

L 103C8-67

ACC NR: AP6029893

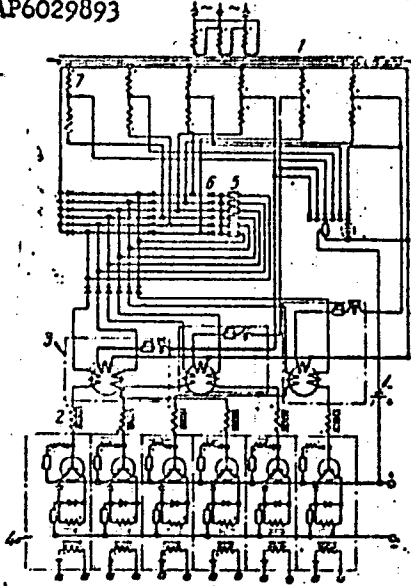


Fig. 1. 1 - three-phase transformer; 2 - transformer secondaries connected in comparison circuits of phase-shifting units; 3 - peak voltage forming units; 4 - controlling pulse shapers; 5 - unit resistors; 6 - unit diodes; 7 - transformer secondaries connected in half-wave voltage forming units !

phases of the transformer connected in opposition. The whole circuit and the part containing the diode and resistor are shunted by diodes connected in the nonconducting direction with respect to the current in the comparison circuit. Orig. art. has: 1 diagram.

SUB CODE: 09/
Card 2/2

SUBM DATE: 11Dec64

EPSTEIN, I.L., insh.

Transporting silica brick in piles. Mekh. stroi. 17 no.11:26 M
'60.

(MIRA 13:11)

(Brick--Transportation)

EPSHTEYN, I.M.

New method of registering the speed of the flow of water in bodies
of water with inlets and outlets. Biul.MOIP. Otd.biol. 61 no.4:
109-110 J1-Ag '56. (MIRA 10:8)
(FLOWMETERS)

EPSHTEYN, I.M.

Resistance thermometer for measuring water temperature.
Trudy Gidrobiol. ob-va 9:375-378 '59. (MIRA 12:9)

1. Uchinskaya laboratoriya Moskovskogo vedoproveda.
(Thermometers)

EPSHTEYN, I.M.

Determining oxygen concentration in reservoirs with the oxygen sounding device. Trudy Gidrobiel. ob-va 9:379-386 '59.

(MIRA 12:9)

1. Uchinskaya laboratoriya Moskovskogo vodozaveda.
(Water--Oxygen content) (Pelaregraphy)

EPSHTEYN, I. I.

33574. Zhizn' i Tvorcheskiy Put' R. M. Fronshteyna. (Urolog. 1882-1949). Khirurgiya, 1949
No. 10, c. 76-78, S Portr.

SO: Letopis'nykh Statey, Vol. 45, Moskva, 1949

EPSHTEYN, I.M., professor.

Present status of the treatment of urogenital tuberculosis.
Urologia no.2:3-8 Ap-Je '55. (MLRA 8:10)

1. Iz urologicheskoy kliniki (sav.--prof. I.M.Epshteyn) pri kafedre fakul'tetskoy khirurgii (sav.--zaslushennyy deyatel' nauki prof. M.N.Yelanskiy I Moskovskogo ordena Lenina meditsinskogo instituta.

(TUBERCULOSIS, UROGENITAL, therapy)

~~EPSHTEYN, I.M., professor (Moscow)~~

"Tuberculosis of the urogenital system." A.I. Malants. Reviewed
by I.M. Epshtein. Urologia no.2:92-93 Ap-Je '55. (MLRA 8:10)
(GENITOURINARY ORGANS--TUBERCULOSIS) (MALANTS, A.I.)

EPSHTEYN, I.M.

EPSHTEYN, I.M., professor (Moscow)

"Cystoscopy atlas." A.P.Frumkin. Reviewed by I.M.Epshtein.
Urologia no.3:95-96 J1-S '55. (MLRA 8:10)
(BLADDER--EXPLORATION) (FRUMKIN, A.P.)

ABIYEV, M.B., professor (Baku); MPSHTEYN, I.M., professor (Moskva)

First Republic Conference of Urologists of Azerbaijan. Urologia 21
no.2:77-81 Ap-Je '56. (MIRA 9:12)
(GENITOURINARY ORGANS--DISEASES)

EPSHTEYN, I.M., professor

Some problems in clinical aspects of tuberculosis of the urogenital system. Urologia 21 no.4:12-17 O-D '56. (MIRA 10:2)

1. Iz kafedry urologii (zav. - prof. I.M.Epshteyn) i Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.
(TUBERCULOSIS, UROGENITAL
clin. aspects diag. & ther.)

EPSHTEYN, I.M. professor (Moskva)

Fifty years of pyclography. Urologia, 22 no.1:9-12 Ja-P '57

(PYCLOGRAPHY, hist.)

(MLRA 10:5)

EPSTEIN, I. M.

TOPCHAN, A.B., professor; EPSTEIN, I.M., professor; ROMANOVA, V., zasluzhen-
nyy vrach RSFSR

Professor Anatolii Pavlovich Frumkin; on his 60th birthday. Urologia
22 no.3:93-94 My-Je '57. (MIRA 10:8)

1. Predsedatel' Vsesoyuznogo obshchestva urologov (for Topchan). 2.
Zamestitel' predsedatelya Moskovskogo Obshchestva urologov (for
Epsteyn). 3. Zaveduyushchiy urologicheskim otdeleniyem Bol'nitsy
imeni S.P.Botkina (for Romanova)
(FRUMKIN, ANATOLII PAVLOVICH, 1897-)

WPSHTEYN, I.M., prof.

"Tumors of the bladder induced by carcinogenic amino compounds"
by I.S. Temkin. Sov.med. 22 no.4:152-153 Ap '58 (MIRA 11:7)
(BLADDER--TUMORS)
(CARCINOGENS)
(TEMKIN, I.S.)

EPSTEIN, I.M., prof. (Moskva)

"Hypospadias and its treatment" [in German] by H.J. Serfling.
Reviewed by I.M. Epstein: Urologia 23 no.5:86-87 8-0 '58
(MIRA 11:11)

(URETHRA--ANOMALIES AND DEFORMITIES)
(SERFLING, H.J.)

EPSHTEYN, I.M., prof.

Indications for surgery in renal and ureteral calculi [with summary
in English] Khirurgia 3/4 no.7:134-141 J1 '58 (MIRA 11:9)

1. Iz kafedry urologii (sav. - prof. I.M. Epshteyn) I Moskovskogo
ordena Lenina meditsinskogo instituta imeni I.M. Sechenova (dir.
-prof. V.V. Kovanov).

