L 14023-65

ACCESSION NR: AP4049004

Inzhenerny*y zhurnal, no. 1, 1961) by means of the area rule when the dimensions of the entropy layer are sufficiently larger than the transverse dimensions of the shock layer, that is, at not too large distances from the tip of the blunted body. Thus, the region of applicability of the area rule is given by the expression

$$\frac{D}{L} \ll C_{x_i}^{1/4}\left(\frac{d}{L}\right)^{1/3} ,$$

where D is the diameter of the body, C is the nose drag, and d is the characteristic dimension of nose bluntness. When the distance L is large enough, that is, the thickness of the entropy layer is small compared with that of the shock layer, the inequality may be written as

$$\frac{D}{L} > C_{x_i}^{1/4}\left(\frac{d}{L}\right)^{1/3} .$$

small circumferential pressure gradients appear in the entropy layer and low density of gas in that region. Orig. art. has: 8 formulas.

Card 2/3

L 14023-55
ACCESSION NR: AP4049004

ASSOCIATION: Institut mekhaniki MGU (Institute of Mechanics, MGU)

SUBMITTED: 00   ENCL: 00   SUB CODE: ME

N: REF SOV: 005   OTHER: 002   ATD PRESS: 3135

Card 3/3

SYCHEV, V.V.

International Symposium on the Properties and Use of Low-
temperature Plasmas. Teplofiz. vys. temp. 3 no.3:491 My-Je '65.
(MIRA 18:8)

L 23869-66   EWT(m)/EPF(n)-2/EWP(t)   IJP(c)   JD/JG/GS
SOURCE CODE: UR/0000/65/000/000/0238/0241   . 44

ACC NR: AT6009942

AUTHOR: Sychev, Yu. N.; Vlasov, L. G.; Lapitskiy, A. V.

ORG: none

TITLE: Use of gas chromatography in the preparative purification of niobium and tantalum chlorides involving removal of iron

SOURCE: AN SSSR. Otdeleniye obshchey i tekhnicheskoy khimii. Issledovaniya v oblasti khimii i tekhnologii mineral'nykh soley i okislov (Studies in the field of chemistry and technology of mineral salts and oxides). Moscow, Izd-vo Nauka, 1965, 238-241

TOPIC TAGS: tantalum compound, iron compoud, niobium compound, chloride, adsorption, activated carbon, metal purification, gas chromatography

ABSTRACT: Gas chromatographic (gas adsorption) techniques were applied to the preparative separation of chlorides of certain rare elements from ferric chloride. The two pairs $NbCl_5$-$FeCl_3$ and $TaCl_5$-$FeCl_3$ were investigated and BAU activated carbon was used as the adsorbent. The preparation of this adsorbent and the apparatus employed in the removal of iron from $NbCl_5$ and $TaCl_5$ are described. The samples obtained after the purification were analyzed colorimetrically (iron was found to be absent) and radio-metrically (iron present in quantities of less than $1 \cdot 10^{-6}\%$, which is the sensitivity limit, determined by the specific activity of the iron-59 isotope introduced). Ana-

Card 1/2

L 23869-66

ACC NR: AT6009942 0

lysis of the chromatographic column after the purification showed that iron has a con-
vex adsorption isotherm on carbon relative to the axis of abscissas, and that high
concentrations of ferric chloride move at a higher rate than low ones. This behavior
of the chloride on carbon, similar to its behavior on silica gel, suggests that the
removal of iron from tantalum and niobium can be carried out with a high separation
factor. Orig. art. has: 2 figures.

SUB CODE: 07/   SUBM DATE: 28Nov63/   ORIG REF: 002/   OTH REF: 000

Card 2/2 dda

L 23867-66   EWT(m)/EPF(n)-2/EWP(t)   IJP(c)   JD/JG/GS

ACC NR: AT6009943   SOURCE CODE: UR/0000/65/000/000/0242/0246

AUTHOR: Sychev, Yu. N.; Vlasov, L. G.; Lapitskiy, A. V.

ORG: none

TITLE: Possibility of purifying niobium during the chlorination of Nb_2O_5

SOURCE: AN SSSR. Otdeleniye obshchey i tekhnicheskoy khimii. Issledovaniya v oblasti khimii i tekhnologii mineral'nykh soley i okislov (Studies in the field of chemistry and technology of mineral salts and oxides). Moscow, Izd-vo Nauka, 1965, 242-246

TOPIC TAGS: niobium compound, metal purification, chlorination

ABSTRACT: An attempt was made to follow the behavior of certain impurities found in niobium pentoxide during its chlorination and to carry out a preliminary purification of niobium pentachloride during the chlorination process. The following labeled micro-impurities were used: iron-59, calcium-45, tin-113, phosphorus-32, and cadmium-115[m]. Niobium metal was chlorinated and the $NbCl_5$ formed was dissolved in conc. HCl. Solutions of the isotopes were then added to portions of the HCl solution, and the specific activity was determined. The pentoxide was then precipitated with ammonia and the degree of coprecipitation was determined by measuring the residual activity of the filtrate. Chlorination of Nb_2O_5 labeled with tin-113 confirmed that niobium pentachloride can be separated from group II impurities, since the pentachloride obtained

Card 1/2

Card 2/2

TOPIC TAGS: hypersonic flow, viscous flow, inviscid flow, viscous interaction, boundary layer, unsteady flow

Card 1/2

L 42309-05

ACCESSION NR: AP5021299

approximation. The results of a numerical calculation of the ... ... as an
... example. The method used here for obtaining the asymptotic solution ... the solution

SUBMITTED: ... ENCL: ... SUB CODE: ME

NO REF SOV: 002   OTHER: 004   ATD PRESS: 4072

Card 2/2

L 9282-66   EWT(1)/EWP(m)/EWA(d)/FCS(k)/EWA(h)/EWA(c)/EWA(1)   WW

ACC NR: AP6000538   SOURCE CODE: UR/0040/65/C29/006/0997/1003

44,55

AUTHOR: Sychev, V. V. (Moscow)

ORG: none

TITLE: On the theory of strong blasts in heat-conducting gases

SOURCE: Prikladnaya matematika i mekhanika, v. 29, no. 6, 1965, 997-1003

TOPIC TAGS: blast, blast wave, viscous gas, heat conducting gas, shock wave, asymptotic solution, successive approximation, ideal gas, flow field

1,55

ABSTRACT: The theory of strong blasts and the exact solution presented by L. I. Sedov for a strong blast in an ideal gas with plane, cylindrical, and spherical shock waves are discussed with the purpose of finding a solution uniformly valid for the entire flow field, including its core, for the case of viscous, heat-conducting gases. This means determining the principal term of an internal asymptotic expansion on the basis of matching with Sedov's solution, inasmuch as it is the principal term of an external asymptotic expansion. Flow parameters such as velocity v, density p, and specific enthalpy h in the central region of a point explosion with spherical shock waves were calculated on a computer for $\gamma = 1.4$ and Prandtl number 0.7, using the method of successive approximations. The results in the form of functions $h(y_0)$, $p(y_0)$, $v(y_0)$, temperature variation in time for the entire flow field and in the center

Card 1/2

2

L 22420-66   EWT(l)/EWA(d)/T-2   IJP(c)   AT

ACC NR: AP6013615

SOURCE CODE: UR/0105/65/000/011/0022/0025

AUTHOR: Kartsev, V. P. (Moscow); Sapozhnikova, A. N. (Moscow); Sychev, V. V. (Moscow)

ORG: none

TITLE: Optimization of superconducting magnetic systems of MHD generators

SOURCE: Elektrichestvo, no. 11, 1965, 22-25

TOPIC TAGS: MHD generator, electronic computer, digital computer, superconductivity

ABSTRACT: Superconducting magnetic systems for MHD generators
(with or without ferromagnetic cores) should offer significant
advantages as compared with the usual systems because 1) they are
much smaller in weight and size; 2) they use much less electric
power for self-consumption; 3) the size of the entire MHD genera-
tor may be reduced by increasing the field strength within the
generator channel; and 4) there is an automatic damping of the
current reaction within the generator plasma and the generator
emf is independent of the load, due to the properties of the
superconductive circuit which maintains the current constant.
The design of superconductive magnetic systems has distinctive
peculiarities (the existence of a critical current beyond which
the conductor stops being superconductive; the superconductor

Card 1/2

UDC: 621.3.045.2:537.312.62

L 22420-66

ACC NR: AP6013615

critical current varies in a sharply nonlinear manner with the magnetic field strength; very high cost of superconductor material). Consequently, the author investigates the methods for the determination of rational geometric dimensions of a superconducting magnetic system without a permanent core. Following the formulation of the pertinent theoretical relationships the actual optimization calculation was carried out on the electronic digital computer "Ural-1". Orig. art. has: 5 figures and 8 formulas. [JPRS]

SUB CODE: 09, 20 / SUBM DATE: 20May65 / ORIG REF: 003 / OTH REF: 002

Card 2/2

KARTSEV, V.P. (Moskva); SAPOZHNIKOVA, A.N. (Moskva); SYCHEV, V.V. (Moskva)

Optimization of superconductive magnetic circuits of magneto-
hydrodynamic generators. Elektrichestvo no.11:22-25 N '65.
                                        (MIRA 18:11)

L 10245-66   EWT(1)/EWT(m)/EWA(d)/EWP(j)/EWP(t)/EWP(z)/EWP(b)   IJP(c)   JD/GG/RM

ACC NR: AP5027838   SOURCE CODE: UR/0020/65/165/001/0073/0076

AUTHOR: Sychev, V. V.; Zenkevich, V. B.; Andrianov, V. V.

