

KOPYTOV, V. D.

SKORYY, I.A.; KOPYTOV, V.D.

In the Department of Mechanics and Mathematics. Vest.Mosk.un. 9 no.6:
143-145 Je '54. (MIRA 7:8)
(Mechanics) (Mathematics)

16(1)

AUTHORS:

Skoryy, I.A., University Lecturer, and SOV/55-58-2-33/35
Kopytov, V.D., Scientific Assistant

TITLE:

Lomonosov - Lectures 1957 at the Mechanical-Mathematical
Faculty of Moscow State University (Lomonosovskiye
chteniya 1957 goda na mekhaniko-matematicheskome fakul'tate
MGU)

PERIODICAL:

Vestnik Moskovskogo Universitety. Seriya matematiki, mekhaniki,
astronomii, fiziki, khimii, 1958 13, Nr 2, pp 241-246 (USSR)

ABSTRACT:

The Lomonosov lectures 1957 took place from October 17 -
October 31, 1957 and were dedicated the 40-th anniversary
of the October revolution.
In the general meeting A.N. Kolmogorov, Academician spoke
"On Approximative Representation of Functions of Several
Variables by Superposition of Functions With Less Variables
and ϵ -Entropy of Classes of Function". The lecture generalizes
the results of Kolmogorov, A.G. Vitushkin, V.I. Arnol'd and
V.M. Tikhomirov. The contents has been already published
(Doklady Akademii nauk SSSR, 114, 5). Professor Kh.A. Rakhmatulin,
Member of the Academy of Sciences of the Uz SSR, spoke on

Card 1/5

Lomonosov - Lectures 1957 at the Mechanical-
Mathematical Faculty of Moscow State University

SOV/55-58-2-33/35

"Investigation of the Boundary Layer of the Motion of a two-Component Liquid".

The other lectures were given separately in the sections mechanics and mathematics. The following lectures were given.

1. Professor L.N. Sretenskiy, Corresponding Member, AS USSR :
Propagation of Sound Waves From a Rotating Deformed Ball.
2. Professor G.G. Cheryy: The Flow Around Thin Truncated Bodies by Gas With High Supersonic Velocity.
3. Professor S.N. Nikiforov : Properties of the Calculation, Construction and Structure of Hydrotechnical Dikes on the Rivers of the Central Strip of the USSR.
4. Professor A.Ya. Sagomonyan : Penetration of a Rigid Body into the Ground.
5. M.Z. Litvinov-Sedoy, Senior Scientific Assistant : On the Synthesis of Control Circuits With Bounded Interval of Variation of the Controlled Variable.
6. V.A. Lomakin, Candidate of Physical-Mathematical Sciences :
Scalar Plastic Metal Properties Under Variations of Structure.
7. Professor N.A. Slezkin : On Some Questions of the Flow Around Porous Walls.

Card 2/5

Lomonosov - Lectures 1957 at the Mechanical-
Mathematical Faculty of Moscow State University

SOV/55-58-2-33/35

8. A.L. Pavlenko, Lecturer : Generalization of the Theory of the Transverse Shock Against a Flexible Thread.
9. A.G. Kulikovskiy, Aspirant : Flow Around Magnetized Bodies by Conducting Liquid.
10. N.V. Yeremeyev, Lecturer : Instruments for the Analysis and Synthesis of Mechanisms.
11. V.S. Lenskiy, Lecturer : Some General Laws in the Behavior of Multiply Loaded Metals.
12. V.D. Klyushnikov, Aspirant : A Variant of the Theory of the Increases of Deformation and Elasto-Plastic Stability.
13. Professor M.I. Vishik and Professor L.A. Lyusternik : Asymptotic Behavior of the Solutions of Linear Equations With Small Parameter in the Derivatives.
14. Professor O.A. Oleynik : Some Non-Linear Partial Differential Equations (Survey of the Results of T.D. Ventsel', Chzhou Yuy-lin', N.D. Vvedenskaya, A.S. Kalashnikov, Ye.S. Sabinen, S.L. Kamenomostskaya).
15. Professor M.R. Shura-Bura and P.N. Trifonov, Senior Scientific Assistant : Automatization and Programming.

Card 3/5

Lomonosov - Lectures 1957 at the Mechanical-
Mathematical Faculty of Moscow State University

SOV/55-58-2-33/35

16. A.D. Gorbunov, Lecturer and B.M. Budak, Lecturer :
Difference Methods for the Solution of Hyperbolic
Equations.
17. N.S. Bakhvalov ; Number of Calculation Operations for
the Solution of Elliptic Equations.
18. V.I. Lebedev, Aspirant ; Difference Method for the
Solution of the Sobolev-System.
19. Professor Ye.B. Dynkin ; Markov Processes and Semigroups.
20. A.G. Kostyuchenko, Candidate of Physical-Mathematical
Sciences ; Decomposition of Differential Operators With
Respect to Generalized Eigenfunctions.
21. F.A. Berezin, Candidate of Physical-Mathematical Sciences;
Foundations of the Theory of Spherical Harmonics on Mani-
folds.
22. V.M. Borok, Aspirant ; General Properties of Partial
Evolution Systems.
23. V.A. Uspenskiy, Candidate of Physical-Mathematical
Sciences ; On Constructive Mathematical Analysis.
24. P.L. Ul'yanov, Lecturer ; Reversal of Terms in Trigonometric Series.

Card 4/5

Lomonosov - Lectures 1957 at the Mechanical-
Mathematical Faculty of Moscow State University

SOV/55-58-2-33/35

25. I.G. Petrovskiy, Academician and Ye.M. Landis, Senior Scientific Assistant : On the Number of Boundary Cycles of a Differential Equation of First Order With a Rational Right Side.
- The contents of all the lectures have already been published.

Card 5/5

S/055/60/000/03/07/010

AUTHORS: Dobrovol'skiy, I.P., Kopytov, V.D., and
Lyu Guannin

TITLE: Analysis of Contact Pressures of Thick Stamp Plates of a Heavy
Stamping Press 14

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya I, matematika,
mekhanika, 1960, No. 3, pp. 60-66

TEXT: By models of a transparent optically active material the contact pressures of thick stamp plates were determined experimentally. The experimental results were compared with the results of approximate computing methods. Since the calculations were made under very rough assumptions of approximation, there is only a partial agreement between the experiment and the approximate calculation. Nevertheless the author is of opinion that the usefulness of the approximate methods (Ref. 2, 3, 4, 5) is confirmed by the experiments.

There are 7 figures, 3 tables and 5 Soviet references.

ASSOCIATION: Kafedra teorii uprugosti (Department of Theory of Elasticity)

SUBMITTED: September 9, 1959

Card 1/1

83689

15.8110 also 2209

S/032/60/026/009/014/018
B015/B058

AUTHORS: Shchegolevskaya, N. A., Morozov, B. A., Skoryy, I. A.,
Kopytov, V. D., Sokolov, S. I.

TITLE: The Use of Epoxy Resin^{1b} of the Type Epoxy-CHS-2200 for
the Polarization-optical Method

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 9, p. 1149

TEXT: An optically active synthetic resin was obtained by using the Czechoslovakian epoxy resin of the type Epoxy-CHS-2200 with phthalic anhydride as hardener. The resin mentioned differs from the much used epoxy resins of the type Э40 (E40) and ЭА6 (ED6) by having a lower viscosity, and a homogeneous mass being nevertheless obtained with phthalic anhydride. The molten anhydride (40 g) is added to the epoxy resin (100 g) heated to 120°C, the mass is carefully mixed, poured into pre-heated molds, and left in the thermostat for 24 hrs at 100°C and then for 21 hrs at 120°C. The properties of the resin are tabulated. There are 1 table and 1 Soviet reference. X

Card 1/2

S/110/61/000/002/002/009
E194/E455

AUTHORS: Dobrovol'skiy, I.P., Engineer,
Kartashkin, B.A., Engineer, Kopytov, V.D., Engineer,
Skoryy, I.A., Candidate of Physical and Mathematical
Sciences

TITLE: An Investigation by the Photo-Elasticity Method of the
Stresses in the Assemblies Used to Fix the Active Steel
in Hydro-Alternators

PERIODICAL: Vestnik elektropromyshlennosti, 1961, No.2, pp.8-13

TEXT: The assemblies used to secure the stator cores in hydro-
alternators sometimes fail, principally near the welds. The
assembly is loaded by the radial magnetic attraction of the poles
and by tangential forces due to electromagnetic torque. The ratio
of these loadings is different under different conditions and as yet
sufficiently reliable methods of determining them do not exist. ✓
These loadings and the places of highest stress are usually
determined by full-scale tests on assemblies, using strain gauges.
The location of the strain gauges is selected arbitrarily. For
accurate design it is necessary to determine separately the
stresses due to the axial and radial loading so as to assess their
Card 1/8

S/110/61/000/002/002/009
E194/E455

An Investigation by the Photo-Elasticity Method ...