(KIDNEYS, calculi,
surg., indic. (Rus))

(URETERS, calculi
surg., indic. (Rus))

EPSHTEYN, Iosif Moiseyevich; GOL'DIN, G.I., red.; LYUKOVSKAYA,
N.I., tekhn.red.

[Urology] Urologiia. Moskva, Gos.izd-vo med.lit-ry, 1959.
334 p. (MIRA 13:2)

1. Zaveduyushchiy kafedroy urologii I Moskovskogo ordens Lenina
meditsinskogo instituta imeni I.M.Sechenova (for Epshteyn).
(UROLOGY)

ABRAMYAN, A.Ya., prof.; ATABEKOV, D.N., prof.; VOROBTISOV, V.I., kand. med. nauk; GASPARYAN, A.M., prof.; GREBENSHCHIKOV, G.S., prof.; DZHAVAD-ZADE, M.D., kand. med. nauk; DUNAYEVSKIY, L.I., dots., prof.; LOPATKIN, N.A., dots.; POMERANTSEV, A.A., dots.; PYTEL', A.Ya., prof.; RIKHTER, G.A., prof.; RUSANOV, A.A., prof.; SMIRNOV, A.V., prof.; SYROVATKO, F.A., prof.; TSULUKIDZE, A.P., prof.; SHAPIRO, I.N., prof.; EPSHTEYN, I.M., prof.; PETROVSKIY, B.V., prof., otv. red.; BAKULEV, A.N., akademik, red.; GULYAYEV, A.V., prof.; YEGOROV, B.G., prof., red.; KUPRIYANOV, P.A., prof., red.; PANKRAT'YEV, B.Ye., prof., red.; FILATOV, A.N., prof., red.; CHAKLIN, V.D., prof., red. GORELIK, S.L., red.; GABERLAND, M.I., tekhn. red.

[Multivolume manual on surgery] Mnogotomnoe rukovodstvo po khirurgii. Moskva, Gos. izd-vo med. lit-ry. Vol.9. [Surgery of the urinary and genital organs and the retroperitoneal space] Khirurgia mochevykh i polovykh organov i zabriushinogo prostranstva. 1959. 630 p. (MIRA 15:4)

1. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Petrovskiy, Yegorov, Kupriyanov).

(RETROPERITONEAL SPACE—SURGERY)
(GENITOURINARY ORGANS—SURGERY)

EPSTEIN, I.M., prof.; GOL'DIN, G.I., doktor med.nauk

In memory of Rikhard Mikhailovich Fronshtein; on the 10th anniversary
of his death. Urologia 24 no.3:3-5 My-Je '59. (MIRA 12:12)

(BIOGRAPHS,
Fronshtein, Rikhard M. (Rus))

EPSHTEYN, I.M., prof.

Teaching of urology in medical institutes. Urologia 24 no.5:56-59
S-O '59. (MIRA 12:12)

1. Iz kafedry urologii (zav. - prof. I.M. Epshteyn) I Moskovskogo
ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.
(UROLOGY educ.)

TOPCHAN, A.B., prof.red.(Moskva),[deceased]; PORUDOMINSKIY, I.M.,
prof.,red.(moskva); PYTEL', A.Ya., prof., red.(moskva);
EPSHTEYN, I.M., prof., red. (Moskva); LEVANT, D.Ye., dotsent, red.
(Moskva); FRUMKIN, A.P., prof. zaslushennyy deyatel' nauki, zam.
red. (Moskva); GABERLAND, M.I., tekhn. red.

[Transactions of the Third All-Union Conference of Urologists]
Trudy Vsesoyuznoy konferentsii urologov, 3d, Tiflis, 1958.
Moskva, Gos.izd-vo med. lit-ry Medgiz, 1960. 259 p.

(MIRA 14:5)

1. Vsesoyuznaya konferentsiya urologov, 3d, Tiflis, 1958.
2. Predsedatel' pravleniya Vsesoyuznogo obshchestva urologov
(for Topchan).

(UROLOGY--CONGRESSES)

EPSHTEYN, I.M.

A method for the electrochemical registration of oxygen metabolism in animal tissues. *Biul. eksp. biol i med.* 50 no.12:104-107 D '60.

(MIRA 14:1)

1. Iz Gosudarstvennogo onkologicheskogo instituta imeni P.A. Gartsena (dir. - prof. A.N.Novikov, nauchnyy rukovoditel' - chlen-korrespondent AMN SSSR prof. A.I.Savitskiy), Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR V.N. Chernigovskim.
(METABOLISM)

PETROV, B.D., red.; GOL'DIN, G.I., red.; DUNAYEVSKIY, L.I., red.;
PORUDOMINSKIY, I.M., red.; EPSHTEYN, I.M., red.; KUDRYAVTSEV,
M.A., red.; NAVROTSKIY, O.G., tekhn. red.

Rikhard Mikhailovich Fronshtein. Pod red. B.D. Petrova. Moskva,
Gos. izd-vo med. lit-ry, 1962. 65 p. (MIRA 15:9)

1. Moscow. Pervyy meditsinskiy institut. 2. Zaveduyushchiy ka-
fedroy istorii meditsiny 1-go Moskovskogo ordena Lenina medi-
tainskogo instituta (for Petrov).

(FRONSHTEIN, RIKHARD MIKHAILOVICH, 1882-1949)

EPSHTEYN, I.M., prof.

Prevention of cystitis. Zdorov'e 8 no.6:14-15 Je '62. (MIRA 15:5)
(BLADDER--INFLAMMATION)

EPSHTEYN, I. M., prof.; LASKOV, B. I., kand. med. nauk (Moskva)

Current status of the problem of enuresis. Urologia no.2:68-73
'62. (MIRA 15:4)

(URINE--INCONTINENCE)

VERTEPOVA, V.M., dots.; VOL'PYAN, Ye.L., ass.; ZAMIKHOVSKIY,
I.Z., ass.; RAMENSKIY, S.B., prepod.; SOROKINA, M.I.,
prepod.; EPSHTEYN, I.M., prof., red.; SHCHUKIN, P.I.,
red.;

[Methodological instructions for practical work in urology]
Metodicheskie ukazania k prakticheskim zaniatiyam po uro-
logii. Pod red. I.M.Epshteina. Moskva, 1963. 37 p.

(MIRA 16:12)

1. Moscow. Pervyy meditsinskiy institut.
(UROLOGY—HANDBOOKS, MANUALS, ETC.)

FRUMKIN, A. P., zasl. deyatel' nauki prof, red. [deceased]; PYTEL',
A. Ya., prof., zam. red.; VOROBTSOV, V. I., kand med. nauk,
red.; GOL'DIN, G. I., doktor med. nauk, red.; LEVANT, D. Ye.,
dots., red.; PORUDOMINSKIY, I. M., prof., red.; EPSHTEYN, I. M.
prof., red.; LEVANT, D. Ye., red.; BEL'CHIKOVA, Yu. S., tekhn.
red.

