Application of polymer films for separating liquids in uniform mixtures. 

(MIRA 1847)
Use of polymer films for separating liquid homogeneous mixtures

ABSTRACT: This article presents a review of the selective permeability of polymeric films for liquids and gases and some of the results that have been achieved to date. In the Soviet Union a new method has been developed which does not use high pressure on the liquid phase and a vacuum on the gas phase to separate a mixture of acetone-dichloroethane and aqueous solutions of acetone, ammonia and phenol, and also to separate water-alcohol solutions on cellulose films. The authors have studied the separation of a number of azeotropic and near-boiling mixtures on various films. It is advantageous to use heat-stable films in this new method since the rate of permeability depends substantially on the temperature. For example, polypropylene films, not inferior to polyethylene films in selectivity of separation, can operate at considerably higher temperatures. The effect of temperature on the rate and selectivity of separation is presented. Conditions under which the industrial advantage in using the film separation method are cited. For instance, there is still no possibility for predicting the rate of permeability and the selectivity.
Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 8, p 97 (USSR)

AUTHORS: Kasatkin, A.G., Kafarov, V.V., Panfilov, M.N.

TITLE: Investigating the Mixing Process in a Gas-liquid System When the Mixing is Done With Mechanical Mixers (Issledovaniye protsessa peremeshivaniya mekhanicheskimi meshalkami v sisteme gaz-zhidkost')


ABSTRACT: An analog study is made of the operation of mechanical mixers, and 14 different types of mixer are subjected to tests. The power characteristic of the mixers is represented as a relationship between two ratios: 1) That of the energy required for mixing in the case of the gas-liquid system (N_g) to the energy required for mixing in the case of the plain liquid (N_0) without the gas, and 2) the ratio V_g/nd^3 (wherein V_g is the quantity of gas fed into the mixer and nd^3 is the mixer's mixture output per unit volume. The authors evolve empirical equations for calculation of the energy required for mixing in
Investigating the Mixing Process in a Gas–liquid System (cont.)

the case of water-air systems and systems of similar types. For the mixers tested, a determination is made of the limiting values of the $V_g/\pi d^3$ ratio, beyond which values the mixers start to choke. An oxygen-absorption process is used to simulate the diffusion phenomena associated with the mixing action in a gas-liquid system. The authors propose a method for evaluating the efficiency of mixers over a broad range of operating conditions, and a comparative evaluation is made of the efficiency of the mixers tested.

Bibliography: 14 references.

Ye. M. Minskiy
KASATKIN, A.G.; KAFAROV, V.V.; PANFILOV, M.N.;

Study of the mixing process in mechanical mixers in a gas-liquid system. Trudy MIHTI no. 24:413-427 '57. (MIRA 11:6)
(Mixing) (Gases) (Water)
PANFILOV, Mikhail Panfilovich; KURIYANOVA, O.V., red.


(MIRA 18:4)

l. Direktor Leningradskogo optiko-mekhanicheskogo ob"yadineniya (for Panfilov).
DANILOV, Konstantin Borisovich; PANFILOV, N., red.; PEREGODOVA, M., tekhn. red.

(Motion-picture projectors)

1. Zaveduyushchiy redaktsiyey literatury po fotografii i kinotehnike izdatel'vta "Iskusstvo". (Bibliography--Photography)
PANFILOV, N., mayor

(MIRA 17:12)
"Principles of the economic analysis of the work of enterprises" by M. Rubinov. Reviewed by N. Panfilov, E. Smirnova, L. Khvedchenia. Fin. SSSR 37 no. 4:93-94 Apr '63. (MIRA 16:4)


(Industrial management) (Auditing and inspection) (Rubinov, M.)
PANFILOV, N.

Motion pictures of tomorrow. IUn. teh. 7 no.10:21-24 0 1'62.  (MIRA 15:10)

(Motion pictures—Congresses)
PANFILOV, N.

Shale ash as an aggregate in asphalt concrete. Zhil.-kom. khos. 4 no. 5; 16-18 '54. (MLRA 7:9)

1. Upravlyayushchiy Saratovskim dorozhnostroitelnym trestom. (Concrete)
BOLOTNIKOV, I. [author]; PANFILOV, N. [reviewer] (Zagorsk, Moskovska oblast').

"Loud-speakers used in sound motion pictures." I. Bolotnikov. Reviewed by N. Panfilov. Kinomekhanik no.7/45 Jl '53. (Loud-speakers)
Electromagnetic calculation of d.c. machines with consideration of cooling of the windings. *Elektrichestvo* no. 5: 50-53 My '60. (MIRA 13:9)

l. Vsesoyuznyy nauchno-issledovatel'skiy institut elektromekhaniki.