combined action. Then when full-scale tests are made, the strain gauges can be placed at the most significant points. It is also important to determine the stress distribution in the thickness of the rings that support the keying ribs. Stress changes resulting from alterations in the rigidity of the joints are also important. It is not possible to study all these problems by means of full-scale tests. Accordingly, tests were made by the photo-elasticity method, using transparent models in polarized light. This method is effective for determining the stress distribution over the whole range and, moreover, no initial stresses are introduced in the manufacture of the models which could distort the results. The principles of the photo-elastic methods of stress determination are briefly explained. It is noted that, if the models are heated under load to a temperature of 100 to 150°C and then slowly cooled under load to room temperature, the stress condition may be retained in the model and is not altered when it is sectioned. By this means, the sections may be studied to determine the stress distribution throughout the body of the model. This method was used in making

Card 2/8

S/110/61/000/002/002/009
E194/E455

An Investigation by the Photo-Elasticity Method ...

the study. Fig.1 shows a model of a fixing assembly consisting of a support ring 1 which is fixed to the stator frame of the alternator, a block 2 welded to the ring and a keying rib 3 welded to the block. In an actual machine there are several rings but, to avoid difficulties in modelling, only an individual assembly was studied. The model was made on a scale of 1/5. To study the influence of assembly rigidity, three methods of fixing were used. In the first, the ring and keying rib were made in one solid piece; in the second and third, the assemblies were made of separate parts stuck together to imitate welds of different kinds. Each of the models was tested under radial and tangential loading applied mechanically; stresses were determined at four sections. Curves of equal slope of main stresses (isoclines) and trajectory of main stresses (isostats) were constructed. The differences in the principal stresses were determined along the selected sections: by integration of the equilibrium equation, the detailed stress distribution was determined. With radial loading, stress concentrations were observed in sections of the ring close to the Card 3/8

S/110/61/000/002/002/009
E194/E455

An Investigation by the Photo-Elasticity Method ...

keying rib in the region between the welded joints. As the distance from the wedge increases, the distribution of stress over the ring thickness becomes more uniform. With tangential loading the stress distribution did not depend much on the method of constructing the model. Stress peaks are observed in places near the side faces of the block. Here, all three stresses are considerable and should be allowed for in assessments of strength. The results obtained by the photo-elasticity methods were compared with strain gauge test results on radially-loaded models fabricated in metal and annealed before test to remove remanent stresses. The stress distributions obtained by the two methods were compared. By the photo-elasticity method, the conditions of equilibrium are fulfilled to within 6 to 7%, whereas the tests on metal models in the corresponding sections indicate that the conditions of equilibrium are fulfilled to within 40%. The difference is due to bending of the rings that occurs in the tests on the metal models. Because of the test conditions, most of the strain gauges are fixed to one side of the ring. A few gauges


Card 4/8

S/110/61/000/002/002/009
E194/E455

An Investigation by the Photo-Elasticity Method ...

fixed on the other side demonstrated the presence of bending, which altered the stress distribution by 20 to 30% as compared with uniform distribution throughout the thickness. Because of the small number of strain gauges on the lower side, it was not possible to make allowance for bending when the results were worked out. It should be noted that when stresses are determined on a transparent model, the method is such that the measured stresses are averaged out over the thickness of the ring and the results are not affected by bending. It is possible to calculate the stress distribution for the case of radial loading; experimental and calculated values are compared; there are certain differences for which an explanation is offered. On consideration of the general picture of stress distribution under the influence of radial and tangential loads, as determined by the photo-elasticity method, certain recommendations may be made for full-scale testing. If the strain gauges are fixed on the axis of symmetry of the block, where the stresses are only due to the action of radial forces, the magnitude of the radial force may

Card 5/8



S/110/61/000/002/002/009
E194/E455

An Investigation by the Photo-Elasticity Method ...

readily be calculated. With this knowledge, it is possible to calculate the stresses due to radial loading in the ring on both sides of the axis of symmetry of the block. Then, if strain gauges are fitted in these places, it is possible to obtain the stress distribution due to tangential loading by subtracting from the total stress the stress due to radial loading. Here, it is of considerable assistance to note that the stress distribution due to tangential loading is obliquely symmetrical. Hence, by adding together the indications of two symmetrically-located strain gauges, its effect may be neutralized and the stress due to the radial force may be determined more accurately. Strain gauges for measuring stress should be fixed to the ring at a distance from the block of not less than 1.5 times the thickness of the ring. At this distance, the influence of irregularities in the stress distribution within the thickness of the ring will be without effect. It is also advisable to fix check strain gauges on the opposite side of the ring, to exclude errors that may be introduced by bending. The tests by the photo-elasticity

Card 6/8

S/110/61/000/002/002/009
E194/E455

An Investigation by the Photo-Elasticity Method ...

method were made by the Laboratoriya opticheskogo metoda
issledovaniya napryazheniy (Laboratory for the Optical Method
Research of **Stresses**) MGU jointly with the section for dynamic
research of Laboratoriya elektricheskikh mashin (Laboratory for
Electrical Machinery) VNIIE, and those by the strain gauge method
by the above named laboratory of VNIIE at the Institut elektrosvarki
imeni O.Ye.Patona (Electric Welding Institute imeni O.Ye.Paton).
There are 11 figures.

SUBMITTED: March 17, 1960

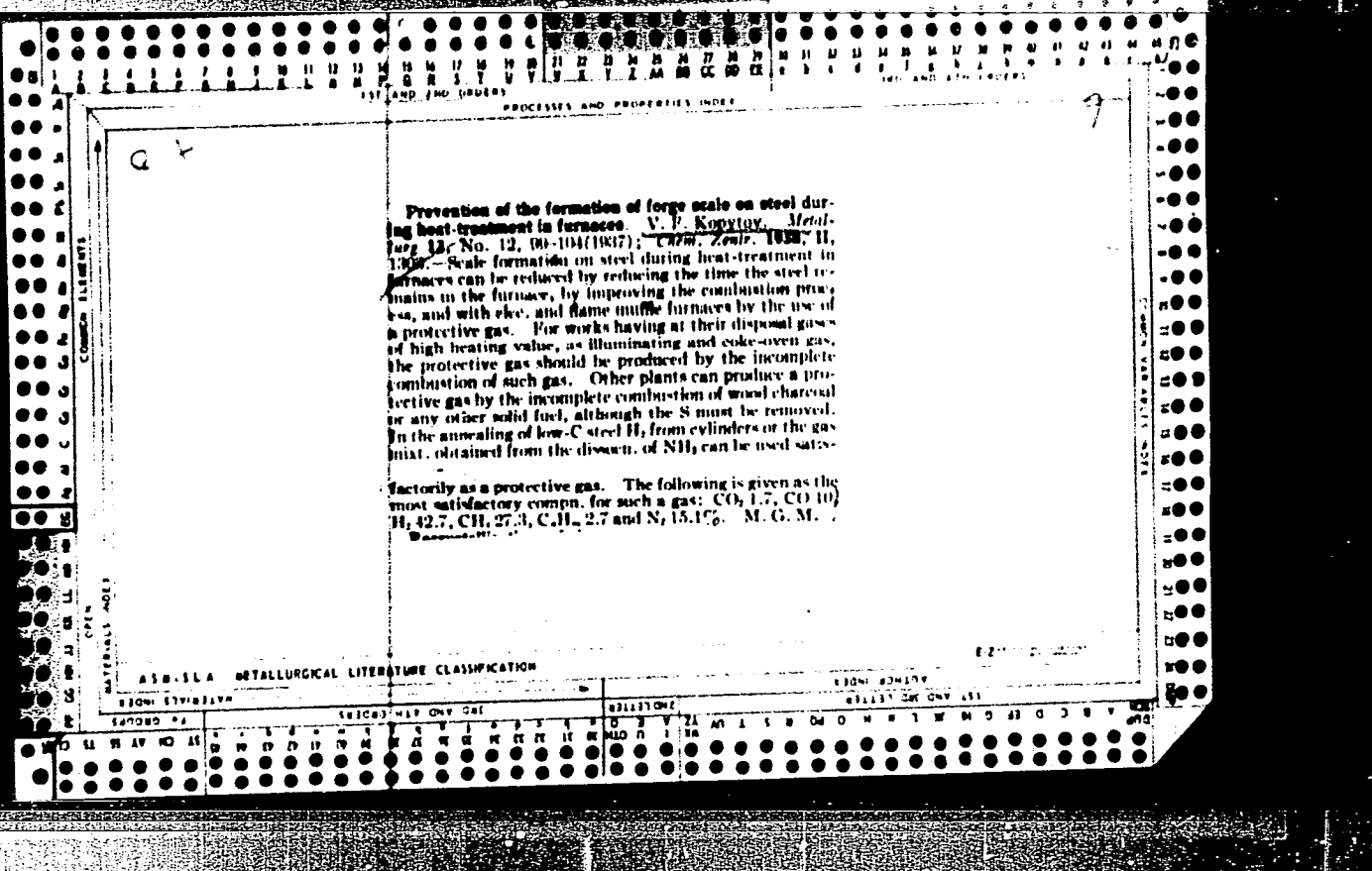
Card 7/8

DOBROVOL'SKIY, I.P., inzh.; KARTASHKIN, B.A., inzh.; KOPYTOV, V.D., inzh.;
SKORYY, I.A., kand.fiziko-matematicheskikh nauk

Use of the photoelectric method for studying the stresses in the
active steel joints of hydrogenerators. Vest.elektroprom. 32
no.2:8-13 F '61. (MIRA 15:5)
(Turbogenerators) (Photoelasticity)

DOBROVOL'SKIY, I.P. (Moskva); KOPYTOV, V.D. (Moskva)

Determining contact pressures on three-dimensional models. Inzh.
zhur. 1 no.4:172-174 '61. (MIRA 15:4)
(Strains and stresses)



1ST AND 2ND COLUMNS PROCESSES AND PROPERTIES INDEX 3RD AND 4TH COLUMNS

The Action of Sulphur in the Fuel on the Steel Heated in the Furnaces. V. Kopytov and P. Sorokin. (Stal, 1939, No. 9, pp. 47-50). (In Russian). Results of previous investigators on the effect on steel of hot gases containing sulphur dioxide or hydrogen sulphide are reviewed. The authors' own experiments were carried out on low- and high-carbon steel and on a chromium-nickel steel (chromium 1-16% and nickel 3-22%) in the form of cylindrical specimens which were heated in a tubular furnace fired by a mixture of town gas, air and sulphur dioxide. The proportion of town gas to air was such as to ensure complete combustion. The presence of SO₂ was found to accelerate scaling. The chromium-nickel steel was generally less stable than the carbon steels with greater penetration of sulphides into the interior at lower temperatures.