ORG: Scientific-Research Institute of High Temperatures (Nauchno-issledovatel'skiy institut vysokikh temperatur)

TITLE: Inductance of a superconducting solenoid

SOURCE: AN SSSR. Doklady, v. 165, no. 1, 1965, 73-76

TOPIC TAGS: superconductivity, superconducting alloy, electric inductance, magnetic induction, solenoid

ABSTRACT: Earlier determinations of the inductance of superconducting solenoids led to contradictory results and transient processes in superconductive magnetic systems could not be explained by the existing ideas concerning the inductance of superconducting solenoids. The present authors carried out experiments using a test solenoid with 11,062 turns of Nb-33%Zr wire 0.2 mm in diameter. The wire is insulated by viniflex lacquer and has no metallic coatings. The inner diameter of the windings is 16 mm, the outer 51.5 mm, and the height of the solenoid is 37.5 mm. The coefficient of filling of the windings by the superconductive material is 0.525. The critical solenoid current is 11.5 a, corresponding to a maximum field at the center of the solenoid of 32 kO. The first series of tests dealt with the solenoid carrying a weak AC current component (1 ma, 80 cps) superimposed on a DC current component. In the second set of tests, the solenoid carrying a prescribed DC current was disconnected from the

Card 1/3   UDC: 537.312.8 + 538.532

L 10245-66

ACC NR: AP5027838

power supply by vacuum connectors and then connected across a discharge resistance (1 ohm).
The results are shown in Fig. 1. Computer calculations of the energy of the magnetic field
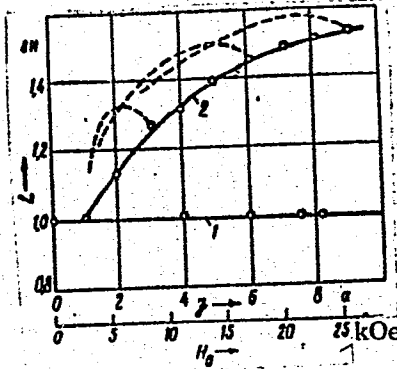

Fig. 1. Results of the measurement of the inductance of the superconducting solenoid.
Curves 1 and 2 correspond to the first and second series of tests, respectively.

within an appropriate magnetic field and the measured value of the total solenoid inductance at
liquid nitrogen temperatures yield a value of 0.971 H for the external inductance of the para-
magnetic solenoid. This is in good agreement with the experimental results. The article con-
cludes with a discussion of the possible reasons for the differences between curves 1 and 2.

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L 10245-66

ACC NR: AP5027838

The paper was presented by Academician V.A. Kirillin, 9 June 65. The authors thank V.A. Al'tov and V.G. Manuylov (who prepared the computer program) for their help during the investigation and F.F. Ternovskiy for discussing the results. Orig. art. has: 3 formulas and 1 figure.

[08]

SUB CODE: 09 / SUBM DATE: 08Jun65 / OTH REF: 002 / ATD PRESS: 4161

Card 3/3

ACC NR: AP6033854   SOURCE CODE: UR/0281/66/000/004/0026/0032

AUTHOR: Sychev, V. V. (Moscow)

ORG: none

TITLE: Present state of and prospects for the application of the phenomenon of super-conductivity. [Presented at a general meeting of the Department of Physico-Technical Problems of Power Engineering, AN SSSR, 5 February 1966 in Moscow.]

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 4, 1966, 26-32

TOPIC TAGS: cryogenic circuit, cryogenic device, superconductivity, superconducting alloy

ABSTRACT: A review of present and potential applications of superconductors, based on information contained in foreign literature is presented. Specific topics covered in this review are: the application of superconductors in physical experiments, electronics and computer technology, space exploration, gyroscopes and accelerometers, magneto-hydrodynamic generators and power transmission systems, production of superconductor materials, shielding of cryogenic systems and associated problems. Orig. art. has: 1 figure.

SUB CODE: 20/   SUBM DATE: 06May66/   ORIG REF: 003/   OTH REF: 012

UDC: 537.312.62

Card 1/1

SYCHEV, V.V. (Krasnogorsk, Moskovskaya oblast')

Vector electrosphygmography as a method for determining local
asymmetrical changes in the large vessels. Klin.med. 37
no.8:78-82 Ag '59.   (MIRA 12:11)
                    (VECTORCARDIOGRAPHY)

SYCHEV, V.V., polkovnik meditsinskoy sluzhby

Registration and study of pulse volume by vector-electrosphygmo-
graphy. Voen.-med.zhur. no.10:27-31 O '59.   (MIRA 13:3)
        (PULSE)
        (VECTORCARDIOGRAPHY)

SYCHEV, V.V., polkovnik meditsinskoy sluzhby

A graphic method for registering the pulse. Voen.med.zhur. no.12:
83-84 D '56.   (MIRA 10:3)
            (PULSE
                graphic registration method)

SYCHEV, V.V.

Effectiveness of treating hypertension in suburban sanatoriums,
Vop. kur., fizioter. i lech. fiz. kul't. 24 no. 4:305-309 Jl-Ag
'59.   (MIRA 13:8)

1. Iz klinicheskogo sanatoriya "Arkhangel'skoye" (nachal'nik-
kandidat meditsinskikh nauk K.Ye. Myasnikov).
                        (HYPERTENSION)

TEST, B.I.; OSIPOVA, Z.V.; SYCHEV, V.Ya.; SOROKOV, D.S., nauchnyy red.;
TOKAREVA, T.N., vedushchiy red.; SAFRONOVA, I.M., tekhn.red.

[Mesozoic sediments of the Zhigansk region] Mezozoiskie
otlozheniia Zhiganskogo raiona. Leningrad, Gos. nauchn.-tekhn.
izd-vo neft. i gorno-topl. lit-ry, Leningr. otd-nie, 1962.
117 p. (Leningrad. Nauchno-issledovatel'skii institut geologii
arktiki. Trudy, vol. 131).   (MIRA 15:11)
(Verkhoyansk Range—Geology)

SYCHEV, Ya.M.

Hormonal treatment of neuritis of the facial nerve. Zhur. nevr.
i psikh. 65 no.9:1335-1339 '65.   (MIRA 18:9)

1. Kafedra nervnykh bolezney (nachal'nik - prof. A.G. Panov)
Voyenno-meditsinskoy ordena Lenina akademii im. Kirova,
Leningrad.

SYCHEV, Ye.N.; STERCHENKO, Ye.A.

Provide animal husbandry with high-quality feeds. Veterinariia
40 no.11:14-15   N '63.   (MIRA 17:9)

1. Ministerstvo proizvodstva i zagotovok sel'skokhozyaystvennykh
produktov Moldavskoy SSR. 2. Starshiy veterinarnyy vrach
Upravleniya veterinarii Moldavskoy SSR (for Sychev).
3. Zaveduyushchiy khimicheskim otdelom Respublikanskoy
veterinarnoy laboratorii Moldavskoy SSR (for Sterchenko).

S/146/61/004/005/002/011
D221/D305

AUTHOR: Sychev, Yu.A.

