BULYGIN, I.A.; SHCHARNIKOVA, Z.D.

Conditioned interoceptive reflex influences from the bladder following the removal of the thoracic cord. Trudy Inst. fiziol. AN BSSR 2:178-187 '58. (MIRA 12:1)

1. Laboratoriya kortiko-vistseral'noy fiziologii Instituta fiziologii AN BSSR.
(BLADDER--INNERVATION) (SPINAL CORD)
(CONDITIONED RESPONSE)

YUN'YEV, G.S.; KUL'VANOVSKIY, M.P.; SHCHANNIKOVA, Z.D.

Interoceptive reflex influences from the bladder on cardiac activity in dogs (according to electrocardiographic data). Trudy Inst. fiziol. AN BSSR 2:209-219 '58. (MIRA 12:1)

1. Laboratoriya kortiko-vistseral'noy fiziologii Instituta fiziologii AN BSSR.
(BLADDER--INNERVATION) (ELECTROCARDIOGRAPHY)

BULYGIN, I.A.; YAKIMOVICH, R.A.; SHCHANNIKOVA, Z.D.

Conditioned shaking reflexes from the interoceptors of the bladder following section and partial removal of the spinal cord. Zhur. vys. nerv. deiat. 10 no. 1:130-137 Ja-F '60. (MIRA 14:2)

1. Laboratory of Cortico-Visceral Physiology, Institute of Physiology, Academy of Sciences, B.S.S.R., Minsk.
(SPINAL CORD) (CONDITIONED RESPONSE) (BLADDER—INNERVATION)

SHCH[illegible]OV, [illegible]

Work experience in technological information and propaganda in enterprises of the lumber and woodworking industries of the [illegible] Economic Region. [illegible] 23-31 '63.

[illegible]

1. Nachal'nik otdela nauchn[illegible] [illegible]cheskoy informatsii i propagandy TSentral'nogo byuro [illegible] informatsii [illegible] soveta narodnogo [illegible].

3.352. SHCHANOV, V. I. Ob organizatsii meditsinskoĭ pomoshchi naseleniiu v raĭonakh kraĭnego severa. (Sovetskoe zdravookhranenie, Jan.-Feb. 1954. god 13, no. 1, p. 21–25, illus.) Text in Russian. ***Title tr.:*** Organization of medical aid to the population of the districts of the far North.

Contains an account based on the author's experience in arctic areas, and on the conviction that due to the special arctic conditions (large areas, poor communication) the district hospitals cannot properly function. In order to bring specialized medical service closer to the population, supplementary specialized hospitals are proposed, with functions similar to those of the district (raĭon) hospitals. The organization of the whole project is also explained by a sketch map.

Copy seen: DLC.

SHCHANOV, V.T.

Specialized medical services in the Far North. Sov.zdrav. 16 no.3: 14-17 Mr '57. (MLRA 10:6)

1. Zaveduyushchiy Ust'-Kamchatskim rayonnom otdelom zdravookhraneniya.

(NATIONAL HEALTH PROGRAMS
med. care in extreme northern districts of Russia)

KOZLOV, T.I., prof., doktor ekon.nauk, otv.red.; BREGEL', E.Ya., prof., doktor ekon.nauk, red.; BUKH, Ye.M., dotsent, kand.ekon.nauk, red.; ZHEBRAK, M.Kh., prof., doktor ekon.nauk, red.; ISAKOV, V.I., dotsent, kand.ekon.nauk, red.; FREYMUND, Ye.N., dotsent, kand. ekon.nauk, red.; SHEVCHUK, A.V., kand.ekon.nauk, red.; SHIFMAN, A.G., dotsent, kand.ekon.nauk, red.; SHCHAPINA, T.A., dotsent, kand.ekon.nauk, red.; USTIYANTS, V.A., red.; MELENT'YEV, A.M., tekhn.red.

[Problems in statistics and accounting; a collection of articles on machine accounting] Voprosy statistiki i ucheta; sbornik statei po mekhanizatsii ucheta. Moskva, Gos.stat.izd-vo. No.2. 1959. 350 p. (MIRA 13:6)

1. Moscow. Ekonomiko-statisticheskiy institut.
(Machine accounting)

KOZLOV, T.I., prof., otv. red.; BREGEL', E.Ya., prof., red.; BUKH, Ye.M., dots., red.; ZHEBRAK, M.Kh., prof., red.; ISAKOV, V.I., dots., red.; FREYMUNDT, Ye.N., dots., red.; SHIFMAN, A.G., dots., red.; SHCHAPINA, T.A., dots., red.; SHEVCHUK, A.V., kand. ekonom. nauk, red.; SHENTSIS, Ye.M., red.; PYATAKOVA, N.D., tekhn. red.