*(Electric machinery)*
Qualitative evaluation of the current-voltage characteristic of the brush contact. Elektritchesvo no.6:65-87 Je '58. (MIRA 11:6) (Brushes, Electric)
PANFILOV, N. A., in ch.

Maximum efficiency of d.c. machines. Vest. elektroprom. 33
no. 6:65-67 Jo '62. 

(Electric machinery--Direct current)

"Sailma" type standard fiberglass motorboat, Sudostroenie 31
no.452-53 4p 65. (MIRA 18:8)
BREYEV, A.M., kand.tekhn.nauk; SOKOLOV, B.P., inzh.; KRIVTSOV, Yu.V.,
kand.tekhn.nauk; PANFILOV, N.A., inzh.

"Ship design of plastic materials" by M.G.Avrukha. Reviewed
by A.M.Breev, P.B.Sokolov, Yu.V.Krivtsov, N.A.Panfilov.
Sudoostroenie 26 no.7:62-84 JL '62.
(Shipbuilding) (Plastics) (Avrukha, M.G.)
PANFILOV, N.A., inzh.

Heating-up of the armature winding of P-series machines with power ratings of 0.2 to 200 kw. Vest. elektroprom. 32 no.6:31-35 Je '61. (MIRA 16:7)

(Electric machinery)
PANKOV, L.V., inzh.; PANFILOV, N.A., inzh.

Small net fishing boat with hull made of glass-reinforced plastics. Sudostroenie 29 no.242-44 F '63. (MIRA 16:2) (Fiberglass boats) (Fishing boats)
PANFILOV, N.A., inzh.; SAFRIK, N.I., inzh.

Determining the stable temperature excess of armature winding in an enclosed d.c. machine. Vest. elektromash. 31 no. 6: 52-55 Je '60, (MIRA 13:7)

(Electric motors, Direct current)
Effect of ambient temperature and altitude on the ratings of d.c. machines. Elektriches'tvo no.3; 30-33 Mr '60. (WIRA 13:6) (Electric machinery)
AUTHOR: Panfilov, N.A. (Engineer) 

TITLE: On the Thermal Design of Salient-pole D.C. Machines 
(0 teplovom raschete yavnoplyusnykh mashin postoyannov 
toka)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, Nr 8, pp 54-58 (USSR)

ABSTRACT: The usual method of thermal design of electrical machines 
with the help of thermal parameters is based on the 
principle of super-position. The method described here 
results from analyses of equivalent thermal circuits. An 
expression is given for the mean temperature-rise of a 
winding on a pole. The corresponding expression for the 
armature winding includes a further term to allow for 
heating due to loss in the steel. The validity of these 
two equations can easily be demonstrated by the method of 
equivalent thermal circuits. Expressions are written for 
the temperature-rises of different parts of the windings 
of a salient-pole d.c. machine. In order to make the 
calculations, it is necessary to know the thermal 
conductivities, and methods of obtaining these are 
explained. Winding temperature-rise is plotted as a 
function of armature copper loss in Fig 2. The way in
On the Thermal Design of Salient-pole D.C. Machines

which this graph is used for determining the thermal conductivity is explained. It is concluded that the mean temperature-rise of a winding on the main pole or the interpole may be considered as comprising, firstly, the mean temperature rise of the internal air relative to the surrounding medium, and secondly, the mean temperature rise of the winding relative to the internal air. The mean temperature rise of the armature winding may be considered as comprising a corresponding first component, with the temperature rise of the armature winding due to losses in the armature steel as a second component and losses in the armature copper as the third. Each of the temperature-rise components is inversely proportional to the thermal conductivity of that part of the machine. Thermal conductivities clarify the thermal processes in a machine better than calculations of conductor temperature-rise in terms of armature copper loss in the customary manner. The method of thermal design of d.c. machines with the help of thermal conductivities can be applied in the following cases: a series of machines with modifications;
On the Thermal Design of Salient-pole D.C. Machines

particular types of machines; development of particular parts of machines and the cooling system; in revealing design and manufacturing defects that impair heat-transfer in machines. An appendix includes numerical worked examples.

There are 2 figures and 3 Soviet references.

SUBMITTED: November 22, 1957

1. Generators (D.C)--Design  2. Generators--Temperature factors

Card 3/3
AUTHOR:     Panfilov, N.A., Engineer.

TITLE:     The use of Aluminium in d.c. Machines for General Industrial use.