[Transactions of the Fourth All-Union Conference of Urologists,
Moscow, June 24-30, 1961] Trudy Vsesoiuznoi konferentsii uro-
logov. 4th, Moscow, 1961. Moskva, Medgiz, 1963. 238 p.
(MIRA 17:3)

1. Vsesoyuznaya konferentsiya urologov. 4th, Moscow, 1961.

BARATS, S.S., kand. med. nauk; PYTEL', A.Ya., prof.; RATNER, M.Ya., doktor med.nauk; RATNER, N.A., prof.; REYZEL'MAN, S.D., prof. [deceased]; SURA, V.V., st. nauchn. sotr.; TUMANOVSKIY, M.N., prof.; CHERVYAKOVSKIY, N.Ya., prof.; SHCHERBA, M.L., prof. [deceased]; EPSHTEYN, I.M., prof.; TAREYEV, Ye.M., prof., red. toma; OSTROVERKHOV, G.Ye., prof., glav. red.; SHUL'TSEV, G.P., doktor med. nauk, red.

[Multivolume manual on internal diseases] Mnogotomnoe rukovodstvo po vnutrennim bolezniam. Moskva, Medgiz. Vol.9. [Diseases of the kidneys] Bolezni pochek. 1963. 383 p. (MIRA 16:11)

1. Deystvitel'nyy chlen AMN SSSR (for Tareyev). (KIDNEYS—DISEASES)

EPSHTEYN, I.M., prof. (Moskva)

"Gynecological urology" by W.Langreder. Reviewed by I.M.
Epshtein. Urologia 28 no.2:81-82 Mr-Ap'63. (MIRA 16:6)
(GYNECOLOGY) (UROLOGY) (LANGREDER, W.)

BEREZIN, I.P.; EPSHTEYN, I.M.; KASHCHEVSKAYA, L.A.

Use a pair of gold and iron electrodes in electrochemical registration of the oxygen regime in tissues in vivo. Eksper. khir. i anest. 9 no.3:18-19 My-Je '64. (MIRA 18:3)

1. Nauchno-issledovatel'skiy institut eksperimental'noy khirurgicheskoy apparatury i instrumentov (dir. M.G. Anan'yov) i Onkologicheskiy institut imeni Gertsena (dir. - prof. A.N. Novikova), Moskva.

BELETSKYH, I.M., prof. (Moskva)

Clinical aspects of renal tumors. Khirurgiya 40 no.4:
135-139 Ap '64 (MIRA 18:1)

ALEKSANDROV, S.N.; ~~EPSHTEYN, I.M.~~; SPESIVTSEVA, V.G.; KOROLEVA, O.F.;
LIKHOVETSKAYA, L.L.

The 9th Congress of Roentgenologists of the German Democratic
Republic held jointly with the Society of Biophysicists. Med.
rad. 10 no.9:92-95 S '65. (MIRA 18:10)

KALININ, D.I. (Moskva); EPSTEIN, I.M. (Moskva)

Remarks on a game of an automaton with a partner using a
correlated mixed strategy. Avtom. i telem. 26 no.11:2060-
2061 N '65. (MIRA 18:12)

EPSHTEYN, I.M., prof.

Treatment and cure of renal tuberculosis. Sov. med. 28 no.1:85-90 Ja
'65. (MIRA 18:5)

1. Kafedra urologii (zav. - prof. I.M.Epshteyn) I Moskovskogo ordena
Lenina meditsinskogo instituta imeni Sechenova.

EPSHTEYN, I.M., prof.; SPESIVTSEVA, V.G.; GLEYZER, Yu.Ya.; AKSEL'DORF, A.L.

Isotope renography in urological practice. Med. rad. 10 no.11:
45-54 N '65. (MIRA 19:1)

1. Urologicheskaya klinika (zav. - prof. I.M. Epshteyn) i kli-
nika fakul'tetskoy terapii (zav. - prof. Z.A. Bondar') I Moskov-
skogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.
Submitted November 11, 1964.

EPSHTEYN, I.M., prof.; VAYNBERG, Z.S., kand.med.nauk; TONGUR, A.M.,
kand.khim.nauk

Experimental nephrolithiasis in the light of electron microscopy
studies. Urol. i nefr. no.2:10-14 '65. (MIRA 19:1)

1. Urologicheskaya klinika (sav.-- prof. I.M.Epshteyn) I Moskov-
skogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.

ACC NR: AP6031639 (A) SOURCE CODE: UR/0240/66/000/009/0067/0071
AUTHOR: Popov, T. A.; Epahtoy, L. H.; Borozin, I. P.
ORG: Institute of General and Municipal Hygiene im. A. N. Sysin, AMN SSSR
(Institut obshchey i kommunal'noy gigiyony AMN SSSR); State Institute of Oncology
im. I. A. Gertsen (Gosudarstvennyy onkologicheskiy institut); Institute of Experi-
mental and Surgical Apparatus and Instruments, Moscow (Institut eksperimental'noy
and khirurgicheskoy apparatury i instrumentov)
TITLE: Electroanalytic method of studying the speed of oxygen consumption in
tissues in vivo in a sanitary-toxicological experiment
SOURCE: Gigiyena i sanitariya, no. 9, 1966, 67-71
TOPIC TAGS: electroanalysis, oxygen consumption, rat, histology, toxicology
ABSTRACT:

The electroanalytic method of studying pO_2 in the tissues of a living organism has been proven to be a sensitive test affiliated with the determination of the MPC (maximum permissible concentration) of a series of tissues. Experiments were conducted with white rats: in one group, a water solution of 2,4 dinitrophenol (DNPH) with a concentration of $1/2 LD_{50}$ (1.5 mg/kg) was injected in the course of 80 days; in the second group the same dosage of DNPH was injected once; the third group was the control and received no injection. A specially constructed organic glass chamber which supplied 100% oxygen at a rate of 5 l/min, thus allowing a full exchange of the air with respired CO_2 , was used. An electronic self-recording potentiometer (YePP09) studied the oxygenic

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UDC: 615.9:614.37-092-07:616-008.922.1-074

ACC NR: AP6031639

condition in the tissues. The following coefficients were used to analyze the results: K_1 represented the relationship of the maximal force of the current to the original force and also the degree of disturbance of the tissue after oxygenic stress. K_2 , K_3 , and K_4 represented the relation of the current forces at 60, 120, and 180 seconds after the first supply of oxygen. Analysis of the data showed that a single inoculation of DNPH produces a significant reduction in the saturation of oxygen in muscles, and increases oxygen consumption. In addition, a more severe experiment was conducted by applying arterial gaskets to the limbs and then inoculating DNPH. Analysis of this method also showed that a single inoculation of DNPH produces a significant increase (43%) in O_2 consumption. It was concluded that the electroanalytic method permits correlation of respiratory intensity in intact muscles of living organisms and expression of respiratory kinetics by a constant of reaction speed. This method of registering O_2 consumption in living tissues can also be used in tracing the effect of a small dose of DNPH over a long period of time. [WA-50; CBE No. 12]

SUB CODE: 06 / SUBM DATE: 07Jan66 / ORIG REF: 010 / OTH REF: 002

Card 2/2

EPSHTEYN, I. Sh.