[Problems in statistics and accounting] Voprosy statistiki i ucheta. Moskva, Gosstatizdat, TsSU SSR. No.3. [Collection of articles on labor productivity statistics in industry] Sbornik statei po statistike proizvoditel'nosti truda v promyshlennosti. 1961. 145 p. (MIRA 14:8)

1. Moscow. Ekonomiko-statisticheskiy institut.
(Productivity--Accounting)

KOPYTOV, D.P., inzh.; SHCHAPKOV, B.K., inzh.

Construction of a 25 km. long heating pipeline between Sverdlovsk and Energ. stroi. no.32:15-22 '62. (MIRA 16:5)

1. Trest "Uralenergomontazh".

ARYKIN, I.G.; SHCHAPOV, A.A.; YEGOROVA, Ye.N., red.; VAKLASHOVA, K.A., red.

[Regulation of the estuaries of lumber-floating rivers] Regulirovanie ust'evykh uchastkov lesosplavnykh rek. Moskva, TSentr. nauchno-issl. in-t informatsii i tekhniko-ekon. issledovanii po lesnoi, tsellyulozno-bumazhnoi, derevoobrabatyvaiushchei promyshl. i lesnomu khoziaistvu, 1963. 21 p. (MIRA 17:5)

[illegible], A.A.

[illegible] construction work on lumber-floating rivers.
[illegible]. inform. Gos. nauch.-issl. nauch. i tekh.
[illegible].9:58-61 S '64 (MIRA 18:1)

IL'IN, A.V., kand.tekhn.nauk, dots.; POLYAKOV, G.M., kand.tekhn.nauk, dots.; ZMACHINSKIY, A.V., inzh.; SHCHAPOV, G.A., inzh.

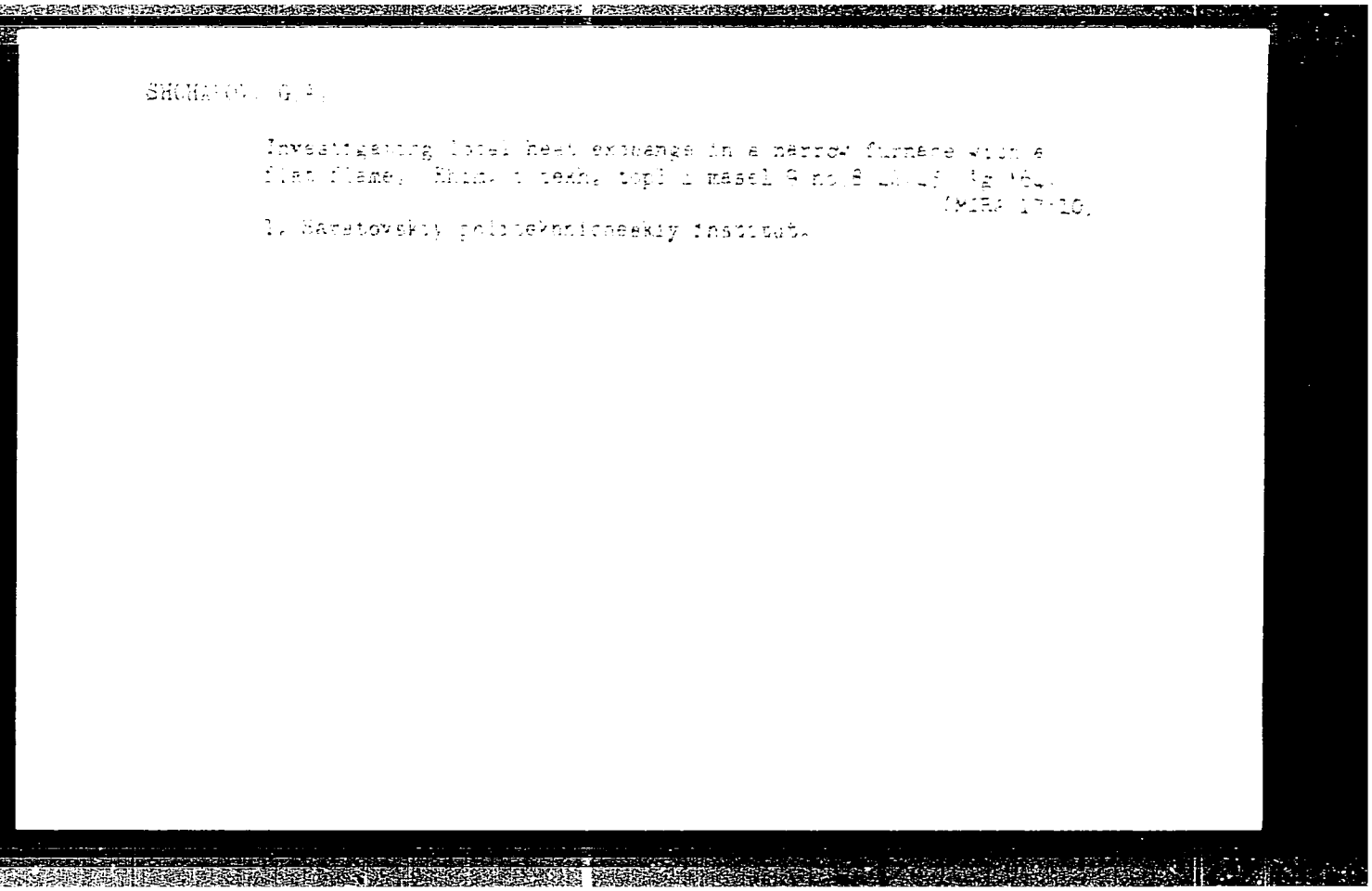
Characteristics of natural gas from the Bagayevka field as a power fuel. Izv.vys.ucheb.zav.; energ. 2 no.6:93-96 Je '59. (MIRA 13:2)