PERIODICAL:     Vestnik elektropromyshlennosti 1959, Nr 8 pp 13-18 (USSR)

ABSTRACT:     One way of using aluminium windings in d.c. machines would be to use more heat-resistant insulation without altering the conductor and other machine dimensions or the output. This is the first case considered, and calculations are made of the losses and temperature-rises in the field and armature windings. Temperature rises in the armatures of protected-type machines, series P, are plotted in Fig 2. When the copper is replaced by aluminium, the losses in the shunt field windings increase considerably, so that the air temperature inside the machine is higher and the armature temperature-rise curves are all displaced upwards, as shown in Fig 3. Expression (12) is derived
The use of Aluminium in d.c. Machines for General Industrial use.

for the temperature rise of the shunt field winding of a general-purpose d.c. machine with aluminium windings. The temperature rises in the interpole and series field windings are not nearly so high. It is concluded from the equations that are derived that if aluminium is used instead of copper and the machine output is unaltered, then the effective temperature differential of the windings is more than doubled. For example, if machines of Series P were made with aluminium windings, the temperature rise of the armature windings would be increased by 50 to 60°C for frame sizes 1-3 by 60 to 70°C for frame sizes 4-6 and by 70 to 80°C for frame sizes 7-11. Thus machines of frame size 1-3 would need class H insulation and even this would not suffice for the larger frame sizes. Much the same is true of the shunt field windings. It is concluded that it is impracticable to design machines in this way. The next case is then considered. Here the output is reduced to give an acceptable temperature rise when aluminium windings are used, the class of insulation and the machine dimensions being unaltered. It is shown that the output of the machine with aluminium windings will
The use of Aluminium in d.c. Machines for General Industrial use.

range from 0.65 to 0.75 of that of the corresponding machine with copper windings: but even in this case the shunt field winding will be overheated because of the increased losses in it. Calculations have shown that in the series F machines, even if the output is reduced by the amount stated above, the shunt field winding would still need insulation of one or two classes higher than when copper is used. Various methods of reducing the losses in aluminium shunt field windings are considered. In the first place, the air gap may be shortened, so reducing the amp-turns required on the shunt field winding. Further improvement is secured by increasing the pole core diameter and using rectangular enameled instead of circular conductors. The relationship between the winding space-factor and the dimensions of rectangular conductors is considered with reference to Fig 4 and it is stated that the use of enameled strip conductors permits of considerable improvement in the space-factor. Further improvement can be secured by winding the coils directly on the poles.
The use of Aluminium in d.c. Machines for General Industrial use.

It is noted that between two-thirds and three-quarters of the total weight of copper in d.c. machines is in the pole winding. Accordingly the conclusion is that these windings should be of aluminium, retaining copper for the armature windings, particularly as this obviates the difficulty of connecting aluminium armature windings to the commutator. The output and efficiency of the machine then remains unaltered and the economy of copper is 65 to 75%. For this suggestion to be adopted Soviet industry must develop the production of aluminium strip insulated with enamel. In general, the pole section will need to be increased only a little or not at all. There are 4 figures and 3 references, 2 of which are Soviet and 1 German.

SUBMITTED: February 20, 1959.

AUTHOR: Panfilov, N.A. (Engineer)

TITLE: Selection of the Air Gap Length under the Main Poles of an Enclosed Type Direct Current Motor (Vybor vozдушного zazora pod glavnymi polyusami dvigateley postoyannogo toka zakrytogo ispolneniya)

PERIODICAL: Vestnik Elektropromyshlennosti, 1959, Nr 4, pp 31-33 (USSR)

ABSTRACT: In high-speed enclosed type direct current motors the optimum magnetic flux (defined as that which ensures maximum output as limited by temperature rise of the winding) is usually small, and this restricts the range of speed control. The range of speed control may be extended for a given optimum flux value by lengthening the air gap and the m.m.f. of the field winding. However, this increases the heat losses in the machine and so reduces the output somewhat. This article considers the selection of length of air gap to provide the required amount of speed regulation combined with maximum output. The analysis uses the method of thermal calculations using thermal conductivities. It has been found in practice that alteration of the air gap under the main poles has little influence on the thermal conductivity of the machine. Expression (1) is then given for the permissible
Selection of the Air Gap Length Under the Main Poles of an Enclosed Type Direct Current Motor

Armature copper losses and from this is derived the expression (5) for the optimum flux in the machines. The magnetomotive force of the shunt field winding is then determined. The shunt field losses are a very small part of the total heating losses of the machine and the thermal conductivity of the air inside the machine is relatively great and, therefore, increase in the m.m.f. of the shunt field winding can be used to increase the limits of speed regulation without greatly affecting the heating of the armature windings or of the interpoles. Therefore, if with a given value of air gap the magnitude of the optimum magnetic flux is so small that the required degree of speed regulation cannot be achieved by field weakening then it is necessary to increase the m.m.f. so far as is permitted by the rated temperature rise of the field winding and then select a value of flux and corresponding length of air gap so as to achieve maximum output. The extent to which the m.m.f. of the field winding can be increased is then evaluated using equation (6) taken from the author's previous article in Vestnik Elektropromyshlennosti, 1956, Nr 8. This formula gives the m.m.f.
Selection of the Air Gap Length Under the Main Poles of an Enclosed Type Direct Current Motor