TITLE: On measuring resistance with direct current

PERICDICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priboro-
               stroyeniye, v. 4, no. 5, 1961, 47-50

TEXT: The author indicates one of the methods which en-
sures a stabilized supply for resistance bridge measurement, and
also analyzes the quantities required for calculating the arrange-
ment, shown in Fig. 1. The direct voltage supply is stabilized by
a ferro-resonance and a barretter. Equations are derived for n%
deviation in the resistance reading. The unbalance voltage is then
given by $U = \dfrac{IrR_e - IrR_x}{2r + R_e + R_x}$. When $R_e > 2r < R_x$, then it is possible
to neglect $2r$. If the error in the unbalance in P% with disregard
of r, then $2r \leq \dfrac{P}{100} (R_e + R_x)$. Near the balance it is possible to

Card 1/4

On measuring resistance...

assume that $R_e \simeq R_x$, and therefore $r \leqslant \frac{P}{100} R_e$. The above establishes the relationship between the minimum measured resistance and the resistance that is permanently connected in the bridge. It also indicates that it is possible to neglect $2r$ when the unbalance varies by less than $P\%$. The voltage of unbalance is

$$U = Ir \; \frac{\pm \frac{n}{100} R_e}{2r_e \pm \frac{n}{100} R_e} \; .$$

The quantity $\frac{n}{100} R_e$ can be neglected as being small in comparison to $2r_e$, and the unbalance is finally represented by $|U| = Ir \frac{n}{200}$. It is therefore independent of the measured resistance, and is influenced by the error n in % of the standard resistance. This is more closely approached when $R_e > 2r$ (when $R_x \approx R_e$). In practice the range is limited by the sensitivity of the zero indicator and
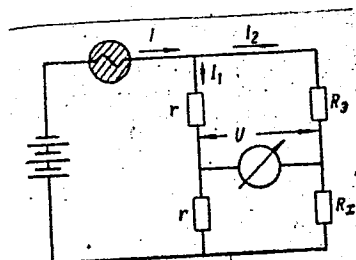
Card 2/4

On measuring resistance...

Fig. 1

Рис. 1

Card 4/4

On measuring resistance...

S/146/61/004/005/002/011
D221/D305

the allowed leakage losses. The sensitivity is determined by $S = \frac{1}{3}Ir$. The value of r cannot be always increased for obtaining higher sensitivity, because it results in narrowing of the measuring capacity. However, increase of I does not affect the range of readings, but produces a greater dissipation of power on losses. The above method was used in designing a bridge for automatic inspection and sorting of relay coils. The results of this operation are in good agreement with the theoretical conclusions of the article. This article was recommended by the Kafedra radiotekhniki LITMO (Department of Radiotechnics, LITMO). There is 1 figure.

ASSOCIATION: Bazovaya laboratoriya, Khar'kovskogo politekhnicheskogo instituta im. V.I. Lenina (Base Laboratory of the Khar'kov Polytechnic Institute im. V.I. Lenin)

SUBMITTED: March 10, 1961

Card 3/4

126-2-28/30

AUTHOR: Sychev, Yu. D.

TITLE: Magnetic surface effect during magnetisation of flat bodies in a curved field. (Magnitnyy poverkhnostnyy effekt pri namagnichivanii ploskikh tel v izognutom pole).

PERIODICAL: "Fizika Metallov i Metallovedeniye" (Physics of Metals and Metallurgy), Vol.IV, No.2, 1957, pp.378-380 (USSR).

ABSTRACT: This problem has been little studied so far although it is of considerable theoretical and practical interest. Surface effects are encountered in a number of instruments, for instance, in instruments for measuring the A.C. losses in electrical sheet steel, in induction heating apparatus, etc. In this paper the case of penetration into a conducting semi-space of a pulsating bi-component (curved) field is considered on the assumption that the normal and the tangential components of the field at the surface of the medium vary in accordance with the following relations:

$$B_z = B_{mz} \cos (\pi / \tau) y \cos \omega t ,$$

$$B_y = B_{my} \sin (\pi / \tau) y \cos (\omega t + \alpha) .$$

Card 1/2   The application of the derived relation, Eq.9, p.379, is illustrated on a practical example for approximate calculation of an induction heating instrument consisting of an

SOV/126-6-3-4/32

AUTHOR: Sychev, Yu. D.

TITLE: Magnetic Surface Effect under the Action of a Pulsating 2-Component Field on the Surface of a Halfspace (Magnitnyy poverkhnostnyy effekt pri deystvii na poverkhnosti poluprostranstva pul'siruyushchego dvukhkomponentnogo polya)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol 6, Nr 3, pp 412-419 (USSR)

ABSTRACT: In the propagation of an alternating electromagnetic field in a conducting medium a surface effect is observed. The theory of the magnetic surface effect in flat bodies has been already well developed but only for the case of single component exciting fields. The surface effect with more complex exciting fields is usually studied experiment- ally and only for a limited number of special cases is an analytical solution possible (Refs.1 and 2). The problem considered in the present paper is formulated as follows: consider a conducting medium bounded on one side by a plane surface and extending to infinity in all the remaining dir- ections (Fig.1). The z axis is taken perpendicularly to

Card 1/3

. Magnetic Surface Effect under the Action of a Pulsating 2-Component Field on the Surface of a Halfspace

the plane surface and is directed into the medium while the xoy plane coincides with the surface. The y axis is directed along the tangential component B_y, and the z axis along the normal component B_z of the magnetic ·induction vector $\vec{B}$. In the case considered here, only magnetic fields parallel to the yoz plane are present and currents should flow only in the x direction. Consequently, the current density can only have one component δ_x . The electrical conductivity and the magnetic permeability are taken to be constant. The components of magnetic induction on z = 0 are taken to be:

$$B_z = B_{mz}\cos \frac{\pi}{\tau} y \cos \omega t \quad , \qquad (1)$$

$$B_y = B_{my}\sin \frac{\pi}{\tau} y \cos (\omega t + \alpha) , \qquad (2)$$

Card 2/3 while at infinity (z =∞) the two components vanish. These

SOV/126-6-3-4/32

Magnetic Surface Effect under the Action of a Pulsating 2-Component Field on the Surface of a Halfspace

expressions prescribe the boundary conditions. Using Maxwell's equations, expressions are then derived for the amplitude of the current density and the power dissipation in the medium. These expressions may be used in an analysis of the performance of induction heaters. Experimental studies carried out by the author have confirmed his calculations to a first approximation. There are 3 tables, 7 figures and 6 references, of which 5 are Soviet and 1 is English.

ASSOCIATION: Institut fiziki metallov Ural'skogo filiala AN SSSR (Institute of Physics of Metals, Ural Branch of the Academy of Sciences, USSR)

SUBMITTED: May 7, 1957.

1. Electromagnetic fields--Propagation   2. Electromagnetic fields --Excitation   3. Electromagnetic fields--Mathematical analysis 4. Surfaces--Magnetic factors

Card 3/3

RUSAKOV, K.I., inzh.; SYCHEV, Yu.I., inzh.

New equipment for stone working. Stroi. i dor. mash. 10
no.9:25-30 S '65.   (MIRA 18:10)

RUSAKOV, K.I., inzh.; SYCHEV, Yu.I., inzh.

Using diamond tools in airport and road construction. Stroi.
i dor. mash. 10 no.6:21-23 Je '65.   (MIRA 18:8)

RUSAKOV, K.I., inzh.; SYCHEV, Yu.I., inzh.; FIALKOV, D.D., inzh.

Diamond tool for finishing and facing work. Transp.stroi. 15
no.10:30-31 O '65.   (MIRA 18:12)

AID P - 4212

Subject	:	USSR/Engineering
Card 1/1		Pub. 103 - 13/20
Authors	:	Drozd, N. K. and Yu. N. Sychev
Title	:	Automation of Horizontal Hobbing Machine
Periodical	:	Stan. i instr., 1, 36, Ja 1956
Abstract	:	The authors describe some alterations of the Kol'man 12-A model horizontal hobbing machine done at the Moscow Automobile Plant im. Stalin. After certain mechanical additions, this machine, which cuts teeth on gear shafts for automobile transmission-boxes, was transformed into a semi-automatic gear-milling machine. One drawing.
Institution	:	None
Submitted	:	No date

Sychev, Yu. N.

AID P - 5169

Subject   : USSR/Engineering

Card 1/1   Pub. 103 - 10/19

Authors   : Vorob'yev, K. G. and Yu. N. Sychev

Title   : Improved methods for repair of steam pneumatic stamping
               presses.

Periodical : Stan. i instr., 6, 32-35, Je 1956

Abstract   : The authors describe several cases of repair and alter-
               ations made in the "Eary", "Chambersburg" and "Banning"
               steam and pneumatic stamping presses at the Automobile
               Plant im. Stalin (ZIS). Fourteen drawings.

Institution : None

Submitted   : No date

VOROB'YEV, K.G.; SYCHEV, Yu.N.