1. Saratovskiy politekhnicheskiy institut. Predstavlena kafedroy teploenergetiki.
(Bagayevka region--Gas, Natural) (Gas as fuel)

POLYAKOV, G.M., kand. tekhn. nauk; IL'IN, A.V., kand. tekhn. nauk; ZNACHINSKIY, A.V., inzh.; SHCHAPOV, G.A., inzh.

Investigation into the performance of the TP-170 boiler operating on natural gas at variable feed-water temperature. Teploenergetika 6 no.12:51-55 D '59. (MIRA 13:3)

1.Saratovskiy avtomobil'no-dorozhnyy institut.
(Boilers)



SHCHAVINSKIY, G. F.

Investigating local heat exchange in a narrow furnace with a flat flame. Khim. i tekh. topl. i masel 9 no 8 [illegible] (MIRA 17:10)

1. Gosudarstvennyy proektno-konstruktorskiy institut.

SHCHAPOV, G.I.

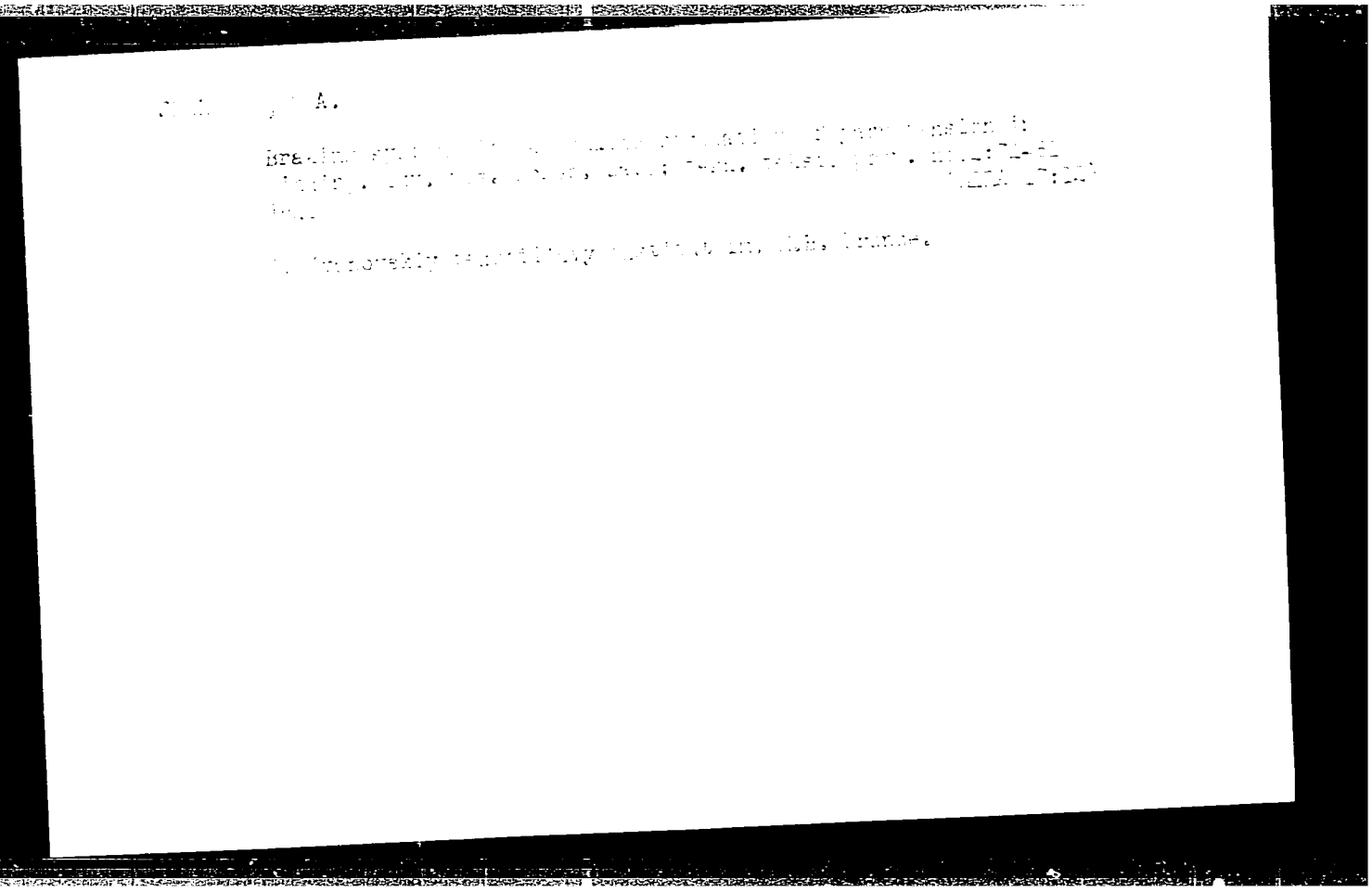
Problems of the over-all mechanization of coal loading operations in the mines of "Donetskugol'" Combine. Trudy MIIT no.143:38-53 '62.
(MIRA 15:7)

1. Glavnyy inzhener proizvodstvenno-tekhnicheskogo otdeleniya kombinata "Donetskugol'".

(Coal mines and mining—Equipment and supplies)
(Donets Basin—Loading and unloading)

SHCHAPOV, G.V.

Organization of the specialized production of spare parts for tractors. Trudy KhPI 22 no.2:9-18 '59. (MIRA 15:9)
(Tractor industry)