corresponding to the permissible temperature rise of the shunt field winding. Calculation of the air gap length is then considered and formula (10) is given. However, this formula is rather cumbersome and it is simpler to calculate the gap length by the method of successive approximations using equation (9). It is concluded that the maximum output of a totally enclosed machine as limited by temperature rise can only be obtained provided that the magnetic flux is at its best value and the values of gap length and magnetic flux should be selected with this in mind. The article describes a procedure for calculating the gap length and the m.m.f. in such a way as to obtain the optimum flux. The usual methods of determining the gap lengths are not applicable to a totally enclosed d.c. machine. Two appendices give test results
Selection of the Air Gap Length Under the Main Poles of an Enclosed Type Direct Current Motor

on a motor and a numerical example of air gap length calculation.
There are 3 figures and 1 Soviet reference.

SUBMITTED: September 10, 1958

Card 4/4
PANFILOV, N.A., inzh.

Thermal design of d.c. salient-pole machines. Vest. elektroprom.
29 no. 8:54-58 46 '58. (MIRA 11:8)

(Electric machinery--Direct current)
Concerning the Problem of the Qualitative Evaluation of the Volt-Ampere-Characteristic of a Brush Contact (K voprosu o kachestvennoy otsenke volt-ampernoy kharakteristiki shchetochnogo kontakta)

PerIODICAL: Elektrichesostvo, 1956, Ns 6, pp. 85-87 (USSR)

ABSTRACT: This is a comment on the article by O. G. Vegner in Elektrichesostvo, 1956, Ns 7; This problem was dealt with in a number of papers (Refs 1 to 3). The basic theory of these papers consists in the assumption that in machines with additional poles the volt-ampere-characteristic of the brush contact of the type $U = const$ can guarantee a favorable commutation, which, however, is wrong. For the purpose of proving this opinion the commutation process in a nonlinear volt-ampere-characteristic of the brush contact is investigated here. The following was found: 1) For guaranteeing sparkless commutation the gradient of electric-potential $U_{down} - U_{up}$ plays the decisive part. $U_{down}$ denotes the potential at the edge of brush running down, $U_{up}$ the potential at the edge of brush running up. For this reason the volt-ampere-characteristic is the more favorable.
Concerning the Problem of the Qualitative Evaluation of the Volt-Ampere-Characteristic of a Brush Contact

the steeper its inclination is within the domain of low as those of high amperages, independent of the fact whether the motor has additional poles or not. 2) The wiring diagram of commutation with the use of brushes ΔU=const and a forced change of current in the section by means of the commutating e.m.f. generated by the external field possesses the following shortcomings: a) the necessary amount of the commutating e.m.f. e_c automatically guaranteed in the case of a changing rotational speed. b) On transition from the brushes with the characteristic ΔU = var to the brushes with ΔU = const the additional amperages caused by the excess e.m.f. of the additional poles considerably increase. This increase is especially intensive in low-speed motors and at low rotational speeds of the machines to be controlled. As far as the conditions for attenuating the additional currents in the brush characteristic ΔU = const considerably deteriorate it is to be expected that the above-mentioned motor will badly commutate 3) The use of brushes with ΔU = const in d. c. motors with additional poles cannot lead to satisfactory results. There are 5 figures and 8 references, 7 of which are Soviet.

The authors do not agree with Vegner's opinion that the basic theses of the classical current commutation theory are incorrect. In their opinion the problem concerned is not the replacement of the classical theory by a new one, but a precise definition of the classical theory. Vegner's article is subjected to a detailed criticism and the following is shown:

1.) Vegner's statement to the effect that the potential drop \( \Delta U_{\text{down}} - \Delta U_{\text{up}} \) (voltages under the downward and upward running brush) are only a part of the mains voltage (motor) or of the emf of the armature (generator) is wrong. 2.) The cause of the modification of the current in the section during commutation is its transition from one parallel branch to another, by which the current is modified from \( i \) to \(-i\). 3.) In the case of a lacking commutating emf \( e_k \), the blind emf \( e_b \) is not compensated by the mains voltage (motor) or by the emf of the armature (generator).
AUTHORS: Panfilov, N.A., Engineer and Saprik, N.I., Engineer

TITLE: Determination of the Steady-State Over Temperature of the Armature Winding of a Fully-Enclosed D.C. Motor

