Referativnyy zhurnal, Tekhnologiya mashinostroyeniya, no. 1, 1963, 4, abstract 1G28 ("Sb. tr. Ukr. n.-i. in-t metallov", 1962, no. 8, 211 - 232)

TEXT: In alloyed steel castings whose composition approaches that of forged steels which are prone to stable overheating, processes of stony fracture formation take place during natural cooling in sand molds. They are analogous to processes which take place in forged steels during overheating. The peripheral zones of the castings where overheating conditions are developed, are, in particular, affected by stony fractures. Thermal conditions, developed in the peripheral zones of castings of 90 x 90 mm cross section, produced from the investigated steels, are sufficient to form stony fractures, but not sufficient for the course of recrystallization processes of austenite grains. Therefore the nature of stony fractures in this steel reflects the type of dendrite structure: in differently oriented dendrites the fractures may occur only with dif-

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ferently oriented grains, and in oriented dendrites only with oriented grains. The metal in the zones of castings affected by stony fractures, shows lower indices of cross-sectional reduction (by 30% on the average) and toughness (by 20%). Therefore stony fractures are defects in the castings. Homogenization corrects the stony fractures with differently oriented grains in small and large section castings, and does not fully correct stony fractures with oriented grains.

[Abstracter's note: Complete translation]