AS B. S. I. A. METALLURGICAL LITERATURE CLASSIFICATION

140345 44 140345 44 140345 44

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

KOPYTOV, V.F., kandidat tekhnicheskikh nauk.

Steel annealing without oxidization. [Trudy] TSNIITMASH 7:3-142 '47.

(MLRA 7:5)

(Steel--Heat treatment)

PROCESSES AND PROPERTIES INDEX

1ST AND 2ND ORDERS

140 AND 4TH ORDERS

A

F

120-F. Rapid Heating of Billets in Gas-Fired Furnaces. (In Russian.) V. F. Kostikov, and P. V. Sorokin. *Vestnik Mashinostroyeniya* (Bulletin of the Machine Construction Industry), v. 30, Feb. 1959, p. 54-55.

Furnace design and time of heating of round and square billets and sheets of medium-carbon steel up to 60 mm. thick and also pipe of low-carbon steel of up to 5-mm. wall thickness. (FXI, CN)

AS B-SLA METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENT

COMMON VARIABLES INDEX

1ST AND 2ND ORDERS

140 AND 4TH ORDERS

KOPYTOV, V.F., kandidat tekhnicheskikh nauk; SOROKIN, P.V.; POPOVA, S.M.,
tekhnicheskiiy redaktor.

[Rapid heating of steel] Skorostnoi nagrev stali. Moskva, Gos.
nauchno-tekhn.izd-vo mashinostroitel'noi lit-ry, 1952.21 p.
(Nauchno-tekhnicheskaya informatsiya) [Microfilm] (MIRA 9:4)
(Steel--Heat treatment)

KOPYTOV, V. F.

Kopytov, V. F. -- "Investigation of the Tempering of Steel in Furnaces."
Dr Tech Sci, Inst of Ferrous Metallurgy, Acad Sci Ukrainian SSR, Kiev
1953. (Referativnyy Zhurnal--Khimiya, No 1, Jan 54)

So: SUM 168, 22 July 1954

KOPKOV, V. F.

KOPKOV, W. F. "Mechanische Schmiedefen" 300.
pp. 27. Illustrated. Berlin, 1963. Verlag Technik.
(Price DM. 8.40)

Translation of Title: Mechanized
Forging Furnaces.

KOPYTOV, V.F.

Gas burner for room heaters

Soviet Source: "RABOTA I KONSTRUKTSIYA GAZOVYKH PECHEI" (Operation and Construction of Gas Ovens), Academy of Sciences, Ukrainian SSR, 1953, p.40✓

Копия № 1

0000

Fundamental calculation of some processes for antioxi-
 dation of steel. V. B. Kozlov. *Trudy Inst. Ispol'zovan.*
Ucheb. Nauch. Upr. S.S.R. 1953, 80-98; *Referat Zhur.*
 1953, No. 14, 20. — An analysis of processes employed
 in the protective film, the equilibria of such
 zones with iron the metal surface being protected, and dif-
 fusion phenomena under these conditions are analyzed.

M. I. Gosh

of LHM

KOPYTOV, V.F., kandidat tekhnicheskikh nauk.

Improving the performance of gas furnaces used in the machinery industry.
Trudy Inst.isp.gaza AN URSR 1:69-79 '53. (MLRA 9:6)
(Furnaces, Heat-treating)

KOPYTOV, V. F.

USSR/Miscellaneous-----machine construction

Card 1/1

Authors : Kopytov, V. F., Cand. in Tech. Sci.; Kopytova, G. F., engineer;
and Sorokin, P. V.

Title : Decarbonizing steel in reverbatory furnaces

Periodical : Vest. mash. 34/3, 36-40, Mar/1954

Abstract : The products of burning fuel in a reverbatory furnace at high temperature oxidize steel, producing scales on it, and such oxidation causes oxidation of the carbon in the surface layer of the steel. When the decarbonizing of the surface layer is rapid the decarbonized layer is found under the scale after heating. In order to reduce decarbonization it is necessary during hot processing to heat the steel more rapidly. One Russian reference, dated 1949. Graphs.

Institution :

Submitted :

KOPYTOV, V.F.

USSR/Engineering—Hot working of steel

Card 1/1 : Pub. 128—13/33

Authors : Kopytov, V. F.

Title : Rapid heating of steel in automatic gas furnaces

Periodical : Vest. mash. 34/8, 50-51, Aug 1954

Abstract : The question of heating steel for forging work is dealt with and a method of speeding up the heating process is described with an explanation of the factors involved. A comparison is made between electric and gas furnaces. Drawings; graphs.

Institution :

Submitted :

DOBROKHOTOV, Nikolay Nikolayevich; ~~KOPYTOV, V.F.~~, doktor tekhnicheskikh nauk, redaktor; ZIL'BAN, M.S., ~~redaktor~~; SIVACHENKO, Ye.K. tekhnicheskij redaktor

[Use of thermodynamics in the metallurgy] Primenenie termodinamiki v metallurgii. Kiev, Izd-vo Akad.nauk USSR, 1955. 73 p.
(Thermodynamics) (Metallurgy)

KOPYTOV, Viktor Filimonovich; KUROVEDOV, V.A., redaktor; VALOV, N.A., redaktor; MIKHAYLOVA, V.V., tekhnicheskiy redaktor

[Heat-treatment of steel in furnaces] Nagrev stali v pechakh.
Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi
metallurgii, 1955. 264 p. (MIRA 9:4)
(Steel--Heat treatment)

KOPYTOV, V.F.

Using fuel in furnaces. Trudy Inst. isp.gaza AN URSR 3:61-66 '55.
(Furnaces) (Fuel) (MIRA 9:9)

Kopytov, V. F.

Use of fuels in furnaces. V. F. Kopytov. *Vestnik Mashinostroeniya* 35, No. 7, 66 (1955).—Natural, coke-oven, water, blast-furnace gases, producer gas made of coal and of anthracite, coal, and pulverized coal were compared in their heating efficiency and cost with oil residues. The results, given mostly in graphs, are supplemented with general comments. J. D. Cal

~~SECRET~~
KOPYTOV, V.F.; KHANDOGA, T.P.

First session of special working group on gas problems at the
European Economic Commission of the UNO. Gas.prom.no.12:39 D'56.

(MLRA 10:1)

(Europe--Gas manufacture and works)
(United Nations--Commissions)

137-58-6-11425

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 26 (USSR)

AUTHOR: Kopytov, V.F.

TITLE: Improving the Operation of Furnaces at Plants in the Machinery Industry (Uluchsheniye raboty pechey mashinostroitel'nykh zavodov)

PERIODICAL: V sb.: Progressiv. metody shtampovki i kovki. Khar'kov, Oblizdat, 1957, pp 129-133

ABSTRACT: A brief examination is made of the conditions for improving the operation of heating furnaces at plants in the machinery industry: the use of gas and heavy oil as fuel, high rates of heating (as fast as 1-2 min per cm thickness) of steel parts, the use of fast-heating furnaces, local heating of parts by various types of burners, shielded-atmosphere non-oxidizing heating, fuel economy by use of recuperators and of steam boilers and water heaters.

G.G.

1. Furnaces--Operation
2. Furnaces--Applications
3. Furnaces--Design
4. Furnaces--Equipment

Card 1/1

AUTHOR: Kopytov, V.F.

122-3-21/30

TITLE: New Methods of Gas Heating (Novyye metody gazovogo nagreva)

PERIODICAL: Vestnik Mashinostroyeniya, 1957, No.3, pp. 53 - 57
(USSR).

ABSTRACT: High-speed methods of gas-heating are now available which approach in speed and compactness those of the induction heating. Increased furnace temperatures and higher speeds of the hot gas are the chief methods of increasing the rate of heating, but local heating and infra-red heating are mentioned. Methods of maintaining precise flame dimensions are discussed. High calorific value gas such as natural, coke-oven gas or butane mixtures yield very hot flames when the correct air mixture is maintained, even without the use of oxygen. Mixing machines including one made by the Moscow Motor Plant (Moskovskiy Avtozavod) imeni Likhacheva are shown. A membrane actuated air valve maintains the ratio of gas and air by responding to the flow of the mixture. The output pressures are between 700 and 2 000 mm water gauge, such high pressures being necessary because in burning gas/air mixtures of the correct ratio, the flame propagates with high velocity. To avoid the rupture of the flame a sparking plug is used in the burner. Standard Card1/3 burners and burners formed in accordance with the component are

New Methods of Gas Heating.