Complete classification of real conic sections in an extended
hyperbolic surface. *Izv.vys.ucheb.sav.; mat.* no.1:234-243 '60.
(MIRA 13:6)

1. Yaroslavskiy pedagogicheskiy institut.
(Geometry, Non-Euclidean)

EPSHTEYN, I.Sh.

Conformal circular transformations in a Lobachevskii plane.
Uch. zap. IAr. gos. ped. inst. no.34:325-338 '60. (MIRA 15:9)
(Geometry, Descriptive)

EPSHTEYN, I.Sh.

Quadric curves on an extended Lobachevskii plane represented as
conic sections. Dokl. na nauch. konf. 1 no.3:136-140 '62.
(MIRA 16:8)

(Curves) (Conic sections)

SKOPETS, Z.A.; EPSHTEYN, I.Sh.

Representation of the motions of a Lobachevskii space on a
Möbius plane. Dokl. na nauch. konf. 1 no.3:121-124 '62.
(MIRA 16:8)

(Projection) (Geometry, Non-Euclidean)

EPSHTEYN, I. Ya.

1. BERESLAVSKIY, A. V. EPSHTEIN, I. YA.
- 2/ USSR (600)
4. Grinding and Polishing
7. Experience with the introduction of diamond dressing on tooth-grinding and groove-grinding machines. Stan. 1 insts. N 152.

23011

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

EPSHTEYN, I.Ya., inzh.

Automatic control of the electric driving on scoop chains and dragline
shunting winches. Izv.vys.ucheb.zav.; gor.zhur. no.6:97-103 '58.
(MIRA 12:1)

1. Leningradskiy gornyy institut.
(Mining machinery--Electric drive)
(Automatic control)

EPSHTEYN, I. YA., CAND TECH SCI, "^{Study} INVESTIGATION OF THE
PROBLEM OF AUTOMATING THE BASIC MECHANISMS OF A MULTI-
BUCKET DREDGE." LENINGRAD, 1959. (MIN OF HIGHER ED USSR,
LENINGRAD ORDER OF LENIN AND ORDER OF LABOR RED BANNER MIN
INST IM G. V. PLEKHANOV). (KL, 2-61, 214).

Cand Tech Sci, Leningrad Mining Inst imeni S.V.
Plethanov, 1959

-205-

SPSHENIN, I.Ya., inzh.

Determining the resistance to the movement of a bucket-chain drag.
Nauch.dokl.vys.shkoly; gor.delo no.2:148-152 '59. (MIRA 12:7)

1. Predstavlena kafedroy gornykh mashin Leningradskogo gornogo instituta im. G.V. Plekhanova.
(Excavating machinery)

EPSHTEYN, I.Ya., insh.

Regulating the insensitive zone in control systems of multibucket excavating machines. Nauch. dokl. vys. shkoly; gor. dele no.1:135-137 '59. (MIRA 12:5)

1. Predstavlena kafedroy gornoy elektrotehniki Leningradskogo gornogo instituta im. G.V. Plekhanova. (Excavating machinery) (Automatic control)

EPSHTEYN, I. Ye.

1. YEPSHTEYN, I. YE.

2. USSR (600)

4. Plastics

7. New nozzles for making plastic tubes. Stek. i her. 9 no. 9, 1952.

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

3-58-7-18/36

AUTHORS: Litsis, N.A. and Epshteyn, I.Ye., Candidate of Technical Sciences, Dotsent

TITLE: Engineering Knowledge to Teachers of Basic Sciences of Industrial Production (Uchitelyam osnov proizvodstva - inzhenernyye znaniya)

PERIODICAL: Vestnik vysshey shkoly, 1958, Nr 7, pp 58-60 (USSR)

ABSTRACT: A scientific methodical conference called by the Rizhskiy pedagogicheskiy institut (The Riga Pedagogical Institute) jointly with the Ministry of Education of the Latvian SSR debated measures to improve the polytechnical education of future teachers. The conference proposed replacing the state examination of teachers in special industrial disciplines, by the presentation of a diploma project on a given subject. The number of hours for teaching industrial drawing must therefore be increased.

ASSOCIATION: Ministerstvo prosveshcheniya Latviyskoy SSR (Ministry of Education, Latvian SSR)

Card 1/1

EPSHTEYN, L.

Using the ZShN scouring and peeling machine in the production of grade-
five pearled barley. Mik.-elev. prom. 28 no.8:18-19 Ag '62.
(MIRA 17:2)

1. Glavnyy inzh. Dnepropetrovskogo kombinata khleboproduktov.

EPSTEIN, L., insh.

~~CONFIDENTIAL~~

Continuous scouring and peeling machine. Muk.-elev.prom. 23
no.9:28 S '57. (MIRA 10:11)

1. Dnepropetrovskiy krupozavod No.17
(Grain-milling machinery)

~~EPSTEIN, L.~~

EPSTEIN, L., inzhener.

Hulling bran is being loaded into railroad cars by machine.
Muk.-elev.prom. 23 no.7:24 J1 '57. (MLRA 10:9)

1. Dnepropetrovskiy krupozavod No.17.
(Loading and unloading) (Grain millin--By-products)

L 29332-66 EWP(k)/EWT(m)/T-2/EWP(w)/EWP(v)/EWP(t)/ETI LJP(c) EM/JD/WH
ACC NR: AF5023012 SOURCE CODE: UR/0029/65/000/008/0005/0006

AUTHOR: Epshteyn, L. (Professor, Doctor of technical sciences) 60
E

ORG: none

TITLE: Is cavitation always harmful?

SOURCE: Tekhnika - molodezhi, no. 8, 1965, 5-6

TOPIC TAGS: cavitation, marine engineering, propeller blade

ABSTRACT: The principles of cavitation are discussed and its adverse effects cited. The development of cavitation during operation at high rates of speed is unavoidable and all measures to prevent it have been unsuccessful. Cavitation led to the discovery of supercavitation which, in turn, inspired the Russian scientist V.L. Pozdynin to design supercavitation propellers. The shape of the propeller blades causes rapid development of a cavity that closes behind the propeller, while the simultaneous decrease in resistance and lifting force make it possible to develop a sufficiently high efficiency. Supercavitation conditions set in at speeds of 10 to 100 m/sec or higher. Noise, vibration, and erosion at lower speeds can be eliminated by pumping air in the cavities. Thus, despite its

L 29332-66

ACC NR: AP5023012

harmful effects, cavitation might eventually find useful application,
as have other harmful physical processes in the past. Orig. art.
has: 2 figures.