PERIODICAL: Vestnik elektropromyshlennosti, 1960, No.6, pp.52-55

TEXT: According to earlier work of one of the authors, (N.A.Panfilov: Vestnik elektropromyshlennosti, 1958, No.6), the temperature rise $\theta_{A}$ of the armature winding of a totally-enclosed d.c. motor as a function of the average temperature rise $\theta_{B}$ of the air inside the motor can be expressed by the formula

$$\theta_{A} = k\theta_{B}$$

(2)

It was found from experimental and calculated results that for enclosed machines, $k$ is practically independent of the speed of rotation and does not differ from the average value by more than 10%. Data for one series of Soviet motors are tabulated. According to this relation, the temperature rise at a point in the
Determination of the Steady-State Over Temperature of the Armature Winding of a Fully-Enclosed D.C. Motor

Internal space of the motor will be approximately proportional to the temperature rise of the armature winding. Hence, the armature winding temperature during running can be measured with sufficient accuracy by a thermocouple or thermistor for example, placed at any fixed point inside the motor. The indicating instrument has to be calibrated to indicate the temperature rise of the armature winding. Curves are given for two types (blower cooled and finned) of Soviet-built motors showing experimental results at 750, 1000, 1500 and 3000 rpm respectively. The relation \( \frac{\theta_a}{\theta_b} = f(\theta_b) \), established by Engineer N.I. Saprik, enables one to obtain a fully satisfactory measuring accuracy. Since the straight line expressing this relation passes through the origin of the coordinate system, measurement of a single set of thermal conditions suffices for determining \( k_1 \) in the equation

\[
\frac{\theta_a}{\theta_b} = k_1 \theta_b
\]


(Karelia--Statistics)
CHISTOSERDOV, Dmitriy Petrovich; PANFILOV, N.D., red.; CHICHERIN, A.N.,
tekhn. red.

[Operation of portable 35-mm. motion-picture projectors].
Eksploataciia peredvizhnykh 35-mm kinoproektorov. Moskva, Gos.
izd-vo "Izusctvo, 1958. 138 p. (MIRA 12:4)
(Motion-picture projectors)
KURDYASHOV, Nikolay Nikolayevich; GOLDOVSKII, Ye.M., doktor tekhn.nauk, red.; PAMPILOV, N.D., red.; MALEK, Z.N., tekhn.red.


[Operation of stationary motion-picture projectors] Nekspluatatsiiia
statsionarnych kinoproektorov. Moskva, Gos. izd-vo "Iskusstvo,"
1957, 166 p. (Biblioteka kinomekhaniki, no.1).    (MIRA 11:7)
(Motion-picture projection)
FANFILOV, Nikolay Dement'evich; NIKOLAYEVA, I.N., red.; MEDVEDEVA, R.A., tekhn. red.


(Amateur motion pictures—Equipment and supplies)
(Sound—Apparatus)
PANFILOV, N.D.

(MIRA 11:5)  
(Architectural acoustics)

ANDREEV, Georgiy Ferdinandovich; BARBANEL', Solomon Rafailovich; KACHURIN, Il'ya Konstantinovich; PANFILOV, N.D., red.; TUMANOVSKII, R.P., tekhn. red.


(Motion-picture theaters—Equipment and supplies)
(Motion-picture projectors)
PRIMAN, Isidor Mironovich; Prinimal uchastiye; TSUKHMAN, Ya.P.
FANFILOV, N.D., red.; MALIK, Z.N., tekn.red.

[Use of motion-picture prints] Eksploatatsiia fil'mokopii,
(Motion-pictures)
VOLOSOV, David Samuilovich; TSIVKIN, Mikhail Vul'fovich, dotsent; 
PAPLILOV, N.D., red.; MALEK, Z.N., techn.red.

[Theory and design of optical systems for projection equipment] 
Teoria i raschet svetoopticheskikh sistem proekcionnykh pri-

(MIRA 13:12)

1. Rukovoditel' laboratorii Gosudarstvennogo opticheskogo insti-
tuta im. S.I.Vavilova i kafedry fiziki i optiki Leningradskogo
instituta kinoinzhenerov (for Volosov).

(Opics) (Projectors)
MATVEYEVKO, Aleksandr Sergeevich; PANFILOV, N.D., ed.; MALEK, Z.N.,
tekhn.red.

[Amateur sound recording] Liubitel'shchik svukszapis'. Moskva,
Gos.izd.-vo "Iskusstvo," 1959. 181 p. (MIRA 12:10)
(Sound--Recording and reproducing)

APPROVED FOR RELEASE: Tuesday, August 01, 2000   CIA-RDP86-00513R0012390
BOLOHOSKII, Aleksandr Mikhailovich; KARAL'NIK, Avraam Hutovich; PANFILOV, N.D., red.; MALIK, Z.N., tekhn. red.; SHILINA, T.S., tekhn. red.