Portable miller for machining die supporting surfaces of horizontal forging machine beds. Stan. i instr. 27 no.11:39 N '56.

(MIRA 10:1)

(Milling machines) (Forging machinery--Repairing)

VOROB'YEV, K.G.; SYCHEV, Yu.N.

New methods for repairing steam-pneumatic stamping hammers.
Vest. mash. 36 no.9:58-61 S '56.   (MLRA 9:10)

(Machine-shop practice) (Forging machinery--Repairing)

Sychev, Yu. N.

AUTHOR: Sychev, Yu.N.   122-2-15/23

TITLE: Advanced methods of repair of cold headed automatic
          machines (Progressivnyye metody remonta kholodnovysadoch-
          nykh avtomatov)

PERIODICAL: "Vestnik Mashinostroyeniya" (Engineering Journal),
              1957, No.2, pp. 64 - 67 (U.S.S.R.)

ABSTRACT: Detailed description with illustrations of typical repair
          schemes under the following sub-headings: fixing of a replace-
          ment plate on the vertical guiding surface of the machine bed;
          renewal of the fit between the crankshaft and its bearing
          sleeves;   surface flame hardening of the crank pins;   fitting
          of antifriction plates and strips in the carriage unit.

Card 1/1   There are 11 figures.

AVAILABLE: Library of Congress

SYCHEV, Yu N.

SYCHEV, Yu.N.; VOROB'YEV, K.G., inzh.

Modernizing the 12-OA automatic trimmers. Mashinostroitel' no.9:26-27 S '57.
(MIRA 10:9)

(Punching machinery)

SYCHEV, Yu.N.

Experience in modernizing automatic machine tools. Stan, i instr.
28 no.5:28-30 My '57.
(Machine tools)
(MLRA 10:6)

SYCHEV, YU. N.

MELESHKEVICH, P.S.; VOROB'YEV, K.G.; SYCHEV, Yu.N.

Attachement for cutting racks on gear shapers. Stan. 1 instr. 28
no.5:37 My '57.   (MLRA 10:6)

(Gear-cutting machines)

PA - 3622

AUTHOR: SYCHEV,YU.N., VOROB'YEV, K.G.
TITLE: Modernization of an Internal Grinding Machine. (Modernizatsiya
            vnutrishlifoval'nogo stanka, Russian)
PERIODICAL: Stanki i Instrument, 1957, Vol 28, Nr 6, pp 31-32 (U.S.S.R.)

ABSTRACT: Such a modernization was carried out in the Moscow I.A.LIKHACHEV
            automobile factory in order to increase efficiency and to diminish
            waste. The grinding machine used for this purpose was one made by
            the firm of Braillant, mod. 112 A.N. Before modernization, it was
            necessary to check the grinding diameter several times during
            grinding in order to warrant the required accuracy. If checking was
            carried out too late this frequently caused waste. In the course of
            modernizing this machine a device was constructed which permits
            automatic control of the grinding diameter during the process of
            grinding in that, as soon as the desired diameter is attained, the
            grinding wheel is automatically withdrawn from the workpiece. By
            fitting an automatic control mechanism and by interrupting the work
            of grinding as soon as the desired diameter is attained, waste
            was eliminated, and by the reduction of working time (measuring
            time hitherto needed) a considerable increase of output was
            attained. Such a modernization can be carried out with internal

Card 1/2

SYCHEV, YU. N.

121-7-22/26

AUTHOR   SYCHEV Yu.N.,
TITLE   The Surface Torch Hardening of Equipment and Machine Parts.
            (Poverkhnostnaya gazoplamennaya zakalka detaley oborudovaniya-Russian)
PERIODICAL Stanki i Instrument, 1957, Vol 28, Nr 7, pp 38 - 38 (U.S.S.R.)

ABSTRACT   The surface hardening of steel parts with a carbon content of from
            0,3-0,7% by means of an oxygen-acetylene torch is widely used in the
            "Likhachev" automobile factory.The hardness of the parts after har-
            dening according to SHORE is Hs=7o-75. Formerly this these parts used
            to be produced of alloyed steel and were then subjected to a chemi-
            cal-thermal treatment.Usually a torch welding apparatus is used for
            torch hardening; here a special hardening tip is fixed in place of
            the torch tip.A torch burner is shown on ill.1 which is used for the
            hardening of cogwheels; the outlet openings a) and b) serve for the
            a) outlet of the torch and b) for the cooling agent (water).The stead-
            ness of the surfaces hardened this way (A and B) (ill.3) was increa-
            sed 2-3 fold.Parts of steel as well as of cast iron can be subject
            to this hardening although experience showed that the best results
            were obtained with steel and with steel 45 a hardeness of Rc=55-57
            was obtained.The depth of the hardening is,depending on the process
            employed,from 2-6 mm.The heating temperature should not become hi-
            gher than 1000° in order to avoid overheating and the development of
            cracks.The ratio between acetylene and oxygen should be 1:1,2 - 1:1,3
            and the intensity of the torch should remain constant.The water sup-
            ply on the occasion of quenching should be 0,4 - 0,5 L/Min on 1cm²

Card 1/2

The Surface Torch Hardening of Equipment and Machine Parts. 121-7-22/26

of the hardened surface, the water temperature 15-18°.The distance
of the torch from the surface should be 8-12mm, the velocity of mo-
vement 80-160 mm/Min. The control consists of an exact outer inspec-
tion as well as of an etching with a 20% nitric acid solution.

ASSOCIATION   Not Given.
PRESENTED BY
SUBMITTED
AVAILABLE   Library of Congress.
Card 2/2

3y c.H E /, y J./V.

121-8-13/22

AUTHOR
TITLE

VOROBYEV, K.G., SYCHEV Yu.N.
From Works' Practice. The Modernization of the Forging-Press Equipment.
(Iz zavodskoy praktiki. Modernizatsiya kuznechno - presso-vogo oborudovaniya.- Russian)
Stanki i Instrument 1957, Vol 28, Nr 8, pp 35-36 (USSR)

PERIODICAL

ABSTRACT

The switch-in mechanism as well as the brake of the operation of the horizontal forging press model 3" (76,2 mm) were modernized. The switch-in mechanism, which is fitted to the crankshaft, was replaced by a pneumatic coupling on the driving shaft which excludes the   constant free-wheeling of the driving shaft and reduces consumption and noise. An illustration shows the coupling, which is des-cribed. The brake was shifted from the pivot of the crank-shaft to the extended driving shaft. On the stand next to the brake drum a pneumatic control cylinder of the brake is mounted which is blocked by means of the pressure pipe of the switch. Control of the brake is carried out by means of an air-distributing device which is operated by means of a duplicating device at the end of the crank-shaft. In consequence of this rebuilding the stress as well as the consumption of the crankshaft and of the

CARD 1/2

SYCHEV, Yu.N.

Laid on zink alloy guides used in heavy-duty metal cutting tools.
Stan.i instr. 28 no.9:39-40 S '57.   (MIRA 10:10)
                    (Machine tools—Attachments)

SYCHEV, Yu.N.

Brake rings made of ferrodo instead of textolite. Stan. i instr.
28 no.12:36-37 D '57.   (MIRA 10:12)

(Lathes) (Packing (Mechanical engineering))

SYCHEV, Yu.N.

Efficient methods for repairing cold upsetting automatic
machines. Vest.mash. 37 no.2:64-67 F '57.   (MLRA 10:2)

(Power presses--Repairing)

$S\acute{Y}CHE\acute{V}$, $\mathcal{Y}u.\mathcal{N}.$

AUTHOR: Sychev, Yu.N., and Vorob'yev, K.G., Engineer   117-58-5-3/24

TITLE: Modernization of Metal Cutting Equipment (Modernizatsiya
              metallorezhushchego oborudovaniya)

PERIODICAL: Mashinostroitel' 1958, Nr 5, pp 7-12 (USSR)

ABSTRACT: The clamping, unclamping, chamfering and cutting-off work on
              stock was formerly done by hand on the turret lathe (model
              1338) at the Izhevsk Plant. To increase the efficiency of
              this machine the transverse support was replaced by a special
              pneumatic gear connected with 2 copying devices. The rotation
              of the driving spindle is transmitted by a worm gear to the
              distribution disc fitted with a number of cams located on
              2 different levels. The pneumatic gear consists of a series
              of valves, pipes and cylinders in which the pistons are set
              in motion by hydraulic pressure, regulated by the opening and
              closing of valves under the action of the cams of the di-
              stribution disc. In this way the operations formerly exe-
              cuted by hand have become mechanized. One copying device
              controls the chamfering and the other the cutting-off process
              of the blank. On the internal grinding machine "Bryant"
              (model 112 AN) the dimensions of the opening had to be checked
              frequently. This work is being done automatically since the

              Card 1/2

Modernization of Metal Cutting Equipment   117-58-5-3/24

installation of hydraulic gear for automatic checking. Figure
2 shows the automatic measuring device mounted on a lathe;
figure 3 shows the details of the mechanism. Figure 4 gives
a general and sectional view of the automatic measuring unit.
The operation is illustrated on a kinematic diagram, figure 5.
The modernization of semi-automatic turret lathe of the firm
"Monforts" is shown in Figures 7,8 and 9. It provides for a
change in construction of the head, as a result of which the
four-positional machining is replaced by an eight-positional
one. Modernization of the machine increased the efficiency,
the variety of machining processes and the speed of operations.
There are 9 figures.