SHCHAPOV, M.A., starshiy nauchnyy sotrudnik

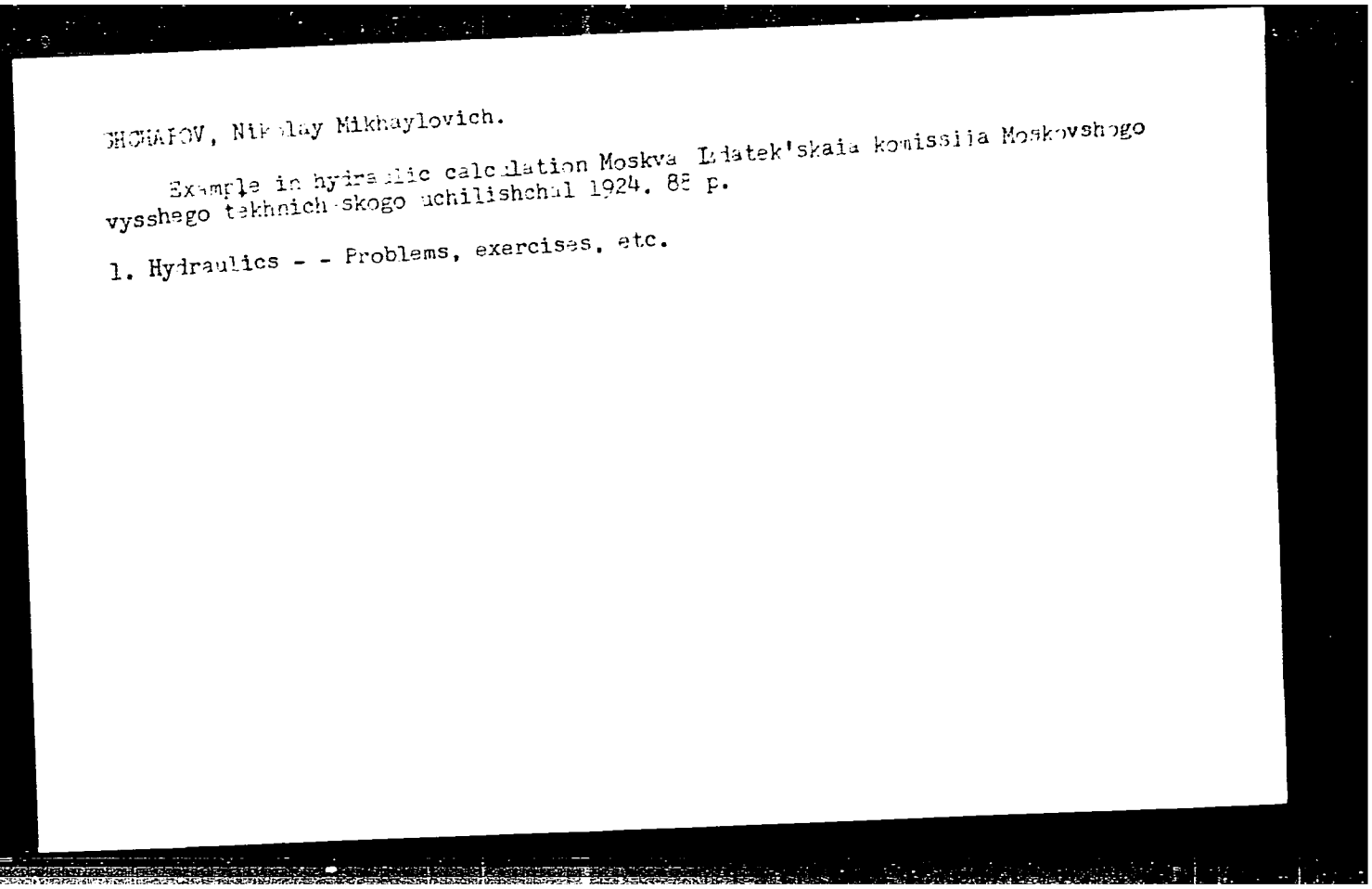
New tension devices for the M-150 and S-140 machines. Tekst. prom. 24 no.7:51-54 Jl '64. (MIRA 17:10)

1. Ivanovskiy nauchno-issledovatel'skiy institut khlopchatobumazhnoy promyshlennosti (IVNITI).

SHCHAPOV, M.A., starshiy nauchnyy sotrudnik; IVANOVA, M.I.; BATUNOVA, N.A., inzh.; NEKLYUDOV, A.N.

Determining the optimum braking load of the tension devices on winding and warping machines. Tekst. prom. 25 no.4:33-35 Ap '65. (MIRA 18:5)