(Motion-picture projection)

PETROV, V.V., kand.tekhn.nauk; PANFILOV, N.D., red.; MALEK, Z.N., tekhn.red.

ZHILEVICH, Ivan Ionifovich; NEMIROVSKII, Ye.L.; IOFIS, Ye.A., kand. 
tekhn. nauk, red.; PARFILOV, N.D., red.; TUMANOVSKII, R.P., 
tekhn. red.

Moskva, Gos. izd-vo "Iskusstvo," 1961. 125 p. (Biblioteka fo-
toliubitelia, no. 24) (MIR 1513)

(Xerography)

Contactless automatic voltage regulators for regulating loaded transformers. Elektrichesstvo no.7:4-12 J1 '63. (MIRA 16:9)
(Voltage regulators) (electric transformers)
Dissertation: Investigation of Some Technological Processes in the Production of Lacquered Sheet Iron. Candidate of Technical Sciences, Moscow Technical Institute of the Fish Industry and Economy named after A. I. Mikoyan, 5 Vay Zh. (Veshernyaya Moskva, Moscow, 21 Apr 54)

SO: SUM 243, 19 Oct 1954
PRIBUL'SKIY, A., architekt; PANFILOV, P., inzh.

Hotel-type apartment houses. Na stroi. Ros. 3 no.121-23 Ja '62.
(MIRA 1675)
(Apartment houses)
Liquative electric smelting of Dzhakhazgan copper concentrates with the production of high calcium slag. Trudy Inst. met. i oboj. AN Kazakh, SSR 8:40-49 '63 (MIRA 17:6)
Effectiveness of depleting converter slags from the Karakpay Copper Smelting Plant. Trudy Inst. met. i obog. AN Kazakh. SSR 9:39-42 '64.

Treatment of oxidized Achishay zino ores. Tsvet. Met. 38 no. 12:
70-71 D '65

(MIRA 19:1)
PANFILOV, P.P.; ONAYEV, I.A.

Selecting a method of metal recovery from slags resulting from cyclone roasting. Trudy Inst. met. i obozashch. AN Kazakh. SSR 3:159-167 '60. (MIRA 14:6) (Nonferrous metals—Metallurgy)
Experimental building with walls built of aluminum-foil insulated concrete panels. Biul.tekh.inform.po stroi. 5 no.8: 8-10 Aug '59. (MIRA 12:11) (Apartment houses) (Insulating materials)
PRESNETSOV, V.D.; PONOMAREV, V.D.; PANFILOV, P.F.; SHUMAKOV, V.V.

Treatment of reverberatory furnace dusts at the Karakpay copper smelting plant. Tsvet. met. 37 no.10:26-29 0 '64. (MIRA 18:7)
KUZ'MIN, L.I.; REVYAKOV, V.P.; POKROWSKAYA, G.N.; TROFIMOV, I.E.; PANFILOV, R.I.

Increasing the durability of linings in low-frequency induction channel furnaces. Tsvet. Met. 38 no.8; 81-85 Aug '65.

(MF)

Smelting out manganese-silicon and ferromanganese from Polunoshnaya deposit ores in 4 furnaces with a power of 10,500 kilovolt-amperes. Trudy Inst. met. URSAN SSSR no.7:127-145 '61. (MIRA 16:6) (Manganese alloys) (Sintering)
TITLE: Semi-industrial furnace for the extraction of alkaline metals by the thermal vacuum method


TRANSLATION: The article describes the design and testing results of a semi-industrial rotary vacuum furnace. The device has internal and external heaters for heating the charge, which permits an increase in the productivity of the furnace. The unit also has built-in devices for loading materials and unloading reaction residues, which provides semi-continuous operation of the furnace. The working volume of the furnace is 15 m³, the volume of working space of the retort is 1.8 m³. The design developed provides conditions for extraction of metallic potassium by the carbide thermal method.
MIKULINSKIY, A.S.; ZHUCHKOV, V.I.; PANFILOV, S.A.; RYABCHIKOV, I.V.

Obtaining alloys of manganese and silicon. Trudy Inst. met. UFAH
SSSR no.7:163-175 '61. (MIRA 10:6)
(Manganese alloys) (Sintering)
PANFILOV, S.I., doktor tekhn. nauk, prof.

I.G. Freiman: on the 70th anniversary of his birth, 1890-1929.
L'vov. LETI no. 45:3-21 '61.
(MIRA 16'5)
(Freiman, Isan G. Georgievich, 1890-1929)
PANFILOV, S.I., doktor tekhn. nauk, prof.