ASSOCIATION: Moskovskiy avtozavod imeni Likhacheva (Moscow Automobile
               Plant imeni Likhachev)

AVAILABLE: Library of Congress

Card 2/2   1. Cutting tools-Automation

117-58-6-3/36

AUTHORS: Sychev, Yu.N., Vorob'yev, K.G., Engineer

TITLE: The Modernization of Forging and Pressing Equipment (Moderni-
             zatsiya kuznechno-pressovogo oborudovaniya)

PERIODICAL: Mashinostroitel', 1958, Nr 6, pp 5-9 (USSR)

ABSTRACT: In the steam-air punching hammers type "Iri" and "Banning"
             the wedges for regulating the distance between the frames on
             the anvil block and the method of their fastening had serious
             drawbacks. The constant vibrations of the frames loosened
             the wedges at their connections and often cut the strengthening
             bolts. In order to increase the reliability of the fastenings,
             rectangular grooves were cut into wedges (figure 1). A blocking
             comb was fitted to the frame for fastening the wedges (Figure
             2). The new method for fastening the wedges is shown in figure
             3. The flanges of the protective and working cylinders in the
             hammers type "Iri" were fastened by bolts. Weakening of the
             bolts caused a leaking of the copper packing. In the flanges
             of the casing of the protective cylinder a groove was bored
Card 1/4   (Figure 4). Another groove was made in the working cylinder

The Modernization of Forging and Pressing Equipment   117-58-6-3/36

and both were closely fitted together.
Steam pressure during the working of the hammers type "Iri"
and "Chembersburg" reaches 9-10 atm, the temperature 270-
280°C. The best stuffing-box packings have only a short life
under these conditions. In order to remove the stuffing box
of the coupling rod from the zone of high temperature, the
construction of the lower cover of the cylinder has been
changed. The opening was enlarged (Figure 5) and a transi-
tional bush pressed into it. This change in construction moves
the stuffing-box packing 100 mm from the zone of high tempe-
ratures. Steam condensate no longer gets into the working
place.
The sub-cylinder plate for the installation of the working
cylinder in hammers of various types has a flat surface.
Weakening of the cylinder fastening caused a displacement of
the casing. A lock 25 mm in height was therefore fastened to
the sub-cylinder plate of the hammers "Iri", "Chembersburg",
and "Banning" preventing the cylinder from displacement.
Hammers of the type "Massey" with a power of 1.5 and 5 t have
been modernized, to increase rigidity of construction and
to reduce wear of moving parts. Two cast iron supporting
Card 2/ 4   plates which were fastened in a concrete foundation, were

The Modernization of Forging and Pressing Equipment   117-58-6-3/36

replaced by a single steel plate (Figure 7) rigidly connecting
the frames. Each frame is installed between supports and is
fastened by a special bolts. The construction of the coupling
rod was also changed to facilitate its replacement during
overhaul. The coupling rod was designed without reinforce-
ments (Figure 8). Its working diameter was increased from
115-140 mm. The stuffing box was made non-detachable (Figure
9) with 142 mm as the interior diameter of the axle bearing.
After modernization the method of shock absorption was also
changed. On the working cylinder (Figure 10) a pneumatic
protective cylinder was fitted in place of the upper cover.
In the connection between the frames (Figure 11) and the cy-
linder casing, shock absorbing springs were fitted. In the
frictional falling hammers type "Billing i Spenser" the
method of lifting was changed from the mechanical to the
pneumatic principle. In the former hammers, the heavy beats
against the pivot bolt often destroyed the frame and caused
many parts to get out of order. The hammers were therefore fitted
with a simple pneumatic device for lifting the ram (Figure 12).
This device, simplifies hammer control, reduces cases of frame
Card 3/4   breakage prevents accidents, and is reliable in operation.

The Modernization of Forging and Pressing Equipment   117-58-6-3/36

   There are 12 figures.

ASSOCIATION: Moskovskiy avtozavod imeni I.A. Likhacheva (Moscow Motorcar
     Plant imeni I.A. Likhachev)

AVAILABLE: Library of Congress
Card 4/4 1. Forging equipment-Modernization 2. Pressing equipment-Modernization

SOV/122-58-8-21/29

·AUTHORS: Sychev, Yu.N. and Vorob'yev, K.G., Engineer

TITLE: Improvements in Repair Methods of Factory Plant
            (Sovershenstvovaniye tekhnologii remonta zavodskogo
            oborudovaniya)

ABSTRACT: Several repair fixtures, procedures for the replacement
            of scarce materials and for increasing the service life
            of major machine-tool components adopted at the motor-
            car plant "imeni Likhacheva" in Moscow are described. A
            universal grinding fixture for the slideways of metal-
            cutting machine tools is illustrated (Figure 1). Set-ups
            are shown for grinding the flat slideway and the V-slide-
            ways starting from the reference planes, namely, the
            mounting faces for the headstock and the tailstock.
            Planing machines are repaired with the help of the same
            grinding fixture. A portable milling fixture and head are
            shown (Figure 3), developed for the milling of horizontal
            forging machine bed. This fixture is claimed to have
            reduced the period of unserviceability due to repair by
            up to 10 days. A new fixture (Figure 4) has been developed
    Card1/3 for cutting, by the generating method, the racks of tooth-

Improvements in Repair Methods of Factory Plant   SOV/122-58-8-21/29

shaping machines. The fixture consists of a base, a table,
and a rack in engagement with a pinion. A dynamometer
designed to measure the stiffness of metal-cutting
machine tools is shown in Figure 5. It is based on the
ring element, measuring the distortion transversely to
the pull by means of a dial gauge. Vibration pads to
isolate steam-air hammers are mentioned. A new method of
restoring the dimensions of bronze bearing sleeves in
diameters above 100 mm has been adopted. The sleeve is
cut along the generating line and the sharp edges are
removed. The sleeve is then clamped by two yokes and
brazed with brass along the cuts. After turning the
outside, a coarse thread is cut and the sleeve is metal-
lised with annealed, low-carbon steel wire, ensuring that
the temperature does not exceed 70 °C. Subsequently, the
sleeve is machined inside and outside. Surface flame
hardening has been extensively applied. Both steel and
cast-iron components are flame-hardened at a burner
speed of advance of 80-160 mm/min. Hollow, slotted boring
tools with a single-point cutter are used for the machining
of plain bearings lined with cast antifriction alloy.

Card2/3

SOV/122-58-8-21/29

Improvements in Repair Methods of Factory Plant

The boring tool has a front collar to bore size; the
remainder is relieved to leave a clearance of 0.6 - 1.0 mm.
The tool is mounted in the tailstock of an engine lathe.
Split permanent moulds (Figure 7) for the casting of bearing
sleeve halves in a zinc alloy have been adopted. The
alloy is poured from a crucible into the mould which has
been heated to 200 - 250 °C. Zinc-alloy pads in heavy
machine tools preserve the service life of slideways. These
pads can be cast into special permanent moulds.
There are 8 figures.

Card 3/3 1. Industrial equipment—Maintenance

SOV/117-58-11-28/36

AUTHORS: Sychev, Yu.N., Vorob'yev, K.G., Engineer

TITLE: A Device for the Protection of Electric Bridge Cranes and
              Electric Telphers From Overload (Prisposobleniye dlya predo-
              khraneniya elektromostovykh kranov i elektrotel'ferov ot pe-
              regruzki)

PERIODICAL: Mashinostroitel', 1958, Nr 11, pp 39 - 40   (USSR)

ABSTRACT: At the Moskovskiy avtomobil'nyy zavod imeni Likhacheva (Mos-
              cow Automobile Plant imeni Likhachev), a device has been
              developed for protecting electric bridge cranes and telphers
              from overload. The device for electric cranes is shown in
              Figure 1. It is installed on an immobile cable of the crane
              (Figure 2). The cable is connected with a spring (17). The
              spring is set for a certain load by the nut (13). If the
              load surpasses 10% of this value, the spring is tightened
              and the electric motor is switched off. The device for elec-
              tric telphers (Figure 3) is similar in operation and construc-
              tion. It is installed on a branch of the telpher cable. There
              are 3 diagrams.