122-3-21/30

used. Examples are given of burners with a small round nozzle like welding burners and burners with an angular nozzle, covered with a ceramic or a metallic grid for moderate speeds. Ceramic burners of the semi-closed type are used for thin-walled components requiring indirect heat. Cup-formed burners are illustrated and the provision of ribs inside the cup for producing turbulence in a slow-burning gas such as natural gas. G.S. Dobrovolskiy tested a heating canopy device at the Gas Utilisation Institute (Institut Ispol'zovaniya Gaza). A number of ceramic plates with a large number of holes of 1.25 mm diameter are situated at the top and direct the flame on to the component. Other examples of mainly indirect radiation heating are given; local heating is also accomplished by burners of the closed type which constitute small combustion chambers (heat release density up to 400 million kcal/m²hr). A temperature of up to 1 600 °C and a speed of 300 m/sec have been achieved and a special burner for crankpins is illustrated. Infra-red heating and infra-red drying are briefly surveyed.

Card 2/3 There are 10 figures (including 1 graph).

APPROVED FOR RELEASE: 03/13/2001
New Methods of Gas Heating.

CIA-RDP86-00513R000824530001

122-3-21/30

ASSOCIATION: Gas Utilisation Institute of the Ukrainian Ac.Sc. SSR.
(Institut Ispol'zovaniya Gaza Ak.Nauk. Ukr.SSR)

AVAILABLE: Library of Congress

Card 3/3

KHMARA, S.M., kand.tekhn.nauk, dotsent, otv.red.; KOPYTOV, V.P., otv.
red.; VESSEL'MAN, S.G., prof., otv.red.; DONSKOY, Ya.Ye., red.;
ZAMAKHOVSKIY, L.S., tekhn.red.

[Conversion of industrial furnaces and boiler installations to
natural gas] Perevod promyshlennykh pechei i kotel'nykh ustanovok
na prirodnyi gas. Khar'kov, Khar'kovskoe obl.isd-vo, 1958. 233 p.
(MIRA 13:1)

1. Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy pro-
myshlennosti. Khar'kovskoye oblastnoye pravleniye. 2. Chlen-
korrespondent AN USSR (for Kopytov).
(Furnaces)

KOPYTOV, V. F.

"Firing of Furnaces in Mechanical Plants by Natural Gas,"
paper submitted for the 1st National Congress, Czechoslovak Scientific Technical
Society for Fuel Utilization, Karlovy Vary. Czechoslovakia, 12-17 May 58.

КОПІЯ, В.Р.

AUTHOR: Ginzburg, Z.I., Engineer
TITLE: Production Engineering and Technol. Section on the Exchange of Experience in the Utilization of Natural Gas in Industrial Furnaces of Heating Plants (Prilozheniya tekhnicheskaya sessiya po obratnu opytu ispol'zovaniya prirodnykh gazov v promyshlennykh pechakh mashinostroitel'nykh zavodov)

PERIODICAL: Vestnik Mashinostroyeniya, 1958, nr 7, pp 56-57 (USSR)
ABSTRACT: The session was called by the Khar'kov sovetskoy naučno-tekhnicheskoy obratnoy sekciiy (Khar'kov Scientific-Technical Exchange Section of the USSR Academy of Sciences) and the Institute of Engineering Industry and Technol. Society for the v konural'nom tsekhov i the Institut ispol'zovaniya gazov i mashinostroitel'nykh zavodov. Prayshlenosti AL USSR Institute for the Utilization in Communist Services and Industry at the A.S. Ukrainian SSR) and Ukraine

and firing of blocks and other units in the foundry have been converted to natural gas. Single-conduit, three-burner burners of 80-50 m³/h capacity are used. Single-conduit multi-burner burners have given good service in boilers. Kopiyov, V.P., corresponding member of the Ukrainian SSR Academy of Sciences, corresponding member of the A.S. USSR Academy of Sciences, reported on the construction of self-heating metal-bearing furnaces using natural gas in shops. Several variants exist: heating methods in forging of such furnaces is associated with the construction of bricks and fire-resistant materials for production of fire-operators and regenerators. At present, the temperature of the metal-bearing furnace is working on the principle of a natural gas oxidizing heating method for forging and melting metal. Kopiyov, V.P., corresponding member of the USSR Academy of Sciences, reported on the conversion of industrial furnaces from liquid to natural gas. The existing gas-burning equipment used is used by simply reducing the cross-sections for gas flow. Kovalenko, V.V. of the IIG AL USSR (Institute for Gas Utilization) lectured on Cards/9 drying kilns with indirect gas heating when working with

of Engineering Plants

natural gas. The heating conditions are controlled by the gas flow or by combustion of radiating panels. A study carried out to determine the conditions of drying for 10-15 m³ of natural gas in the conditions of drying on the basis of drying methods has shown that the best drying method is obtained when the moisture content of the material is 2-3%. The moisture content of the material is increased by a factor of 2-3. The duration of drying is reduced by the same factor as in drying with air heated to the same temperature. Kovalenko, V.V., corresponding member of the USSR Academy of Sciences, reported on the construction of a metal-bearing furnace for the drying of metal-bearing parts. The furnace is equipped with a natural gas burner and a heat exchanger. The furnace is used for drying metal-bearing parts and the heat exchanger is used for heating the gas. The furnace is equipped with a natural gas burner and a heat exchanger. The furnace is used for drying metal-bearing parts and the heat exchanger is used for heating the gas.

Cards/9

PHASE I BOOK EXPLOITATION

SOV/4987

Kopytov, V.F.

Bezokislitel'nyy nagrev metalla (Nonoxidizing Heating of Metal) Moscow [VINITI] 1959.
46 p. Errata slip inserted. 1,500 copies printed.

Sponsoring Agencies: Gosudarstvennyy nauchno-tekhnicheskly komitet Soveta ministrov SSSR, Akademiya nauk SSSR, and Vsesoyuznyy institut nauchnoy i tekhnicheskoy informatsii.

Ed.: M.K. Morozova; Tech. Ed.: G.A. Shevchenko.

PURPOSE: This booklet is intended for engineers and technicians concerned with the heating of metals.

COVERAGE: Protective atmospheres for preventing the oxidation of heated pieces in flame furnaces are discussed. The instruments for analysis and control of the composition of these atmospheres are indicated and suggestions for selecting suitable atmospheres for steels and nonferrous metals are made. New methods of heating metal in flame furnaces without oxidation are reviewed, and designs of such

Card 1/2

SOV/4987

furnaces are shown. No personalities are mentioned. There are 21 references: 4 Soviet, 15 English, and 2 German.

TABLE OF CONTENTS:

Protective Atmospheres	3
Instruments For Controlling the Atmosphere in Furnaces	11
Regulating the Composition of the Protective Atmosphere	13
Selection of Protective Atmospheres	14
Protective Atmospheres Used For Nonferrous Metals	26
Practices of Cementation With Gases	29
New Methods of Nonoxidizing Heating of Metal in Flame Furnaces	37
Bibliography	48

AVAILABLE: Library of Congress

Card 2/2

VK/dfk/gap
4-24-61

Kopytov, V.F.

SOV/2156

PHASE I BOOK EXPLOITATION

28(1)

Sovetskaniye po kompleksnoy mekhanizatsii i avtomatizatsii tekhnologicheskikh protsessov. 2nd, 1956.
 Avtomatizatsiya mashinostroitel'nykh protsessov /trudy sovetskaniya, tom 1. Obyednyayemye obrabotka metallor (Automation of Machine-Building Processes; Proceedings of the Conference on Over-All Mechanization and Automation of Technological Processes, Vol. 1. Hot Metal-Forming) Moscow, 1959. 394 p. 5,000 copies printed.
 Sponsoring Agency: Akademiya nauk SSSR. Institut mashinorezheniya. Komissiya po tekhnologii mashinostroyeniya.
 Resp. Ed.: V.I. Dikushin, Academician; Compiler: V.M. Kaskatov; Ed. of Publishing House: V.A. Masov; Tech. Ed.: I.P. Kus'min.

PURPOSE: The book is intended for mechanical engineers and metallurgists.
 COVERAGE: The transactions of the Second Conference on the Over-All Mechanization and Automation of Industrial Processes, September 25-29, 1956, have been published in three volumes. This book, Vol. 1, contains articles under the general title, Hot Working of Metals. The important sections described in the book were conducted by the Institute for Automation and Hot Working of Metals, under the direction of the following scientists: casting - A.M. Krasov, D.P. Ivanov and G.M. Orlov; forming - A.I. Tselikov, A.M. Tselanov and V.T. Meshcherin; welding - G.A. Nikolayev, N.I. Prolov and G.A. Maslov. There are 183 references: 142 Soviet, 34 English, 6 German, and 1 French.