Some problems concerning the determination of complex roots in polynomials. Izv. LETI no.47:36–45 '62. (MIRA 16:12)
AUTHORS: Panfilov, S. I. (Doctor of technical sciences, Professor)

TITLE: Some methods of determining complex roots in polynomial


TOPIC TAGS: algebraic equation, root of algebraic equation, complex root, number of complex roots, value of complex root, detection of complex roots, squared polynomial method, even symmetrical function method, Lobachevskiy condition method

ABSTRACT: In view of the large amount of computation required to ascertain exactly whether a polynomial has complex roots or not, and since there are many applications where only the approximate number or value of the complex-conjugate root pairs is required, some methods are described, involving small computational labor, and per-
mitting in some practical cases to detect the presence of complex roots without solving the entire algebraic equation. The methods discussed are: (1) The method of the coefficients of the squared polynomial, in which the original polynomial is squared and the presence of negative or zero values of the coefficients of a new polynomial guarantees the presence of complex roots in the original polynomial. (2) The method of the first even symmetrical functions, in which reversal of the sign of a simple, even, symmetrical function or the vanishing of this function discloses exactly the presence of complex roots in the original polynomial. (3) The method of violation of the conditions of N. I. Lobachevskiy, in which the signs of certain functions disclose the presence of the complex roots. (N. I. Lobachevskiy, Algebra ili vy*chisleniya konechny*kh, Kazan', 1834; see also Polnoye sobraniye sochineniy (Collected works), v. 4. GITTL, 1948). Orig. art. has: 10 formulas.

ASSOCIATION: Leningradskiy elektrotekhnicheskiy institut (Leningrad
PANFILOV, S.I., prof., doktor tekhn.nauk

(MIRA 13:8)
(Leningrad--Radio--Study and teaching)
AFANAS'YEV, L., prof.; BLEYZ, N.; GLEYZER, L.; PANFILOV, V.

Abroad. Avt.transp. 42 no.1:58-61 Ja '64. (MIRA 17;2)

(МиRа 14:4)

1. Главный конструктор Московского карбюраторного завода.

(Motor vehicles—Engines—Carburetors)
PANFILOV, V., sculptor

Building racing car body of glass reinforced plastics,
Za rul., 20 no., 16a-16c, Ja '62. (MIRA 15×2)
(Automobiles, Plastic)
PANFILOV, V., podpolkovnik zapasa

Literature read by readers. Voen. vest. 42 no.5:87 My '63. (MIRA 16:5)

(Military libraries)
PANFILOV, V., elektromonter

Every activist will give a report. Sov. profsociusy 19 no.21: 20-21 N '63. (MIRA 17:1)

1. Organizer professional'no-soyuzy gruppy upravleniya "Krymtrub"us", Simferopol'.
PANFILOV, V.

Devices of the fuel system of the GAZ-53F motortruck engine.
Avt. transp. 40 no. 9:41-43 S '62. (MIRA 15:9)
(Motortrucks—Fuel systems)
PANFILOV, V.

For a unified wage system in transportation, Sots. trud no. 3:37-43
Mr '57. (Wages) (Transportation) (MLRA 10:4)
PANFILOV, V.


(Motor vehicles—Engines) (Air filters)
PANFILOV, V.

The ME3-85 four-chamber carburetor. Avt. transp. 37 no. 8: 42-45
Ag '59.

1. Glavnuy konstruktor Moskovskogo karbyuratorskogo zavoda.
(Automobiles—Engines—Carburetors)
PANFILOV, V.

New feeding system mechanisms for the engines of ZIL-130 and ZIL-131 automobiles. Avt. transp. 39 no. 4: 37-41 Ap '61. (MIRA 14:5)

1. Moskovskiy karbyuratornyy zavod.
   (Automobiles—Fuel systems)
AUTHOR: Panfilov, V. A.

ORG: Kuybychev Aviation Institute (Kuybyshvskiy aviationshiy institut)

TITLE: Three-channel pulse-height analyzer with transistorized components

SOURCE: Pribory i tehnika eksperimenta, no. 4, 1965, 90-93

TOPIC TAGS: pulse analyzer, metal wear, engine testing, transistor, gamma measurement, metal friction/ AADO-1 analyzer, ID-2 analyzer, P402 transistor, D2 Ye diode