SUB CODE: 20,13/ SUBM DATE: None

2/2 00

ESHTEYIN, L. A.

Kolebaniia kruglogo tsilindra v viazkoi zhidkosti. (K voprosu o kachke).
Moskva, 1935. 21 p., diags. (TSAGI. Trudy, no. 233). Summary in Ger-
man.

Title tr.: Oscillations of a round cylinder in a viscous fluid. (On the
question of pitching.

QA911.M65 no. 233

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of
Congress, 1955

EPSHTEYN, Leonid Abramovich

"Some New Experimental Opinions on the Phenomenon of Sliding," Dokl. AN
SSSR, 26, No.8, 1940

Central Inst. Aero-Hydrodynamics Im. Zhukovskiy, Moscow

EPSTEIN, L. A.

EPSTEIN, L. A.

Novye eksperimental'nye materialy po glissirovaniu ploskikh plas-
tinok. Moskva, 1940. (TSAGI. Trudy no. 508)

Title tr.: New experimental data on planing of flat plates.

NCF

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of
Congress, 1955.

13

CA

Heat-resistant micantites. B. M. Tarcev, L. A. Epstein and K. I. Chetnyak. *Vestnik Elektromot. II*, No. 3, 35 (1941); *Chem. Zvest.* 1940, II, 1701. --Micantites prep'd. from mica waste and either Na alkate or an alkyl were tested for use in electric heaters (resistors); both types were satisfactory. M. Hirsch

ASB.51A METALLURGICAL LITERATURE CLASSIFICATION

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 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 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|

Эпштейн, Л. А.

EPSHTEIN, L. A.

Masshtabnyi effekt voln i bryzg, obrazuemykh glissiruiushchimi sudam. Moskva, 1940. 32 p., illus. (TSAGI. Trudy, no. 469)

Title tr.: Scale effect of waves and spray generated by planing hulls.

NCF

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

Епштейн

EPSHEIN, L. A.

Ustoichvost' glissirovaniia gidrosamoletov i glisserov. Moskva,
1941. (TSAGI. Trudy, no. 500)
Title tr.: Stability of planing of hydroplanes and flying boats.

NCF

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of
Congress, 1955.

EPSHTEYN, L. A.

"On the Possibilities of a Theoretical Study of Cavitation as a Motion of a
Special Kind of Compressible Fluid," Dokl. AN SSSR, 49, No.6, 1945

Central Inst. Aero-Hydrodynamics im. N. Ye. Zhukovskiy, Moscow

EPSHTEIN, L. A.

N. S. Zhukovskiy Central Aerohydrodynamic Inst. (-1946-)

"The Formation and Development of Undimensional Cavitation Streams."

Iz. Ak. Nauk, Otdel Tekh. Nauk, No. 5, 1946

EPSHTEYN, L. A.

"On the Negative Pressures and Cavitation in Fast-Flowing Water," Zhur. Tekh. Fiz., 16, No.6, 1946

Hydrodynamics Lab., Central Inst. Aerohydrodynamics

Epshteyn

EPSHTEIN, L. A.

O kriteriakh ustoychivosti pri starte gidrosamoletov. (Tekhnika
vozdušnogo flota, 1940, no. 6, p. 26-32, diagsr.)

Title tr.: Criteria of stability of seaplanes during take-off.

TL504.T4 1940

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of
Congress, 1955.

EPSHTEYN, L. A.

"On the Work of the Ideal Supercavitating Screw Propeller," Inzhen. Sbor., Vol. 9, pp 19-26, 1951

Gives critical review of following: "On the Theory of the Ideal Cavitating Propeller," A. M. Basin, Dok AN SSSR, Vol 49, p 570, 1945, and "Theory of the Ideal Cavitating Propeller," V. M. Lavrent'yev, Dok AN SSSR, Vol 50, p 89, 1945. Discusses certain questions on theory of ideal supercavitating screw propeller. Submitted 17 June 1950.

257T51

EPSHTEYN, L.A., doktor tekhn.nauk.

Propeller interaction on multiple shaft ships. Sudostroenie 24
no.1:6-9 Ja '58, (MIRA 11:2)
(Propellers)

EPSHTEYN, L.A. (Moskva)

Motion of an inclined plate below a free surface. Prikl. mat. i mekh.
27 no.4:735-738 JI-Ag '63. (MIRA 16:9)
(Hydrodynamics)

EPSTEIN, L. A. (Moscow)

"Formation and Development of Cavitation."

report presented at the First All-Union Congress on Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb 1960.

L 17442-63 EPA(b)/EWT(1)/RDS AFFTC/ASD Pd-4
ACCESSION NO: AP0004120

S/0040/63/027/004/0735/0738

AUTHOR: Epshteyn, L. A. (Moscow)

56

TITLE: Motion of a tilted disc under a free surface

SOURCE: Prikladnaya matematika i mekhanika, v. 27, no. 4, 1963, 735-738

TOPIC TAGS: tilted disc, incompressible fluid, jet method, conformal mapping

ABSTRACT: The author considers the plane problem of determining the motion of a tilted disc under the surface of an ideal, weightless, incompressible fluid of infinite depth. The statement of the problem closely corresponds to the case of motion of a disc for large Froud numbers. For the solution he applies the methods of jet theory and the usual complex variable conformal maps. Orig. art. has: 24 formulas and 8 figures.

ASSOCIATION: none

SUBMITTED: 10May63

DATE ACQ: 15Aug63

ENCL: 00

SUB CODE: HM, PH

NO REF SOV: 003

OTHER: 000

Card 1/1

EPSHTEYN, L., inzh.; POLYAKOVA, L., inzh.