TABLE OF CONTENTS:

Masurov, A.M. Automation of Industrial Processes in a Forge Shop	148
Tselanov, A.D. The Value of Shrinkage Force in Steel Ingots	160
Philippov, V.V. Technical and Economic Efficiency of Automation of Stamping from Sheet Steel	165
Mavrotskiy, G.A. Investigation of Operating Conditions of Cold-Opsetting Automatic Presses	169
Popov, V.A. Automation of the Production of Pasterning Articles	183
Leppikh, Y.P. New Methods for Heating with Gas in Automated Production	189
Glukhanov, M.P. Use of High-Frequency Currents for Heating Billets for Plastic Deformation	192
Philippov, V.V., V.Ya. Shekhter, and V.I. Olsener. Automation of Cold Stamping of Automobile Parts from Sheet Steel	204
Burakhtyn, D.Ye. Automation Processes in Stamping Production Parts from Sheet Steel	219
Leonov, V.A. Some Problems in Automating the Forming of Pressed Shapes from Aluminum Alloys	228
PART III. AUTOMATION OF WELDING PROCESSES	
Nikolayev, G.A. The Problem of Automating Industrial Welding Processes	237
Paton, B.Ye. Electric Slag Welding of Large Constructions from Castings, Forgings, and Rolled Stock	243
Ryzalitz, M.M., and A.I. Puglin. Regularities in Heating Cores during Resistance Butt-Welding	252
Card 6/8	

KOPYTOV, V.F.

Research on the use of gas. Visnyk AN URSR 30 no.3:23-29 Mr '59.
(MIRA 12:6)

1.Chlen-korrespondent AN USSR.
(Gas, Natural).

AUTHOR: Kopytov, V.F. SOV/122-59-3-28/42
TITLE: Non-Oxidising Metal Heating Furnaces outside Russia
(Pechi bezokislitel'nogo nagreva metalla za Rubezhom)
PERIODICAL: Vestnik Mashinostroyeniya, 1959³⁷,₁ Nr 3, pp 79-82 (USSR)
ABSTRACT: A critical review of foreign furnace designs with
examples from Great Britain, Western Germany, U.S.A.,
and Italy.
There are 5 figures and 4 references, including
1 Soviet, 2 English and 1 German.

Card 1/1

KOPYTOV, V.F., otv.red.; KORNEV, K.A., doktor khim.nauk, red.; KLIMENKO, V.Ya.,
kand.geol.-miner.nauk, red.; SHTUL'MAN, I.F., red.izd-va;
KADASHEVICH, O.A., tekhn.red.

[Complete utilization of fuel gases of the Ukraine; natural and
industrial gases of the Ukraine; natural and industrial gases]
Kompleksnoe ispol'zovanie goriuchikh gazov Ukrainy; prirodnye i
promyshlennye gazy. Kiev, Izd-vo Akad.nauk USSR, 1960. 256 p.
(MIRA 13:4)

1. Akademiia nauk URSR, Kiyev. Instytut vykorystannia hazu.
2. Chlen-korrespondent AN USSR; Institut ispol'zovaniya gaza AN
USSR (for Kopytov). 3. Institut geologicheskikh nauk AN USSR (for
Klimenko).

(Ukraine--Gas, Natural)

(Ukraine--Gas manufacture and works)

S/709/60/025/001/004/0.
D040/D113

AUTHOR: Kopytov, V.F., Professor, Doctor of Technical Sciences

TITLE: Shielding atmospheres for metallurgical furnaces

SOURCE: Nauchno-tehnicheskoye obshchestvo chernoy metallurgii. Trudy, v. 25, pt. 1. Moscow, 1960. Raschety, konstruirovaniye i ekspluatatsiya nagrevatel'nykh pechey; materialy Vsesoyuznogo soveshchaniya, 231-240.

TEXT: The paper contains general information on the chemical composition, production processes, properties and recommended applications of gases used in heat treatment furnaces for steel. The conventional designations of the listed gases are taken from a book by A.A. Skmykov and B.V. Malyshev (Ref. 1: Kontroliruyemyye atmosfery [Controlled atmospheres], Mashgiz, 1953). The following gases are described: ПС-06 (PS-06) - 5% CO₂, up to 10% CO, up to 11% H₂, 0.3% CH₄, 0.8% H₂O, the remainder-nitrogen; ПС-09 (PS-09) - up to 5% CO, up to 5% H₂, traces of CH₄, 0.013% H₂O, remainder-nitrogen; con -

Card 1/3

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D040/D113

Shielding atmospheres ...

verted PSO-09 - 2 to 8% H₂, traces of CH₄ up to 0.013% H₂O, remainder - nitrogen; ПСА-09 (PSA-09) - mixture of nitrogen and hydrogen produced from the combustion products of cracked ammonia; ДА (DA) - cracked ammonia, consisting of 75% and 25% nitrogen; electrolytic hydrogen; КГ-H₂O (KG-H₂O) - a strong reducing gas obtained by cracking hydrocarbon gas with steam and containing 50-99% hydrogen; КГ-ВО (KG-VO) - obtained by cracking hydrocarbon gas with air and consisting of 20% CO, 40% H₂ and 40% N₂; argon and helium. The description of gas production processes is illustrated by block diagrams of gas producer systems. The gases can be used for bright annealing, tempering, carbonizing, carbonitriding, and nitriding of low- and medium-carbon steels, alloy steel, high-speed steel, thin sheet steel, etc. There are 7 figures, 1 table and 9 references: 2 Soviet and 7 non-Soviet bloc. The four most-recent English-language references are: R.R. Swain, Iron and Steel Eng., no. 9, (1957); J.L. Garrison, Iron and Steel Eng., no. 7 (1957); W.H. Holcroft, Metal Progress, v. 72, no. 4 (1957); C.E. Peck, Metal Progress, v. 72, no. 3 (1957).

Card 2/3

KOPYTOV, V.F.

Combustion products of natural gas used for heating construction
works and production shops. Gas.prom. 5 no.9:25-28 S '60.
(MIRA 13:9)

(Gas ad fuel)

(Gas burners)

KOPYTOV, V.F.

Gas utilization institute of the Academy of Sciences of the U.S.S.R.
Gaz. prom. 6 no.3:22-25 '61. (MIRA 14:3)
(Ukraine—Gas, Natural)

KOPYTOV, Viktor Filimonovich; KAPLAN, V.G., red.; LANOVSKAYA, M.R.,
red. izd-va; ISLENT'YEVA, P.G., tekhn. red.

[New methods of gas heating] Novye metody gazovogo nagreva.
Moskva, Metallurgizdat, 1962. 135 p. (MIRA 15:3)
(Gas heating)

KOPYTOV, Viktor Filimonovich; KACHKIN, V.G., red.; GRIGOR'YEVA, I.S.,
red. izd-va; BELOGUROVA, I.A., tekhn. red.

[Using new gas heating techniques; verbatim report]Primenenie
novykh metodov gazovogo nagreva; stenogramma lektsii. Lenin-
grad, 1962. 36 p. (MIRA 15:8)
(Gas heating--Equipment and supplies)

KOPYTOV, V.F., otv. red.; DAVYDOV, G.M., kand. ekon. nauk, red.;
KLIMENKO, V.Ya., kand. geol.-min. nauk, red.; GOREV, N.A.,
inzh., red.; GORODETSKIY, V.I., inzh., red.; LYASOVSKIY,
N.F., inzh., red.; TUMANOV, A.P., inzh., red.; STUKALOV,
K.V., inzh., red.; TILOVA, N.M., red. izd-va; CHUMACHENKO,
V.S., red. izd-va; LIBERMAN, T.R., tekhn. red.

[Development of the Ukrainian gas industry] Razvitie gazovoi
promyshlennosti Ukrainy. Kiev, Izd-vo Akad. nauk USSR, 1962.
274 p. (MIRA 15:11)

1. Akademiya nauk URSR, Kiev. Rada po vyvchenniu produktyv-
nykh syl URSR. 2. Chlen-korrespondent Akademii nauk Ukr.SSR i
Institut ispol'zovaniya gaza Akademii nauk Ukr. SSR (for
Kopytov). 3. Sovet po izucheniyu proizvoditel'nykh sil Ukr.
SSR (for Davydov). 4. Institut geologicheskikh nauk Akademii
nauk SSR (for Klimenko). 5. Ukrainskoye otdeleniye Gosudar-
stvennogo instituta po proyektirovaniyu zavodov iskusstven-
nogo zhidkogo topliva i gaza. (for Gorodetskiy). 6. Gosudar-
stvennyy planovyy komitet Soveta Ministrov SSSR (for Gorev,
Lyasovskiy).

(Ukraine--Gas, Natural)

KOPYTOV, V.F.

In the Institute of the Study of the Use of Natural Gas of the
Academy of Sciences of the U.S.S.R. Gaz. prom. 7 no.5:52-56 '62.
(MIRA 17:11)

SOROKIN, A.I., red.; ALEKSANDROV, A.V., red.; KLIMUSHIN, A.M.,
red.; KOPYTOV, V.F., red.; TREBIN, F.A., red.;
TURKIN, V.S., red.; CHERNYAK, L.M., red.; SOROKIN, A.I.,
red.; ZUBAREVA, Yelena Ivanovna, ved. red.; SOLGANIK,
Grigoriy Yakovlevich, ved. red.; POLOSINA, A.S., tekhn.red.