              1. Mobile hoists—Protective devices   2. Mobile hoists—Per-
              formance   3. Electric motors—Control systems
Card 1/1

SYCHEV, Yu.N.; VOROB'YEV, K.G.

Modernizing semiautomatic turret lathes. Stan. i instr. 29
no.7:31-32   Jl '58.   (MIRA 11:9)
                        (Lathes)

Sychev A.

VOROB'YEV, K.G., inzh.; SYCHEV, Yu.N.

Experience in modernizing automatic machine tools at the Likhachev
Automobile Plant. Vest. mash. 38 no.4:45-49 Ap '58.   (MIRA 11:3)
                (Machine tools)   (Automobile industry)

SYCHEV, Yu.N.; VOROB'YEV, K.G., inzh.

Improving the technology of repairing plant equipment. Vest. mash.
38 no. 8:57-60 Ag '58.   (MIRA 11:8)
          (Machinery--Maintenance and repair)

SYCHEV, Yu.N.; VOROB'YEV, K.G., inzh.

Improving the technology of repairing plant equipment. Mashino-
stroitel' no.1:25-32 Ja '59.   (MIRA 12:2)
              (Machine tools--Maintenance and repair)

VOROB'YEV, K.G. ; SYCHEV, Yu.N.

Mechanization of heavy, labor-consuming operations for the repair of press-forging machinery. Kuz.-shtam. proizv. 1 no.8:38-41 Ag '59.
(MIRA 12:12)

(Forging machinery--Maintenance and repair)

25(2)   SOV/117-59-3-8/37

AUTHORS: Vorob'yev, K.G., and Sychev, Yu.N.

TITLE: The Modernization of Shaping Machines (Modernizat-
             siya poperechno-strogal'nykh stankov)

PERIODICAL: Mashinostroitel', 1959, Nr 3, pp 15 - 16 (USSR)

ABSTRACT: The described modernization, i.e. design improve-
             ment, concerns the "735(Sh-4)" and "736(Sh-5)"
             shapers at the Moskovskiy avtozavod im. I.A. Likha-
             cheva (Moscow Automobile Plant imeni Likhachev).
             The design improvement consists in the use of new
             mechanisms for the mechanical displacement of the
             machine table, which until now was done manually
             and was arduous work. The idle-run speed of the
             table with the new feed mechanism is between 1.5
             and 2.25 m/min, depending on the rpm of the motor.
             There are 4 diagrams.

Card 1/1

SYCHEV, Yu.N.; VOROB'YEV, K.G.

Modernization of automatic machine tools. Mashinostroitel' no.10:
11-14 O '59.   (MIRA 13:2)
        (Machine tools) (Automatic control)

VOROB'YEV, K.G.; SYCHEV, Yu.N.

Modernization of press forging equipment at the Likhachev
Automobile Plant in Moscow. Kuz.-shtam.proizv. 2 no.1:27-33
Ja '60.   (MIRA 13:5)
        (Moscow--Automobile industry)
            (Forging machinery)

SYCHEV, Yu.N., inzh.; VOROB'YEV, K.G., inzh.

> Mechanizing heavy and labor-consuming operations in re-
> pairing forging machines. Mashinostroitel' no.3:4-5
> Mr '60.   (MIRA 13:6)
>   (Forging machinery—Maintenance and repair)

S/117/60/000/005/005/013
A004/A002

AUTHORS: Vorob'yev, K. G., Sychev, Yu. N.

TITLE: Friction Disks With Ceramet Layer

PERIODICAL: Mashinostroitel', 1960, No. 5, p. 21

TEXT: At the Moskovskiy avtozavod imeni Likhacheva (Moscow Automobile Plant imeni Likhachev) ceramet-reinforced steel disks instead of bronze ones are used in multi-disk friction couplings operating in an oil medium of the multi-spindle semi-automatics "Krasnyy proletariy" and "Bullard". The basic steel disks are copper plated in a cyanide solution with subsequent diffusion annealing in a hydrogen atmosphere at 950°C for 2.5 hours. The ceramet layer has the following composition (in %): electrolytic copper powder = 70, tin powder = 9, lead powder = 6, graphite = 4, iron powder = 4, sand = 4, asbestos fiber = 3. Metal powders and asbestos fiber are mixed in a mixer during 3-4 hours. The ceramet mixture is pressed in press-molds with a specific pressure of 2.2 t/cm². The basic copper-plated steel disks and the ceramet disks are baked together in a special furnace in a hydrogen atmosphere at temperatures

Card 1/2

Friction Disks With Ceramet Layer

S/117/60/000/005/005/013
A004/A002

in the range of 760-780°C during 2.5 - 3 hours. The disks are then cooled in a reducing atmosphere where the same pressure is maintained. The life of these ceramet-reinforced steel disks exceeds that of bronze disks by 5 times, which resulted in savings of 50,000 rubles per year. There are 3 figures and 1 table.

Card 2/2

S/117/60/000/008/022/022/XX
A033/A133

AUTHOR: Sychev, Yu.N.

TITLE: Friction rings made of "Ferrado"

PERIODICAL: Mashinostroitel', no. 8, 1960, 25

TEXT: The Moskovskiy avtozavod im. Likhacheva (Moscow Automobile Plant im. Likhachev) has replaced the textolite rings of tapered friction reversing gears by Ferrado rings manufactured by the method of hot vulcanization. The rings are made of a mixture composed of 50% asbestos fibre, 25% pulverized bakelite, 18% white spirit and 7% brass chips. The latter can be replaced by small pieces of copper wire. The press mold for the manufacture of the rings is made of 45 grade steel. The height of the blank being pressed is calculated for two rings. The outer blank diameter is fabricated with a 5 mm tolerance for the tight fitting of the rings. The press mold parts are fabricated with a loose fit of the 4th class of accuracy. The finish of the working surface should not be less than of the 8th class according to ГОСТ (GOST) 2789-51. The rings are molded at a specific pressure of 300 - 500 kg/cm² and a temperature of 135 - 145°C with 20 - 25 min holding. Final pressing takes place on hydraulic or mechanical presses of 35 -

Card 1/2

Friction rings made of "Ferrado"

S/117/60/000/008/022/022/XX
A033/A133

40 tons capacity in two operations. The friction coefficient of the Ferrado rings on steel amounts to 0.4 compared to 0.16 of textolite rings. The wear during testing was 0.15 mm/h. Water and oil absorption of the specimens should not exceed 6% in the course of 4 h, while the specific gravity amounts to 1.7 - 2 kg/cm^2. Brinell hardness is to be not less than 13 (at a load of 500 kg of a ball 10 mm in diameter during 30 sec). There is 1 figure.

Card 2/2

SYCHEV, Yu.N.

Modernizing automatic four-spindle machines. Mashinostroitel'
no.7:25 '61.   (MIRA 14:7)
     (Machinery, Automatic—Technological innovations)

STCHEV, Yu.N.; VOROB'YEV, K.G.

Improving oil-feeding collars. Mashinostroitel' no. 2:12-13 F '61.
(MIRA 14:2)

(Lubrication and lubricants)

SYCHEV, Yu.N.

Modernizing the engaging gear of an eccentric press. Mashinostroitel'
no.3:15 Mr '61.   (MIRA 14:3)
        (Power presses—Technological innovations)

S/189/62/000/006/003/006
D214/D307

AUTHORS: Vlasov, L.G., Sychev, Yu.N. and Lapitskiy, A.V.

TITLE: Preparative separation of titanium and iron chlor-
                ides by vapor phase chromatography

PERIODICAL: Moscow. Universitet. Vestnik. Seriya II. Khimiya,
                no. 6, 1962, 55-57

TEXT: Separation of the chlorides (95% $TiCl_4$; 5% $FeCl_3$)
was conducted on a silica gel column at $380 \pm 1°C$ using Cl_2 as the
carrier gas. The Fe content of the emerging $TiCl_4$, found radiomet-
rically (^{59}Fe), was $< 5.10^{-8}\%$ (limit of detection). After 4-5 hrs,
10-15 g of Fe-free $TiCl_4$ were obtained. The adsorption of $FeCl_3$ on
silica gel follows the Langmuir equation. The authors point out
the value of gas chromatography both in analytical and in prepara-
tive inorganic chemistry. There is 1 figure.