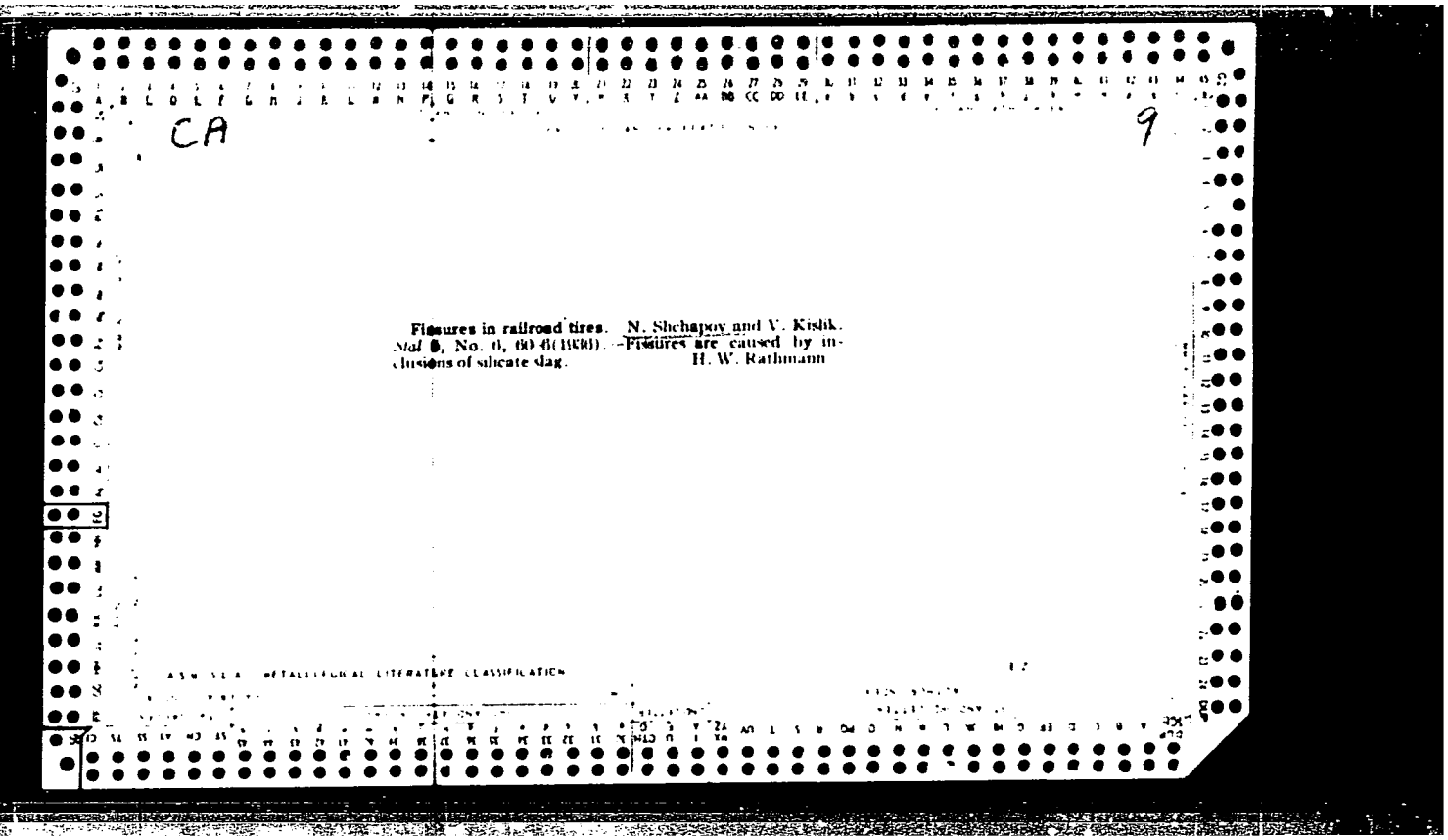
1. Ivanovskiy nauchno-issledovatel'skiy institut tekstil'noy promyshlennosti (for Shchapov). 2. Nachal'nik laboratorii tekstil'noy fabriki imeni Dzerzhinskogo (for Ivanova). 3. Laboratoriya tekstil'noy fabriki imeni Dzerzhinskogo (for Batunova). 4. Zamestitel' nachal'nika motal'no-snoval'nogo otdela tekstil'noy fabriki imeni Dzerzhinskogo (for Neklyudov).



SHCHAPOV, Nikolay Mikhaylovich.

Example in hydraulic calculation Moskva Izdatel'skaia komissiia Moskovskogo vysshego tekhnich-skogo uchilishcha, 1924. 85 p.

1. Hydraulics - - Problems, exercises, etc.



CA

9

Fissures in railroad tires. N. Shchapov and V. Kislik. *Stal* **5**, No. 6, 60-6(1938). Fissures are caused by inclusions of silicate slag. H. W. Rathmann

SHCHERCV, N. M.

"Kharakteristiki Nasosturbiny i Poterya Nasom Privoda"

Sbornik Statey po Voprosam Turbin i Pr. (Trudy Vigm BY P. 8)
M.-L. 1938

[illegible], [illegible]

Prof., All-Union Sci. Res. Inst. Hydromachinery, -1[illegible]-. Dr. Technical Sci. "Graphic Analysis of the Operation of [illegible] [illegible]," Gidr. Tekh. [illegible], No. 6, 19[illegible].

SHCHAPOV, N. M.