[Techniques used in the gas industry of foreign countries]
Zarubezhnaia tekhnika gazovoi promyshlennosti; doklady. Mo-
skva, Gostoptekhizdat, 1963. 386 p. (MIRA 17:2)

1. International Gas Congress. 7th, Stockholm. 1961.

KOPYTOV, V.F., doktor tekhn. nauk, otv. red.; VESELOV, V.V.,
kand. khim. nauk, red.; YERINOV, A.Ye., kand. tekhn. nauk,
red.; TISHCHENKO, A.T., kand. tekhn. nauk, red.; DASHEVSKIY,
L.N., kand. tekhn. nauk, red.; CHEGLIKOV, A.T., kand. tekhn.
nauk, red. SIGAL, I.Ya., kand. tekhn. nauk, red.;
SEMENKOVSKAYA, P.T., kand. tekhn. nauk, red.; YEREMENKO, A.S.,
kand. tekhn. nauk, red.; DYBAN, Ye.P., kand. tekhn. nauk, red.;
FEDOROV, V.I., kand. tekhn. nauk, red.; POL'SKIY, N.I., kand.
fiz.-mat. nauk, red.

[Transactions of the Second Heat Engineering Conference of
Young Research Workers] Trudy vtoroi teplotekhnicheskoi kon-
ferentsii molodykh issledovatelei. Kiev, Izd-vo AN USSR, 1963.
278 p. (MIRA 17:6)

1. Teplotekhnicheskaya konferentsiya molodykh issledovateley,
2, 1963. 2. Chlen-korrespondent AN Ukr.SSR (for Kopytov).

KOPYTOV, V.F.; STEZHENSKIY, A.I.; ZAGOROVSKIY, O.A.

Oxidation of atmospheric nitrogen in gas furnaces. Gaz. prom.
9 no.7:26-29 '64. (MIRA 17:8)

KOPITOV, V.F.

Work of the Institute for the Utilization of Gas of the
Academy of Sciences of the U.S.S.R. Gaz. prom. 8 no.9:28-29
S '63. (MIRA 17:8)

KOPYTOV, V.I., inzh.

Forced oscillations in systems with two degrees of freedom
caused by impact against the limiter of a mass. Izv. vys. ucheb.
sav.; gor. zhur. no.8:91-97 '58. (MIRA 12:5)

Leningradskiy politekhnicheskii institut.
(Boring machinery--vibrations)

ALABUZHEV, P.M.; KOPYTOV, V.I.

Investigating the vibration of a weight hitting a limiting device.
Iss. TPI 106:213-226 '58. (MIRA 11:11)
(Vibration)

KOPYTOV, V. I., Cand Tech Sci (diss) -- "Some problems in the theory of emission in shock machines". Tomsk, 1959. 12 pp (Min Higher and Inter Spec Educ RSFSR, Tomsk Order of Labor Red Banner Polytech Inst im S. M. Kirov, Chair of Theoret Mech), 150 copies (KL, No 10, 1960, 130)

SMOKOTIN, G. Ya, starshiy prepodavatel'; KOPYTOV, V.I., assistant

Calculating the impact energy in the repeated impact test of metals. Izv.vys.ucheb.zav.; gor.zhur. no.8:49-54 '59.

(MIRA 13:5)

1. Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskoy institut imeni S.M.Kirova. Rekomendovana kafedroy teoreticheskoy mekhaniki Tomskogo politekhnicheskogo instituta.

(Metals--Testing)
(Testing machines)

KOPYTOV, V.I., inzh.

Vibrations in the system elastic coupling-mass-limiter with one degree of freedom, taking force of resistance into consideration. Izv. vys. ucheb. zav.; gor. zhur. no.9:68-76 '59. (MIRA 14:6)

1. Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskii institut imeni S. M. Kirova. Rekomendovana kafedroy teoreticheskoy mekhaniki.

(Vibration)

ALABUZHEV, P. M., prof.; KOPYTOV, V. I., dotsent

Analytical studies of the vibrations of the shell of breaking and drilling hammers. Izv. vys. ucheb. zav.: gor. zhur. 5 no.8:95-99 '62. (MIRA 15:10)

1. Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskii institut imeni S. M. Kirova (for Alabushev). 2. Novosibirskiy elektrotekhnicheskii institut (for Kopytov). Rekomendovana kafedroy teoreticheskoy mekhaniki Novosibirskogo elektrotekhnicheskogo instituta.

(Boring machinery) (Vibration)

GORBUNOV, V.F., inzh.; KOPYTOV, V.I., inzh.; VYSOTSKIY, I.F., inzh.

Results of the investigation of a specimen of pneumatic
drill with an elastic handle. Izv. vys. ucheb. zav.;
mashinostr. no.10:54-57 '63. (MIRA 17:3)

1. Tomskiy politekhnicheskoy institut.

L 32941-66 EEC(k)-2/EWT(d)/FSS-2 BC

ACC NR: AP6022062

SOURCE CODE: UR/0146/66/009/003/0100/0103

AUTHOR: Kopytov, V. I.; Studenikin, A. I.

ORG: Tomsk Polytechnical Institute, Department of Gyroscopic Instruments and Devices
(Tomskiy politekhnicheskiy institut, Kafedra giroskopicheskikh priborov i ustroystv)

TITLE: Floating vibration gyroscope ⁹

SOURCE: IVUZ. Priborostroyeniye, v. 9, no. 3, 1966, 100-103

TOPIC TAGS: gyro, gyroscope, gyroscope suspension

ABSTRACT: While recent designs of vibration gyroscopes have many advantages over the conventional gimbaled type, they have an inherent problem in their low level of output signal. The authors describe an improved vibration gyro which can provide an adequate output signal without degrading gyro performance. The design, shown in Figure 1, consists of two resonant tuning fork masses (1,1) resonated at fixed amplitude by electromagnets (3,3) and mounted in a hermetically sealed float (2) which is secured to the gyro outer case (5) by torsion springs (6) with very low spring constants. If we first assume a constant rotational velocity of the gyro platform about the X-axis, the float will eventually assume the same velocity, due to the combined action of the springs and viscous drag of the liquid filler. The amplitude of the fork oscillation varies with float rotational velocity and is sensed by pickoff (7). Assuming the more general case where the gyro platform may

Card 1/3

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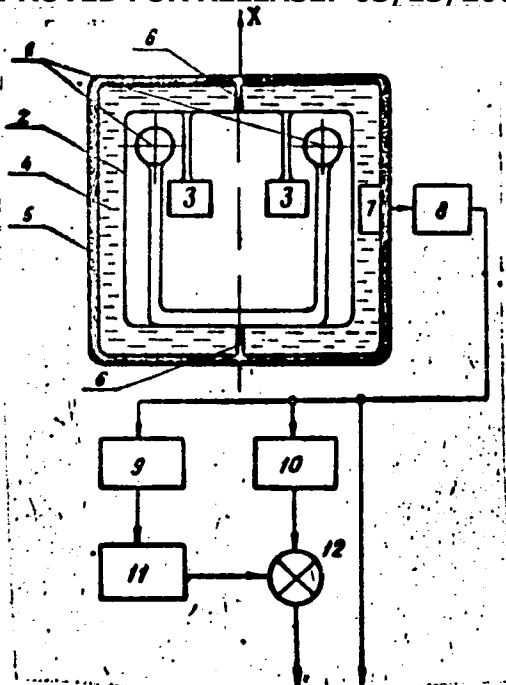


Fig. 1. Vibration gyro

- 1 - Tuning fork masses; 2 - sealed float; 3 - electromagnets;
- 4 - fluid; 5 - outer case; 6 - torsion springs; 7 - pickoff;
- 8 - discriminator; 9 - amplifier;
- 10 - differentiator; 11 - detector;
- 12 - summer.

Card 2/3

L 32941-66

ACC NR: AP6022062

rotate at a varying velocity, a corresponding modulation of the high-frequency sensed signal will appear. The carrier and modulation frequencies are separated in discriminator (8), after which the carrier signal is detected and the modulation signal is differentiated. The resulting signals are proportional respectively to the velocity of the float about the X-axis and the gyro case about the float, hence their sum yields the net platform velocity about the X-axis. From the motion equations for the system the authors show that the pickup sensitivity is a direct function of the applied vibrational frequency, and therefore can be designed to a desired level. This feature is cited as an advantage over the earlier Sperry vibrational gyro. Orig. art. has: 1 figure and 7 formulas. [SH]

SUB CODE: 17/ SUBM DATE: 17Oct65/ OTH REF: 002/ ATD PRESS: 5028

Card

3/3

LLB

ACC NR: AP6021453

SOURCE CODE: UR/0413/66/000/011/0077/0078

INVENTOR: Kopytov, V. I.; Studenikin, A. I.