ABSTRACT: The analyzer is designed for measuring the radiation of three isotopes differentiated by their γ-rays. Existing methods, including those using the analyzers AADO-1 and ID-2, are said to be electronically complicated and inadequate under production conditions. The analyzer presented here allows the detection and continuous recording of the atomic radiation of three isotopes in such a way that the deterioration of moving machinery parts may be evaluated both qualitatively and quantitatively. The analyzer, shown in block-diagram form in Fig. 1, consists of a rectifier (1), pulse amplifier (2),...
Fig. 1. Pulse-height analyzer

amplitude clipper (3), driven multivibrator (4), and integration stages with operational amplifiers and direct current differential amplifiers (5). The remaining components (6, 7, and 8) serve as output devices. The functioning of the analyzer is described with reference to individual components of the network. Electrical pulses of varying height, received at the output of a photomultiplier, pass through the respective stages and enter the analyzer, wherein signal amplitude selection occurs through three separate channels. Specific elements used in the network include a P402 transistor in the pulse amplifier, DZYe diodes in the clipper, and an M-24 measuring device. The inte-
gration network and characteristics are discussed in detail. The analyzer was tested in the study of the wearing of parts of internal combustion engines. The results confirmed that the deviation in measuring the radiation intensity of radioactive isotopes Fe$^{59}$, Sn$^{113}$, and Cr$^{51}$ does not exceed ±4% in all three channels. Orig. art. has: 4 figures.

SUB CODE: EC, IE, NR/SUB DATE: 05May64/ ORIG REF: 001/ OTH REF: 001/

ATD PRESS: 4/13/
PANFILOV, V.A.

Use of radioactive isotopes in studying the process of wear, Zav. Lab. 31 no.21224-227 1965. (MIRA 18:7)

1. Kuybyshevskiy aviatsionnyy institut.

Speed and acceleration control of a turbine unit. Blak.,sta.29 no.3:13-19 Mr '58. (MIRA 11:5) (Governors (Machinery)) (Turbines)
Title: Use of radioactive isotopes in studying wear

Wear resistance, bearing steel vs. a variety of non-ferrous metals, was studied using radioactive tracers.

Radioactivity of Fe-59, Sn-113, and Cr-51 were used to measure wear.

100 ml of 10 M 

\[
\text{HCl} \quad \text{and} \quad \text{HNO}_3, 10 \text{ml} \text{HNO}_3  
\]

Card 1/2
Depending on the desired accuracy and the sampling technique, equations can be derived for the required surface area. The equation for the surface area of a cylinder is given by:

\[ A = 2\pi rh \]

where \( A \) is the surface area, \( r \) is the radius of the base, and \( h \) is the height of the cylinder.

**Association:** Kuybyshevsky Academy

**Note:**
KUZ'MIN, G.I., inzh.; PANFILOV, V.A., inzh.; RUBIN, V.B., kand.tokhn.nauk

Regulation of the power of large turbogenerators. Elek. sta.,
36 no.2:35-39 F'65.

(MIRA 134)
Describes procedure of dynamic, with load removal, and static tests of two 44,000-kw turbines. Regulating system incorporated for first time membrane regulator of A. V. Shcheglyayev system and springless servomotors. Dynamic test was to detect deviation of rpm at complete load removal and to record transient processes when total or partial loads are removed. Analyses in detail static characteristics or regulation.
PANFILOV, V.A., inzh.

Starting systems of large turbine blocks. Teploenergetika 9 no. 8: 21-23 Aug '62. (KIRA 15:7)

1. Vsesoyuznyy teplotekhnicheskii institut.
(Steam turbines)
PANFILOV, V. A.

New feed system units for the ZIS-150, ZIS-151 and ZIS-155 automobile engines. Avt. transp. 33 no.4:29-32 Apr '55.
(MIRA B:7)

1. Glavnuyy konstruktor Moskovskogo karbyuratornogo zavoda.
(Automobiles--Fuel systems)


(Radar)
AUTHOR: Rozov, R. A.; Panfilov, V. M.; Blikulch, V. A.; Yurin, I. L.; Konyashov, V. V.; Mel'nikov, A. A. (Candidate of technical sciences)

ORG: Bryansk Automobile Factory (Bryanskoy Avtozavod); Gorkiy Polytechnic Institute (Gor'kovskiy politekhnicheskiy institut)

TITLE: Hydropneumatic suspension for high-power automobiles

SOURCE: Avtomobil'naya promyshlennost', no. 8, 1965, 20-22

TOPIC TAGS: motor vehicle, vehicle engineering, vehicle component, pneumatic device

ABSTRACT: The Bryansk Automobile Plant (Bryanskoy Avtozavod) developed jointly with the Gork'kiy Polytechnic Institute (Gor'kovskiy politekhnicheskiy institut) a hydropneumatic suspension for high-power 8 x 8 automobiles with a gross weight exceeding 10 t. The suspension is independent, has an automatic body control (three positions), and a variable clearance. The design of the front end suspension is shown as Fig. 1. The article gives a detailed description of the system, including the design of the hydropneumatic spring, its operating parameters, the suspension characteristic, and the shock-absorber characteristic. Orig. art. has: 6 figures and 1 table.