ASSOCIATION: Kafedra radiokhimii (Department of Radiochemistry)

SUBMITTED: March 30, 1961
Card 1/1

SHORIN, V.D.; CHEKIN, V.F.; SYCHEV, Yu.V.

Diamond-tipped instruments in stomatology.   Med.prom. 16 no.6:
29-30 Jl '62.   (MIRA 15:12)

1. Moskovskiy meditsinskiy stomatologicheskiy institut i Nauchno-
issledovatel'skiy institut eksperimental'noy khirurgicheskoy
apparatury i instrumentov.
                  (DENTAL INSTRUMENTS AND APPARATUS)

SYCHEVA, A.A

PROGRESSES AND PROPERTIES INDEX

Determination of volatile compounds with the aid of gaseous diffusion. R. S. Pil'nik and A. A. Sycheva, *Zavodskaya Lab.* 14, 710-13(1948).—In the detn. of NH₃, place 2 ml. of test soln. contg. 0.2-11.0 mg. NH₃ in a cup and cover hermetically with a glass on which is 10 drops of a satd. soln. of H₃BO₃ in glycerol. After 2 hrs. at room temp. remove the glass, wash the glycerol drops with cold water into a tube, and titrate with 0.1 N HCl in presence of 2 drops of mixed indicator contg. methyl red and methylene blue. The total vol. of liquid should be about 20-25 ml. In the detn. of CO₂, place 10 ml. of 0.1 N NaOH soln. and 5 ml. of 10% BaCl₂ in an Erlenmeyer flask. Suspend a small cup with 2 ml. of the test soln. from the end of a tube passing through the stopper of the flask and add 10 drops of 18 N H₂SO₄. Let stand for 2 hrs., carefully rotating the flask from time to time. Remove the cup, stopper the flask, and rotate again for 1 min. Titrate excess alkali with 0.1 N HCl in presence of phenolphthalein. If the sample is a solid contg. much CO₂, use 0.1 g. in the cup and moisten with 5 drops water and in the flask place 40 ml. of 0.1 N NaOH soln. and 5 ml. 10% BaCl₂. Close the flask, add 2 ml. of 4 N HCl to the cup, and leave for 2 hrs. at room temp. Then proceed as above. In the detn. of H₂S, place a cup contg. 5 or 10% NaOH soln. (depending on the amt. of H₂S expected) in a larger cup contg. 1-2 ml. of the test soln. Cover the outer cup hermetically with a glass integral with a separatory funnel, add 5 ml. of 6 N HCl, keep for 30 min. at 85-120°. Remove the inner cup, wash the outside with water, place it in 20 ml. of acidified titrated I₂ soln., dil. to 150 ml., and titrate with Na₂S₂O₃.

B. Z. K.

Ural Chem.
Inst-

ASM-SLA   METALLURGICAL LITERATURE

SOV/65-58-5-2/14

AUTHORS: Bakhshiyan, Ts. A. and Sycheva, A. M.

TITLE: Selection of Tubular Shell Heat Exchangers for Working Under Optimum Conditions. (Vybor kozhukhotrubchatykh teploobmennykh apparatov po optimal'nym rezhimam raboty)

PERIODICAL: Khimiya i Tekhnologiya Topliv i Masel, 1958, Nr.5. pp. 5 - 11. (USSR).

ABSTRACT: One method of intensifying the efficiency of heat exchangers lies in increasing the velocity of the current which is linked on the one hand with increasing the coefficient of heat emission, and on the other hand with increased pressure losses. Values for the optimum rates were determined by technical and economic analysis. The values of the rate of the movement of the current, the quantity of transfer heat, and the coefficient of heat emission were compared with values for pressure losses, as well as losses in efficiency and capital losses. The heat exchanger was calculated for the following conditions: (1) the transfer of cold petroleum along the tubular space (inlet temperature 10°C, heating), (2) transfer of heated petroleum along the tubular space (inlet temperature 128°C, heating), (3) transfer of ligroin along the inter-tubular space (inlet temperature 120°C, heating), (4) transfer of petrol along the tubular

Card 1/3

Selection of Tubular Shell Heat Exchangers for Working Under Optimum
Conditions.

space (inlet temperature 160°C, cooling). The calcu-
lations were carried out for the tubular and inter-
tubular space. The dependence of the value of unit
heat and the velocity of the current - Fig.1, and the
dependence of the optimum velocity and the viscosity
of the product - Fig.2. These figures show that the
optimum velocities are in inverse proportion to the
viscosity of the products. For cold petroleum the op-
timum velocity = 0.8 - 0.9 m/second. For heated petrol-
eum and light products 1 - 1.2 m/seconds, and for the
light fractions themselves (petrol) = 1.5 m/second.
The efficiency of a heat exchanger can be increased by
increasing the velocity in the tubular and inter-tubular
spaces. In the tubular space the velocity can be in-
creased by increasing the number of runs. In the inter-
tubular space by (1) decreasing the distance between the
transverse baffle plates, (2) by decreasing the space in
the transverse baffle plates between the openings for
the tubes and the tubes themselves, and also between the
transverse baffle plates and the body,   (3) by de-
Card 2/3   creasing the segmental cuts, (4) by fixing longitudinal

SOV/65-58-5-2/14

Selection of Tubular Shell Heat Exchangers for Working Under Optimum
Conditions.

baffle plates, and (5) by selecting heat exchangers with
a smaller diameter. Recommended constructions are shown
in Fig.4b and 4g. The following methods are recommended
for increasing the surface of heating and for intensifying
the heat emission: (a) increasing the length of the
tubes from 6 - 9 m, (b) decreasing the diameter of the
tubes to 20 mm (for pure products), (c) ribbing of
the tubes, (Fig.4A), (d) the distribution of the tubes
in an alternating order (Fig.4B). The dependence of the
optimum diameter of the apparatus on the rate of the
consumption for tubular and inter-tubular spaces is given
(compare Fig.3). The required diameter of the heat
exchanger can be found (for heat exchangers working on
one run having segmental baffle plates, two runs, one
run with a longitudinal vertical baffle plate along the
body of the heat exchanger with inclined tubes). There
is 1 Table, 5 Figures and 6 Soviet references.

ASSOCIATION: Giproneftemash.

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SYCHEVA, A.M.; YEGOROV, N.N.

Resistance of a large packing layer in a nonisothermal stream.
Khim.i tekh.topl.i masel 8 no.8:10-16 Ag '63.   (MIRA 16:9)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy
institut neftyanogo mashinostroyeniya i Moskovskiy institut
khimicheskogo mashinostroyeniya.
            (Scrubber (Chemical technology)--Fluid dyanmics)
                (Packing (Mechanical engineering))

SYCHEVA, A.M.; YEGOROV, N.N.

Heat transfer from a gas flow in pipes with large fittings.
Khim. i tekhn. topl. i masel 9 no.5:53-57   5 My'64
(MIRA 17:7)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy
institut neftyanogo mashinostroyeniya i Moskovskiy institut
khimicheskogo machinostroyeniya.

SYCHEVA, A.M.; YEGOROV, N.N.

Heat transfer from fluid in pipes with heavy packing. Khim. i
tekh. topl. i masel 9 no.6:14-18 Je'64   (MIRA 17:7)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy
institut neftyanogo mashinostroyeniya i Moskovskiy institut
khimicheskogo mashinostroyeniya.

YEGOROV, M.N., prof., MISHCHENKO, Ye.D., SYCHEVA, A.N., KRASNOVA, A.M.

Chemotherapy of diabetes mellitus and problems of dietotherapy.
Terap. arkh. 30 no.7:18-25 Jl'58   (MIRA 11:8)

1. Iz kliniki lechebnogo pitaniya (zav. - prof. F.K. Men'shikov)
Instituta pitaniya AMN SSSR.
          (ANTIDIABETICS, therapeutic use,
              (Rus))
          (DIETS, in var. dis.
              diabetes mellitus (Rus))
          (DIABETES MELLITUS, therapy
              diets (Rus))

SYCHEVA, A.V.

Daily course of nutrition of Coregonus peled(Gmelin). Vop.ikht.
no.4:173-177 '55.   (MIRA 9:6)

1.Sibirskoye otdeleniye Vsesoyuznogo nauchno-issledovatel'skogo
instituta ozernogo i rechnogo rybnogo khozyaystva VNIORKh.
    (Whitefishes) (Fishes--Food)

SYCHEVA, A.V.