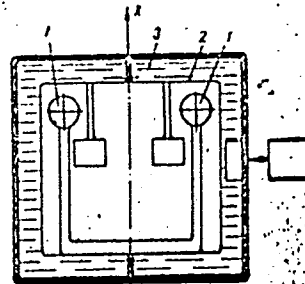
ORG: None

TITLE: A floating vibration gyroscope. Class 42, No. 182345

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 77-78

TOPIC TAGS: gyroscope system, torsional vibration

ABSTRACT: This Author's Certificate introduces a floating vibration gyroscope containing a sensing element which consists of masses oscillating at resonance frequency in phase opposition. These masses are suspended in the housing on elastic torsional supports. The unit also contains a device for signal takeoff. The sensitivity of the gyroscope to the rate of angular motion of the housing is increased by making the sensing element in the form of an airtight float suspended in a liquid with inertial masses inside.



SUB CODE: 17, 13 SUBM DATE: 02Nov64

Card 1/1

UDC: 62-752,4

KOKORIN, A.I.; KOPYTOV, V.M.

On some classes of ordered groups. Alg. i log. 1 no.3:21-23 '63
(MIRA 8:1)

~~SHLEVIN, I.N.; KOPYTOV, V.M.~~
Semigroups having subsemigroups with relative complements.
Dokl.AN SSSR 145 no.5:1012-1015 '62. (MIRA 15:8)

1. Ural'skiy gosudarstvennyy universitet im. A.M.Gor'kogo.
Predstavleno akademikom A.I.Mal'tsevym.
(Groups, Theory of)

KOPYTOV, V.N., inzhener; MALOV, L.M., inzhener; SHEVCHENKO, A.G.,
inzhener.

Repairing generator contact rings. Elek.sta. 25 no.10:52-53 0 '54.
(Dynamos) (MIRA 7:11)

КОПЫТОВ, В.П., kandidat tekhnicheskikh nauk; SIGAL, I.Ya., inzhener.

Gas burner for room heater. Trudy Inst. isp.gaza AN URSS 1:
40-43 '53. (Gas burners) (MLBA 9:6)

KOPYTOV, V.P., kandidat tekhnicheskikh nauk.

Calculating some nonoxidizing processes used in the heat
treatment of steel. Trudy Ins. isp. gaza AN URSS 1:80-98
'53. (Furnaces, Heat-treating) (MLRA 9:6)

SOV/137-57-11-20801

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 11, p 23 (USSR)

AUTHOR: Kopytov, V.S.

TITLE: A New Metering Device for Reactants (Novyy dozator reagentov)

PERIODICAL: Obogashcheniye rud, 1956, Nr 5, p 51

ABSTRACT: This device is employed at the Balkhash Copper Smelter. A pump delivers the solution from one tank to another tank located at a higher level. Under the pressure that comes into being because of the difference in levels, the solution from the 2nd tank flows through a calibrated aperture. Excess solution returns to the first tank through a drain line. Utilization of this metering device has made it possible to solve the problem of distribution of the solution to a number of different points.

A.Sh.

Card 1/1

KOKOVIN, I.N.; KOPYTOV, V.S.

Introducing a flowsheet of gravity concentration by stages. Obeg.
rud. 3 no.3:43-44 '58. (MIRA 12:1)
(Ore dressing)

KOPYTOV, V.S.; SOLOMENNIKOV, Ye.I.; TUGARINOV, V.K.

Improving crushing department operations in Leninogorsk
Combine plants. Obog.rud. 7 no.1:49-53 '62. (MIRA 15:3)

1. Leninogorskiy kombinat.
(Leninogorsk (East Kazakhstan Province)—Ore dressing)

KOPYTOV, V.S.; SOLOMENNIKOV, Ye.I.; TUGARINOV, V.K.

Improving the operation of crushing and grinding departments in plants of the Leninogorsk Combine. Obog. rud 7 no.4:51-54 '62. (MIRA 16:4)

1. Leninogorskiy kombinat.
(Leninogorsk (East Kazakhstan Province)—Ore dressing)

L 51509-65 EWT(d)/EWT(l)/EEC(m)/ZWT(m)/EWP(w)/EWP(f)/EWP(v)/EWP/T-2/EWP(k)/EWA(h)/
EWA(c) Po-l/Pq-l/PP-l/PS-l/Peb/PL-l WA/EM

ACCESSION NR: AP5015320

UR/0286/65/000/009/0076/0076
591 121.86

AUTHOR: Bel'kovskaya, T. N.; Byzov, L. N.; Kopytov, V. Ye.

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54
B

TITLE: A turbine flowmeter. Class 42, No. 170702

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 76

TOPIC TAGS: flowmeter, flow measurement, turbine rotor

ABSTRACT: This Author's Certificate introduces: 1. A turbine flowmeter which consists of a pipe containing the fluid whose flow is to be measured, a rotor which turns at a rate proportional to the volumetric flow, and a trachometer. In order to eliminate bearings in the flow meter, the rotor is located between a swirler and a jet straightener. These devices create the pressure difference which is necessary for balancing the drag of the rotor. 2. A modification of this flow meter in which a jet tube is mounted in the center of the swirler. The rotor acts as a valve with negative feedback with respect to the auxiliary stream created by the jet tube. Thus the forces applied to the rotor are balanced and equilibrium is achieved within a wide range of variations in the flow and physical properties of the

Card 1/3

L 51509-65

ACCESSION NR: AP5015320

fluid which is being inspected.

ASSOCIATION: Leningradskiy ordena krasnogo znameni mekhanicheskii institut
(Leningrad "Order of the Red Banner" Institute of Mechanical Engineering)

REMITTED: 09Jan64

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SUP CODE: IE

REF ID: 000

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ACCESSION NR: AP5015320

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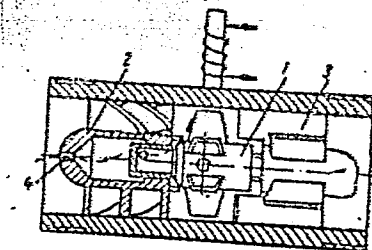


Fig. 1. 1--rotor; 2--swirler; 3--jet straightener; 4--jet tube

AV
Card 3/3

KOPYTOV, Ya.

PA 19T67

USSR/Microphones, Carbon
Microphones - Diaphragms

Apr/May 1946

"The Microphone Capsule," Ya. Kopytov, Chief of the Telephone Section of the Bashkir Administration of the Ministry of Communications, USSR, $\frac{1}{2}$ p

"Vestnik Svyazi - Elektro Svyaz'" No 4/5 (73-74)

Dampening of the carbon powder and diaphragm of a microphone capsule are the main reasons for its becoming non-operational. Discusses means adopted by the Bashkir Administration to combat damage by moisture. Capsule type MK-10 has so far given the best service.

19T67

KOMSKIY, D. Primali uchastive: VOLKOV, V.; VOLCHKOV, V.;
GORSHKOV, A. KOPYTOV, Ye.; SALOV, V.; SHORIKOVA, T.;
STOLYAROV, Yu., red.

[Cybernetics made easy] Prostaia kibernetika. Moskva,
Molodaia gvardiia, 1965. 158 p. (MIRA 18:7)

1. Sverdlovskiy gosudarstvennyy pedagogicheskiy institut
(for all except Stolyarov).

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S/126/60/010/004/006/023
E201/E491

9.4300 (1137, 1138, 1143)

AUTHORS: Samokhvalov, A.A., Fakidov, I.G. and Kopytov, Ye.I.

TITLE: The Anomaly of Very-High-Frequency Permittivity of Antiferromagnetic Semiconductors at the Néel Temperature

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol.10, No.4, pp.538-542

TEXT: A waveguide method was used at 9500 Mc/s to study the permittivity anomaly of Cr_2O_3 at the Néel temperature of 33 to 37°C. Cr_2O_3 is an antiferromagnetic semiconductor with very low electrical conductivity (10^{-9} - 10^{-14} ohm $^{-1}$ cm $^{-1}$) at room temperature. Its forbidden bandwidth depends on many factors and ranges from 0.4 to 0.8 eV; on transition through the Néel point the activation energy jumps by 0.08 eV. Samples were made from Cr_2O_3 powders of ЧДА (ChDA) purity by pressing (5000 kg/cm 2) and subsequent firing at 800 to 900°C. Before measurement the samples were dried by vacuum heating at 400°C. The circuit used in measurements is shown in a figure on p.540. A klystron oscillator of 51-M (51-I) type was used as the source. A standard waveguide line, with an indicator making it possible to measure the standing-wave minimum to within 0.01 mm, was employed. The signal was passed to a narrow-

85038
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E201/E491

The Anomaly of Very-High-Frequency Permittivity of Antiferromagnetic Semiconductors at the Néel Temperature

band amplifier of 21-MM (21-IM) type or to a ГТТЗ-2 (GPZ-2) galvanometer. Both the amplifier and the klystron oscillator had stabilized power supplies. Permittivity was measured with an additional waveguide section (1 in the figure) insulated from the main waveguide by a thin mica plate. A sample was heated with an oven (2 in the figure) and its temperature was measured with a copper-constantan thermocouple (5). The sample (4) was placed at the short-circuited end of the section 1 or at a quarter-wavelength from the short-circuited end, i.e. in the open-circuit position. Complex permittivity was found from displacement of the standing-wave minimum and from measurements of the standing-wave ratio, deduced from the width of the standing-wave minimum. It was found that on transition to the paramagnetic state the real component of permittivity increased discontinuously by 3 to 4%. This jump may affect markedly the changes of the energy spectrum on destruction of the antiferromagnetic spin order at the Néel temperature. The authors point out that similar permittivity jumps were observed in other antiferromagnetics such as MnS, FeO etc. The authors
Card 2/3