NGP-2K 800K centrifugal machine on activibration mountings.
Prom. stroi. 1 inzh. soor. 5 no.5:27-28 S-0 '63. (MIRA 16:12)

ACC NR: AP6034542 (N) SOURCE CODE: UR/0421/66/000/005/0078/0081

AUTHOR: Epshteyn, L. A. (Moscow)

ORG: None

TITLE: On the minimum cavitation number and width of the cavity in plane and axisymmetric channels

SOURCE: AN SSSR. Izvestiya. Mekhanika zhidkosti i gaza, no. 5, 1966, 78-81

TOPIC TAGS: cavitation, fluid flow, cavity flow

ABSTRACT: The author studies the width of the cavity behind a body in plane and axisymmetric channels. Formulas are given for calculating the minimum cavitation number and also for finding the width of the cavity as a function of the cavitation number and the ratio of the transverse dimensions of the body in the channel. The results are given in the form of graphs and compared with data in the literature. Satisfactory agreement is observed in the region of maximum cross sectional areas of the cavity. The discrepancy increases with a reduction in the cross sectional area reaching approximately 12% when $S=0$, i. e. when the walls of the channel are removed to infinity. This contradiction is due to the differences in the computational schemes used. Curves are given showing the effect of the channel walls on the width of the cavity, with the ratio of the width in the channel to that in an unbounded

Card 1/2

ACC NR: AP6034542

fluid being laid off along the y -axis while the cavitation number is plotted along the x -axis. It is found that the width of the cavity increases as that of the channel is reduced for plane and circular channels with bodies of identical size and identical cavitation numbers. No matter how distant the walls, the area of the center section of the cavity behind a body in a channel is twice as great at the same minimum cavitation number as that of the center of the cavity behind a body in an unbounded fluid. This effect is briefly discussed and a physical explanation is given. Orig. art. has: 6 figures, 13 formulas.

SUB CODE: 20/ SUBM DATE: 27Jan66/ ORIG REF: 002/ OTH REF: 001

Card 2/2

~~SECRET~~

KPSHTEYN, Lev Abramovich

1964

o/1963

PLASTICS

ELECTRIC INSULATORS

EPSHTEYN, L.A.

Juvenile mathematics school at the Karelian Pedagogical Institute.
Uch. zap. Kar. ped. inst. 14:73-78 '63. (MIRA 17:3)

EPSHTEYN, L.G.
ca

11 F

Effect of age on gastric secretion. A. M. Vorob'ev and L. G. Eshstein. *Izv. vuzov. (Ukraine)* 1946, No. 8, 48 M. (1946). *1946* performed on 3 puppies (having Pavylov stomachs) for a period of 3 months beginning with the age of 3 months. As the puppies aged the same kind and quantity of food (milk, bread, meat) produced a greater quantity of gastric juice (per kg. of body weight), a greater percentage of solid residue, greater acidity and a greater digestive power of the juice. In the younger puppies the period of secretion of gastric juice was short, the max. secretion occurring at the end of the first hr. With advancing age the increase in gastric secretion became more gradual, the max. secretion occurring during the third hr. in the oldest puppies. S. A. Cosman

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

YEPSTEYN, L.G.

Nutrition and regimen in hypotrophy. Vopr. pediat. 20 no.4:52-55
July-Aug 1952. (OLML 23:2)

1. Candidate Medical Sciences. 2. Of the Children's Clinic, Gor'kiy State Medical Institute imeni S. M. Kirov (Director -- Docent P. V. Kravchenko; Head of Clinic -- Prof. F. D. Agafonov) attached to the Physiological Division of Gor'kiy Oblast Scientific-Research Pediatric Institute (Director -- A. A. Prokof'yeva; Scientific Supervisor -- Prof. F. D. Agafonov).

EPSHTEYN, L. G.

STULIY, L.A.; SAFRONOVA, O.N.; BUTS'KA, L.K., kand. med. nauk; KRIVOBOKOV, S.A. [Kryvobokov]; VOLOSHINOV, B.M. [Voloshynov, B.M.], dotsent BICHKOVSKIY, V.N. [Byshkovs'kyi, V.N.] dotsent; POKOTILOVA, V.Yu. [Pokotylova, V. IU]; KOLESNIKOV, G.F. [Kolesnykov, H.F.]; ZLATKIS, L.S.; SAVOST'YANOVA, S.I.; BRIN, D.D. [Bryn, D.D.]; MATVEYENKO, Ye.A. [Matvilenko, IE.A.]; BRONZ, L.M.; YEPSHTEYN, L.G. [Epshtein, L.H.], kand. med. nauk; SHAKHNOVICH, L.A. [Shakhnovych, L.A.]

Annotations and authors' abstracts. Pediat. akush. ginek. no.3:
31-34 '63 (MIRA 17:1)

1. Khar'kovskiy nauchno-issledovatel'skiy institut okhrany materinstva i detstva (for Stuliy). 2. Kafedra detskikh bolezney Odesskogo meditsinskogo instituta (for Safronova). 3. Ukrain'skiy institut okhrany materinstva i detstva (for Buts'ka). 4. Detskiy sanatoriy dlya rekonvalesstentov ot tuberkuleznogo meningita, Kiyev, Pushcha-Voditsa (for Krivobokov). 5. Detskaya klinika Ivano-Frankovskogo meditsinskogo instituta (for Voloshinov). 6. Kafedra detskikh infektsionnykh bolezney Krymskogo meditsinskogo instituta (for Bichkovskiy, Pokotilova). 7. Institut infektsionnykh bolezney Kiyev (for Kolesnikov). 8. Khar'kovskiy oblastnoy detskiy dom No.1 (for Zlatkis, Savost'yanova, Brin, Matveyenko). 9. Kafedra pediatrii Kiyevskogo med. instituta (for Bronz) 10. Kafedra fakul'tetskoy pediatrii Gor'kovskogo med. instituta (for Yepshteyn). 11. 2-ya detskaya bol'nitsa Shevchenkovskogo rayona g. Kiyeva (for Shakhnovich).

EPSHTEYN, L.M.

Zooplankton of Onega Bay and its importance in the nutrition of herring and fish fry. Mat. po kompl.izuch. Bel. mor. no.1:315-349 (MLRA 10:8) '57.

1. Belomorskaya biologicheskaya stantsiya Instituta biologii Karel'skogo filiala AN SSSR.
(Onega Bay--Zooplankton) (Onega Bay--Herring)
(Fishes--Food)

МПСХТЭЙН, Л.М.

Zooplankton in the mouth of the White Sea at the western coast of
the Kanin Peninsula: Mat. po kompl.isuch.Bel.mor. no.1:350-354
'57. (MLRA 10:8)

1. Belomorskaya biologicheskaya stantsiya Instituta biologii
Karel'skogo filiala AN SSSR.
(Kanin Peninsula--Zooplankton)

GREYSUKH, M.V.; YERMILOV, A.A.; ZALESSKIY, Yu.Ye.; KAZYMOV, A.A.;
KATSEVICH, L.S.; KIRPA, I.I.; KIREYEV, M.I.; KNYAZEVSKIY,
B.A.; KOFMAN, K.D.; KRZHAVANIK, L.V.; KUZNETSOV, P.V.;
MOROZOV, K.S.; RAKOVICH, I.I.; RYABOV, M.S.; SVENCHANSKIY,
A.D.; SOKOLOV, M.M.; SYCHEV, L.I.; TVERDIN, L.M.; KHEYFITS,
M.E.; SHULIMOV, Ye.V.; EPSHTEYN, L.M.; SHCHEGOL'KOV, Ye.I.;
TSAPENKO, Ye.F.; FEDOROV, A.A., glav. red.; SERBINOVSKIY, G.V.,
red.; BOL'SHAM, Ya.M., red.; BRANDENBURGSKAYA, E.Ya., red.;
TVERDIN, L.M., red.; FRIDKIN, L.M., tekhn. red.