SYCHEVA, A.V.

New larval forms of Tendipedidae from Lake Sovetskoye. Zam. po faune
i flore Sib. no.18:39-42 '55.   (MIRA 11:1)
(Turukhan Valley--Chironomidae)
(Larvae--Insects)

SYCHEVA, A.V., arkhitektor

New forms of organization of group rest and the construction
of rest zones. Zdrav. Bel. 8 no.6:50-53 Je'62   (MIRA 16:8)

1. Belorusskiy gosudarstvennyy proyektnyy institut (direktor
M.A. Moroz) i kafedra arkhitektury Belorusskogo politekhni-
cheskogo instituta (zav. - deystvitel'nyy chlen Akademii
stroitel'stva i arkhitektury SSSR - prof. A.I.Voinov).
        (MINSK--RECREATION AREAS)   (MINSK--REST)

SLOBODIN, V.M.; IVANYUK, Yu.I.; KUZOVLEV, P.M.; NAGAYEV, Yu.A., LUPAREVA,T.F.;
MESHCHANINOV,S.I.;BRYUKHOV,Yu.A.; SYCHEVA,F.A.; KOSYAKOV,P.O.,
red.; ZANOVA, K.N., red.izd-va; TAMKOVA, N.F., tekhn.red.

[Distribution and specialization of agriculture in Chelyabinsk
Province] Razmeshchenie i spetsializatsiia sel'skogo khoziaistva
Cheliabinskoi oblasti. Sverdlovsk, AN SSSR, 1963.   204 p.
                                                  (MIRA 16:12)

1. Akademiya nauk SSSR. Ural'skiy filial, Sverdlovsk. Otdel
ekonomicheskikh issledovaniy.
   (Chelyabinsk Province--Agriculture--Economic aspects)

33159
S/120/61/000/006/030/041
E035/E435

9, 2560 (1024, 1040, 1154)

AUTHORS: Yegorov, Ye., Sycheva, G.

TITLE: D.C. Stabilizer

PERIODICAL: Pribory i tekhnika eksperimenta, no.6, 1961, 130-131

TEXT: The circuit diagram is shown in Fig.1.   The main
components of the circuit are: П4Д (P4D) - a powerful
regulating transistor,   П201 (P201) - an amplifying transistor,
Д808 (D808) - a zener diode, giving a reference voltage at the
base of the P201, Д7Г (D7G) - a thermo-compensating germanium
diode.   Assume the load resistance R_H becomes smaller: as a
result, current through the load, the regulating transistor and
the resistance (R1 + R3) in the emitter of the circuit increases.
The negative potential on the P201 base increases and the
current passing through the emitter-base, reference diode D808
and diode D7G is increased.   This causes an increase of the
amplifying transistor collector current and a reduction of the
base current of the regulating transistor P4D with a corresponding
increase of the voltage drop across the transistor (the emitter-
collector resistance of the P4D increases).   The current through
the load R_H and the regulating transistor is reduced, thus
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D.C. Stabilizer

leaving it almost unaltered.   The operation of the circuit is similar if there is an increase of the load resistance.   By varying R1 a definite current can be established to the base of the amplifying transistor and also sets the necessary current passing through the regulating transistor and the stabilized load. The circuit effectively stabilizes currents up to 400 mA at a load resistance R_H of 20Ω.   By varying the load resistance $R_H = 20 \Omega$ by $\pm 1 \Omega$, the stabilized current varies by ± 0.03 mA from 300 mA.   The stabilized current as a function of load resistance variations for three current values of 200, 300 and 400 mA, is shown in Fig.2.   The internal resistance of the stabilizer is calculated by the approximate formula $R_i = \triangle R\ I_c / \triangle I$ by substituting the data taken from the graphs for stabilized current values of 200, 300 and 400 mA.   The internal resistance is respectively 10, 7.9 and 6.6 $k\Omega$.   The variation of stabilizer supply voltage by $\pm$ 10% from 32 V causes variation of the stabilized current by $\pm$ 25 mA from 300 mA.   The presence of three semiconductor elements makes the circuit sensitive to ambient temperature variations.   For reducing the

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D.C. Stabilizer

influence of temperature on stabilizer operation, thermo-compensating elements may be introduced - a germanium diode A7 (D7) - into the reference diode circuit. The results of incorporating the compensating diode in the circuit is shown in Fig.3. Without temperature compensation, the stabilized current fell by 3 mA from 300 mA when the ambient temperature was increased from 20 to 40°C, but with the inclusion of the compensator D7G only by 1 mA. The described stabilizer is used for stabilizing the supply voltage of a thermoconductometric gas analyser. There are 3 figures and 1 Soviet-bloc reference.

[Abstractor's note: Abridged translation.]

SUBMITTED: April 5, 1961

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PIVEN', P.K., red.; BARYSHNIKOVA, N.I., red.; PROTOPOPOVA, V.M., red.;
      IVANOVA, Yu.I., red.; CHEREPANOVA, N.A., red.; KOSTKO, R.P., red.;
      PETROVA, O.Ye., red.; SYCHEVA, G.F., red.; CHURIKOVA, A.K., red.;
      POZDEYEV, A.P., tekhn.red.

[Economy of Tyumen Province] Narodnoe khoziaistvo Tiumenskoi
oblasti. Omsk, Gos.stat.izd-vo, 1958. 198 p.   (MIRA 12:3)

1. Tyumen oblast'. Statisticheskoye upravleniye. 2. Nachal'nik
statisticheskogo upravleniya Tyumenskoy oblasti (for Piven').
            (Tyumen Province--Economic conditions)

KHOKHLOVA, Z.V., starshiy nauchnyy sotrudnik; SHAKHNAZAROVA, M.Sh., mladshiy nauchnyy sotrudnik; VIRNIK, D.I., inzh.; GUROVA, V.I., inzh.; SYCHEVA, G.V., inzh.

Determining gelatin yield from various types of raw materials.
Trudy VNIIMP no.11:170-177 '62.

(MIRA 18:2)

1. Moskovskiy zhelatinovyy zavcd. (for Virnik, Gurova, Sycheva).

KONYAYEV, B.V.; RUDNEVA, P.A.; V'YUSHINA, O.P.; NEKLYUDOVA, V.I.;
        SYCHEVA, I.K. (Moskva)

        Some indices of the blood coagulation and anticoagulation
        system in myocardial infarct and coronary insufficiency.
        Kardiologiia no.1:16-22 '64.   (MIRA 17:10)

SYCHEVA, I. M., Cand Med Sci (diss) -- "The permeability of erythrocytes to the radioisotope phosphorus-32 in certain internal diseases". Moscow, 1959. 12 pp (Acad Med Sci USSR), 200 copies (KL, No 10, 1960, 137)

SHISHKIN, Sergey Sergeyevich; SYCHEVA. I.M., red.; MATVEYEVA, M.M.,
tekhn. red.

[Recurrent infarcts of the myocardium] Povtornye infarkty
miokarda. Moskva, Medgiz, 1963. 181 p.   (MIRA 16:9)
(HEART—INFARCTION)

DOBKIN, I.Ye.; GUSHANSKAYA, P.G.; SYCHEVA, L.F.

Production of C_5 - C_9 low molecular weight synthetic fatty by the oxidation of soft paraffins. Proizv.smaz.mat. no.5: 34-44 '59.   (MIRA 13:4)

1. Leningradskiy opytnyy neftemaslozavod imeni Shaumyana.
             (Acids, Fatty) (Paraffins)

GUSHANSKAYA, P.G.; SYCHEVA, L.F.; DOBKIN, I.Ye.; LEV, L.I.

Using partition chromatography for the separation of low
molecular weight acids obtained in the oxidation of soft
paraffins. Khim.i tekh.topl.i masel 6 no.8:31-36 Ag '61.
                                        (MIRA 14:8)

1. Neftemaslozavod im. Shaumyana.
                    (Acids, Organic)
                    (Chromatographic analysis)
                    (Paraffins)

AL'TMAN, S.S.; GUSHANSKAYA, P.G.; SYCHEVA, L.F.

Manufacturing synthetic lubricants from oxidation products of the Ozek-Suat kerosene. Khim. i tekh. topl. i masel. 6 no.10:22-24 O '61.   (MIRA 14:11)

1. Neftemaslozavod im. Shaumyana.
        (Lubrication and lubricants)   (Ozek-Suat region—Kerosene)