85038

S/126/60/010/004/006/023
E201/E491

The Anomaly of Very-High-Frequency Permittivity of Antiferromagnetic Semiconductors at the Néel Temperature

measured also the dispersion of permittivity between 100 and 10^8 c/s: permittivity was 16 ± 1 at 100 c/s, decreasing monotonically with frequency and reaching 3.8 ± 0.3 near 10^8 c/s. (The latter was the value obtained at 9500 Mc/s and 20°C.) There are 1 figure and 12 references: 2 Soviet, 6 English, 3 French and 1 translation from English into Russian. ✓

ASSOCIATION: Institut fiziki metallov AN SSSR
(Institute for Metal Physics, AS USSR)

SUBMITTED: March 9, 1960

Card 3/3

AYZENBERG, A.I.; KOPYTOV, Yu.A., starshiy nauchnyy sotrudnik; GURULEVA,
N.M., mladshiy nauchnyy sotrudnik

Comparison of frontal frame dogging carriages based on the
time of completing auxiliary operations. Trudy VSNIPILesdrev
no.9:18-21 '64. (MIRA 18:11)

AIZENBERG, A.I.; KOPYTOV, Yu.A., starshiy nauchnyy sotrudnik

Stand and field testing of the cable drive of a frontal
frame dogging carriage. Trudy VSNIPILedrev no.9:22-26 '64.
(MIRA 18:11)

KOPYTOV, Yu. A., inzh.

Strong spherical cabin on the bathyscaphe "Trieste" [from foreign journals]. Sudostroenie 27 no.6:73-74 Je '61 (MIRA 14:6)
(Italy--Bathyscaphe)

S/112/59/000/016/015/054
A052/A002

Translation from: Referativnyy zhurnal, Elektrotehnika, 1959, No. 16, p. 104,
34232

AUTHORS: Negovskiy, A., Kopytova, A.

TITLE: Raising the Power of Electric Furnaces for Smelting Electrolytic
Corundum ✓

PERIODICAL: Tekhn.-ekon. byul. Sovnarkhoz Zaporozhsk. ekon. adm. r-na, 1958,
No. 1, pp. 12-15

TEXT: In order to improve the quality of corundum blocks smelted at Zaporozhskiy abrazivnyy zavod (Zaporozh'ye Abrasives Plant), circuit and design of the furnace transformer have been modified. The power of the furnace has been raised from 2,500 kw to 3,800-4,500 kw by reconnecting the transformer winding from star to delta and by adding an oil-cooling column. These alterations have secured an increase of the specific surface power at the charge hole from 220 to 300 kw/m². The quality of block melting has improved and the efficiency of furnaces per hour has increased by 8%. At the same time the yield of the

Card 1/2

KOPYTOVA, E.A.

Spores of the fern *Todites Szeiana* (P'an) Brick in Upper
Triassic sediments of the Kurayly series in western Kazakhstan.
Trudy VNIGNI no.37:59-61 '63. (MIRA 16:8)

KOPYTOVA, E.A.

New spore-pollen species from Triassic sediments in western
Kazakhstan. Trudy VNIGNI no.37:65-69 '63. (MIRA 16:8)

KOPYTOVA, E.A.

Stratigraphy and spore-pollen complexes of Triassic sediments in the Ilek basin (Ural Mountain portion of Aktyubinsk Province). Trudy VNIIGI no.37:77-88 '63. (MIRA 16:8)

KIRZON, M.I.; KOPYKOVA, F.V.

Effect of sensory stimulations on the "spontaneous" afferent activity recorded in the common nerve trunk in frogs. Biol. eksp. biol. i med. 60 no.9:10-15 S '65. (MIRA 12:10)

1. Kafedra fiziologii zhivotnykh (zav. - prof. B.I. Kudryashov) biologo-pochvennogo fakul'teta Moskovskogo gosudarstvennogo universiteta imeni Lomonosova.

BASKAKOVA, G.M.; KOPYTOVA, F.V.

Effect of aminazine on respiration in the frog. Biul. eksp. biol.
i med. 56 no.12:20-23 D '62.

(MIRA 17:11)

1. Kafedra fiziologii zivotnykh (nauchnyy rukovoditel' - prof.
M.V. Kirzon) biologo-pochvennogo fakul'teta Moskovskogo gosudarst-
vennogo universiteta imeni M.V. Lomonosova.

KOPYTOV, V.F., kandidat tekhnicheskikh nauk; KOPYTOVA, G.F., inzhener;
SOROKIN, P.V.

Decarbonizing steel in flame furnaces. Vest.mash. 34 no.3:36-40
Mr '54. (MIRA 7:4)
(Steel--Metallurgy)



BRUK, M.I. [deceased]; KOPITOVA, E.A.; TURUTANOVA-KETOVA, A.I.

Some Mesozoic ferns and their spores of the southwestern Ural Mountain
region. Mat. VSEGEI no. 9: 131-177 '55. (MIRA 9:9)
(Ural Mountain region--Ferns, Fossils)

1. KOPYTOVA, **5**. A.

2. USSR (600)

4. Alga Region - Lignite

7. Report on the exploratory survey and prospecting activities in the region of the Alga lignite deposits in the Aktyubinsk Province during 1944. Abstract / Izv. Glav.upr.geol.fon. No. 3, 1947.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

KOPYTOVA, L.A.

Individual style of labor activity of the adjusters as affected
by the strength of excitatory processes of the nervous system.
Vop. psikhol. 10 no.1:25-33 Ja-F'64 (MIRA 17:3)

1. Kafedra psikhologii Permskogo pedagogicheskogo instituta.

3/689/61/600/000/010/03
D205/D303

18.1210

AUTHORS: Matveyev, B.I., and Konvtova, M.V.

TITLE: Influence of the manganese content, temperature and degree of deformation on the mechanical properties of large profiles of the B95 (V95) alloy

SOURCE: Fridlyander, I.M., V.I. Dobatkin, and Ye.D. Zakharov, eds. Deformiruyemye alyuminiyevyye splavy; sbornik statey. Moscow, 1961, 76 - 84

TEXT: Differences in the Mn content of V95 alloys induce different mechanical characteristics into profiles made thereof. Thus V95 containing 0.1 % Mn will have a higher strength and plasticity in the transverse direction owing to partial recrystallization after thermal treatment, while alloys with higher Mn contents do not undergo recrystallization at all which results in lower values of strength and plasticity in the transverse direction. V95 alloys containing 0.1, 0.25, 0.35 and 0.5 % Mn at a constant Cr content of 0.15 % were chosen for investigation. The ingots were homogenized at 450°C over 24 hours

Card 1/3

Card 2/3

Influence of the manganese content ...

S/689/61/000/000/010/03.
D205/9303

Tensile strength and the yield points were independent of the Mn content, temperature and the degree of deformation. There are 4 figures, 4 tables and 4 Soviet-bloc references.

✓ B

Card 3/3

S/137/62/000/005/105/150
A006/A101

AUTHORS: Matveyev, B. I., Kopytova, M. V.

TITLE: The effect of the manganese content, the temperature and degree of deformation upon the mechanical properties of large-size B 95 (V95) sections

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 71 - 72, abstract 5I434 (V sb. "Deformiruyemyye alyumin. splavy", Moscow, Oborongiz, 1961, 76 - 84)

TEXT: Grade V95 alloys containing Mn within 0.1; 0.25; 0.35; 0.5%, and a constant amount of Cr within 0.15%, were investigated. In the extremal direction, σ_b and σ_s change practically little at Mn 0.12 - 0.52%, 440 - 360°C extrusion temperature and 75 - 90% deformation degree. In lengthwise direction δ changes to a higher degree, depending on the Mn content, and the temperature and degree of deformation. An increase of the Mn content from 0.12 to 0.52% entails at all extrusion temperatures a decrease in δ in lengthwise direction. In the transverse direction σ_b and σ_s change little depending on the Mn content. the

Card 1/2

S/123/62/000/012/002/010
A004/A101

18.1000
AUTHORS: Matveyev, B. I., Kopytova, M. V.

TITLE: The effect of the manganese content, temperature and degree of deformation on the mechanical properties of large-size sections from the \bar{P} 95 (V95) alloy

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 12, 1962, 23, abstract 12A149 (V sb. "Deformiruyemyye alyumin. splavy". Moscow, Oborongiz, 1961, 76 - 84)

TEXT: The authors investigate the effect of the Mn-content (0.1 - 0.52% at 0.15 % Cr), temperature (360, 400, 440°C) and degree of deformation (75, 85, 90%) during pressing by the direct and reversed methods on the mechanical properties in the longitudinal and transverse direction of the V95 alloy. σ_b and σ_s in the transverse and longitudinal direction change only slightly depending on the Mn-content, temperature and degree of deformation during pressing; δ changes considerably in both directions. Increasing Mn from 0.12 to 0.52% reduces δ in the transverse direction by a factor of 2 at a temperature of 440 - 400°C, and at a pressing temperature of 360°C nearly by a factor of 3. An increase in the degree

Card 1/2