[Handbook for power engineers of industrial enterprises in
four volumes] Spravochnik energetika promyshlennykh pred-
priyatii v chetyrekh tomakh. Moskva, Gosenergoizdat.
Vol.2. [Electric-power supply (conclusion), use of electric
power and electrical equipment in some branches of industry]
Elektrosnabzhenie (okonchanie), priemniki elektroenergii i
elektrooborudovanie nekotorykh otraslei promyshlennosti. Pod
obshchei red. A.A.Fedorova (glav. red.), G.V.Serbinovskogo i
IA.M.Bol'shama. 1963. 880 p. (MIRA 16:7)
(Power engineering—Handbooks, manuals, etc.)
(Electric power distribution)

EPSHTEIN, L.M.; YAROSLAVSKIY, N.G.

Long-wave infrared spectra ($400-20\text{ cm}^{-1}$) of diphenyl iodonium salts. Dokl. AN SSSR 149 no. 4:865-868. Ap '63. (MIRA 16:3)

1. Moskovskiy gosudarstvennyy universitet im. Lomonosova.
Predstavleno akademikom A.N. Nesmeyanovym.
(Iodonium compounds—Absorption spectra)

NESMEYANOV, A. N.; EPSHTEYN, L. M.; ISAYEVA, L. S.; TOISTAYA, T. P.;
KAZITSYNA, L. A.

Infrared spectra of diphenylhalo onium and triphenyl oxonium
salts in the region 400-750 cm^{-1} . Izv AN SSSR Ser Khim no. 4:
613-618 Ap. '64. (MIRA 17:5)

1. Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova.

EPSHTEYN, L. S.

Epshteyn, L. S. and Zamoruyev, V. M. - "The effect of the smelting process in an induction furnace (coilless) on the physical properties of medium-carbon steel," Trudy Tsent. Nauch.-issled. in-ta (N-vo sudostroit. prom-stil SSSR), No. 6, 1948, p. 35-30.

SO: U-3850, 16 June 53, (Letopis 'Zhurnal 'nykh Statey, No. 5, 1949).

EPSHTEYN, L.T. (Leningrad)

Determining variation coefficients for maximum intensities in the calculation of storm sewers. Vod. i san. tekhn. no.5:15 My '60.

(MIRA 13:10)

(Sewer design)

EPSTEIN, L.V.; GLADILIN, P.M.

Placing asphalt concrete on a stabilized ground base. Stroi.
dor. 10 no.7:13-14 J1-Ag '47. (MLRA 6:12)
(Road construction)

EPSHTEYN, L.V.

3

4214. UTILIZATION OF BURNT MINE REFUSE. Shiman, M.J.,
 Roklin, R.M. and Epstein, L.V. (Ugol (Coal), Jan. 1954, 2-24). Coal,
 sulphur and shale in mine refuse may cause spontaneous combustion and
 temperatures over 1000° in tips. Some of the material remaining is
 partially clinkered and hard; in Donbass, the heat comes from anthracite
 and coking coal mines. It is used successfully as an underlayer below
 the foundation of motor roads, instead of sand or crushed stone. (L.)

Fuel Abstracts
 June 1954
 Natural Solid Fuels
 Mining

EPshTEYN, L.V.

P'YANKOV, A.A.; EPSHTEYN, L.V., kand.med.nauk

Moscow region sanatoriums. Vop.kur., fizioter. i lech.fiz.kul't.
22 no.2:69-70 Mr-Ap '57. (MIRA 11:1)

1. Zamestitel' nachal'nika Moskovskogo territorial'nogo upravle-
niya (for P'yankov). 2. Glavnyy vrach sanatoriya "Peredelkino"
(for Epshteyn)
- (MOSCOW PROVINCE --HEALTH RESORTS, WATERING PLACES, ETC.)

EPSHTEYN, L. YA.

Epshteyn, L. Ya. - "Orthopedic treatment of irreparable paralysis of the radial nerve and of ischemic contractures, " In symposium: VIII Sessiya Neyrokhirurg. soveta i Leningr. in-ta neyrokhirurgii, (Akad. med. nauk SSSR), Moscow, 1948, p. 285-87.

SO: U-3600, 10 July 53, (Letopis'Zhurnal 'nykh Statey, No. 6, 1949).

AUTHOR: Epshteyn, L. Ye. SOV-12-90-4-6/22

TITLE: About the Article by F.Ya. Kirin on Topics of Economic Geography (Po povodu stat'i F.Ya.Kirina o predmete ekonomicheskoy geografii)

PERIODICAL: Izvestiya Vsesoyuznogo geograficheskogo obshchestva, 1958, Vol 90, Nr 4, pp 351-355 (USSR)

ABSTRACT: The above mentioned article was published in "Uchenyye zapiski" of the Chelyabinsk branch of the Geographic Society of the USSR, Nr 2 (1957), by F.Ya. Kirin. The author does not agree with his definition of the economic geography. There are 10 Soviet references.

1. Geography--USSR

Card 1/1

69034

S/097/60/000/01/010/017

18.8200

AUTHOR: Epshteyn L/E., Engineer

TITLE: Relationship Between Strength of Steel Mark 30KhG2S and the Temperature of Heating

PERIODICAL: Beton i zhelezobeton, 1960, Nr 1, p 35 (USSR)

ABSTRACT: Electro-thermic method of pretensioning of reinforced concrete constructions is widely used. In Tula Mechanical Institute tests were carried out to establish properties of strength of steel mark 30KhG2S subjected to heating and subsequent cooling. For this purpose 250 mm long samples were selected from reinforcing steel of standard profile mark 30KhG2S of 14 mm diameter. These were heated to 200, 300, 400, 500, 600 and 700°C and kept in the kiln for 30 minutes and then cooled down to the temperature of the air. The time of keeping the reinforcement under the increased temperature in the kiln secured constant properties of steel. Cooled-down samples were tested on tearing machine UIM-50. Illustrated graph shows that the obtained curve has maximum corresponding to temperature of 200°, which can be explained by the process of strengthening of the steel during its "ageing". After the increase of temperature above 200° the strength begins to fall. Temper-

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69034
S/097/60/000/D1/010/017

Relationship Between Strength of Steel Mark 30KhG2S and the Temperature of Heating

ature of 300 - 400°C does not cause decrease in the strength of samples in relationship to initial condition. The curve indicates rapid decrease in strength commencing at a temperature above 400°. At a temperature up to 500° the limit of strength is equal to 79 kg/mm², up to 600° - 78 kg/mm², and up to 700° - 68 kg/mm². It follows that at a temperature of 600°C the point of yield of the steel is reached at a stress of 60 kg/mm², that is the value of standard resistance for reinforcement from steel mark 30KhG2S. The point of yield of reinforcing steel when heated up to 700°C is 53 kg/mm², which is lower than the standard resistance. Elastic properties of reinforcement became larger with increased temperature. In original condition the relative elongation was 60%, at 300° - 16%, at 500° - 18% and 600 - 700° - 20%. Properties of steel samples after heating in the kiln were also rechecked by heating using electrical current. Two 600 mm long samples were heated up to 500 - 600°C. After reaching 500°C the limit of strength was 80 kg/cm², and after reaching 600° - 80 kg/mm², which corresponds with the illustrated graph.

Card 2/3

69034

S/097/60/000/01/010/017

Relationship Between Strength of Steel Mark 30KhG2S and the
Temperature of Heating

The obtained results show that reinforcement from steel
mark 30KhG2S, with regard to its strength, could be heated
up to the temperature of not more than 500°C, but the
result is excessively high plasticity and it is therefore
recommended not to use higher temperature of heating than
300 - 350°C. ✓

There is 1 figure.

Card 3/3

S/126/63/015/003/010/025
2171/1111

AUTHORS: Sokolovskiy, P.I., Golovin, S.A., Epshteyn, I.Ye.,
Arone, R.G. and Yakovleva, V.S.

TITLE: On the problem of increased strength of hardened steel
during tempering by passage of an electron current

PERIODICAL: Fizika metallov i metallovedeniye, v. 15, no. 3,
467 - 470

TEXT: It has been established that steel tempered by the
passage of electrical current has mechanical properties superior
to those of steel tempered in a furnace. The cause of this
difference has not yet been understood - hence the present investi-
gation carried out on steels 5 and 35FC (35GS). The experiments
(tensile tests, electrical-resistance measurements, determination
of the temperature-dependence of internal friction) were conducted
on wire specimens 14 mm in diameter, 450 mm long, quenched from
860 °C, then tempered at various temperatures either in a furnace
or by passage of an electric current. The results are reproduced
graphically. In Fig. 1, the UTS (σ_b , kg/mm²), yield point
(σ_T , kg/mm²) and elongation (δ , %) of steel 5 are plotted against
Card 1/4

S/126/63/015/005/020/025
E193/E383

On the problem of

the tempering temperature of specimens tempered in a furnace (δ_5 and δ_{10} denote elongations measured on a gauge length of 5 and 10 mm, respectively). Similar curves reproduced in Fig. 2 have been constructed for steel 5 specimens, tempered by the passage of electric current. In Fig. 5, the decrease in electrical resistivity ($\Delta\rho$, $\Omega\text{mm}^2/\text{m}$) of steel 5 is plotted against the tempering temperature, curves 1 and 2 relating to specimens tempered, respectively, in the furnace and by electric current. Finally, the temperature-dependence of internal friction of steel 35GS, tempered at 250 °C in the furnace (curve 1) and by passage of electric current (curve 2) is demonstrated in Fig. 7.

Conclusions - Improvement in the mechanical properties of steel tempered by passage of electric current can be explained in the following manner: electrical tempering brings about a greater decrease in the electrical resistivity of the steel, which indicates that carbon is more completely precipitated from the martensite, which means that a larger quantity of carbides is formed. In the same way, the increased width and height of the internal-friction peaks in electrically tempered steel indicates a higher
Card 2/4

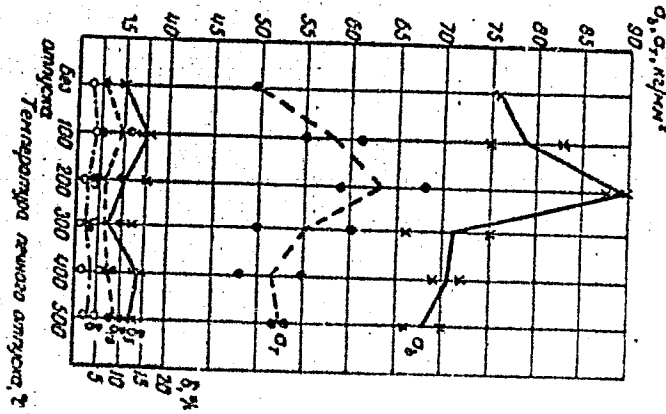
On the problem of....

concentration of dislocations and, consequently, a larger number of sources of relaxation processes. There are 7 figures and 1 table.

ASSOCIATION: Tul'skiy mekhanicheskiy institut
(Tula Mechanical Institute) S/126/63/015/003/020/025
E193/E383

SUBMITTED: May 25, 1962 (initially)
September 25, 1962 (after revision)

Fig. 1:



Card 3/4

On the problem ..

Fig. 5:

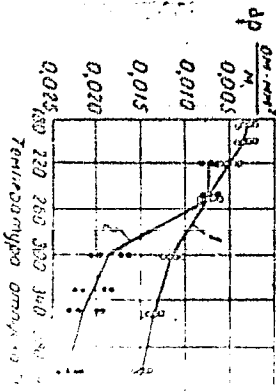


Fig. 2:

Card 4/4

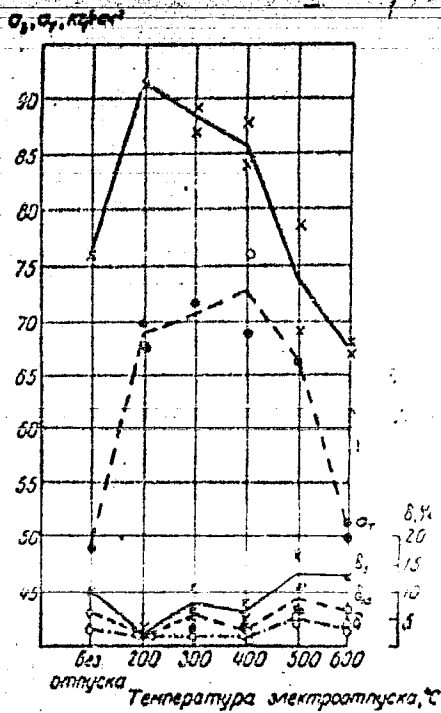
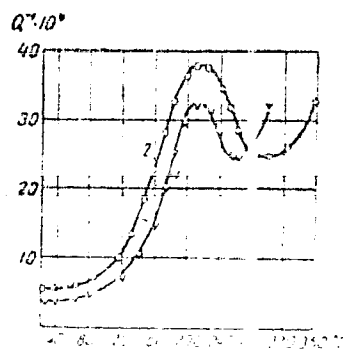


Fig. 7:



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E123/E383

"APPROVED FOR RELEASE: Thursday, July 27, 2000

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