Podbor vodianykh turbin dlia gidroelektrostantsii. Moskva, Gosenergoizdat, 1949.
82, (2) p. diagrs.

Bibliography: p. 82-(83)

Choice of hydraulic turbines for water-power electric plants.

DLC: TK1081.S28

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953

KVYATKOVSKIY, V.S., laureat Stalinskoy premii, professor; SHCHAPOV, N.M., doktor tekhnicheskikh nauk, professor, redaktor; POPOVA, S.M., tekhnicheskiy redaktor; TIKHONOV, A.Ya., tekhnicheskiy redaktor.

[Working process of axial-flow hydraulic turbines; Pt. 2: Methods for hydraulic calculation of blades for hydraulic turbines] Rabochii protsess osevoi gidroturbiny; Pt. 2: O sposobakh gidravlicheskogo rascheta lopastei osevykh gidroturbin. Moskva, Gos. nauchn.-tekhn. izd-vo mashinostroitel'noi lit-ry, 1952. 140 p. (Vsesoiuznyi nauchno-issledovatel'skii institut gidromashinostroeniia. Trudy, no.15) (MLRA 9:8)

(Hydraulic turbines--Blades)

USSR/Engineering - Hydraulics, Turbines Feb 52

"Efficiencies of the Hydraulic Turbine, Unit and Block," N. M. Shchapov, Dr Tech Sci, Laureate Stalin Prize

"Gidrotekh Stroi" No 2, pp 29-32

Defines total and proper efficiencies of turbine and discusses fields of their application. Proper efficiency is always greater than total and used for evaluating quality of turbine disregarding length and outlet cross section of draft tube. But only total efficiency, accounting for outlet energy loss, must be used in design of power station. Gives example when mixt of these concepts leads to erroneous conclusions.

211T66

212T66

SHCHAPOV, N. M., PROF

USSR/Engineering - Hydraulics, Machinery Testing Jun 52

"Errors in Determination of the Efficiency of Hydraulic Machines," Prof N. M. Shchapov, Dr Tech Sci, Stalin Prize Laureate

"Gidrotekh Stroit" No 6, pp 30-32

Evaluates accuracy of detg the efficiency of operating hydraulic turbine, measuring discharge with propeller-type meters installed on movable horizontal rods in several compartments of inlet chamber. Develops formula and illustrates its application by numerical example. Analyzes results and finds suggested method more accurate than other methods for discharge measurements. 230T25

ANDREYEV, A.B.; ANTONOV, A.I.; ARAPOV, P.P., BARMASH, A.I., BEDNYAKOVA, A.B.; BENIN, G.S.; BERESNEVICH, V.V.; BERNSHTEYN, S.A.; BITYUTSKOV, V.I.; BLYUMENBERG, V.V.; BONCH-BRUYEVICH, M.D.; BORMOTOV, A.D.; BULGAKOV, N.I.; VEKSLER, B.A.; GAVRILENKO, I.V.; GENDLER, Ye.S., [deceased]; GERLIVANOV, N.A., [deceased]; GIBSHMAN, Ye.Ye.; GOLDOVSKIY, Ye.M.; GORBUNOV, P.P.; GORYAINOV, F.A.; GRINBERG, B.G.; GRYUNER, V.S.; DANOVSKIY, N.F.; DZEVUL'SKIY, V.M., [deceased]; DREMAYLO, P.G.; DYBETS, S.G.; D'YACHENKO, P.F.; DYURNBAUM, N.S., [deceased]; YEGORCHENKO, B.F. [deceased]; YEL'YASHKEVICH, S.A.; ZHEREBOV, L.P.; ZAVEL'SKIY, A.S.; ZAVEL'SKIY, F.S.; IVANOVSKIY, S.R.; ITKIN, I.M.; KAZHDAN, A.Ya.; KAZHINSKIY, B.B.; KAPLINSKIY, S.V.; KASATKIN, F.S.; KATSAUROV, I.N.; KITAYGORODSKIY, I.I.; KOLESNIKOV, I.F.; KOLOSOV, V.A.; KOMAROV, N.S.; KOTOV, B.I.; LINDE, V.V.; LEBEDEV, N.V.; LEVITSKIY, N.I.; LOKSHIN, Ya.Yu; LUTTSAU, V.K.; MANNERBERGER, A.A.; MIKHAYLOV, V.A.; MIKHAYLOV, N.M.; MURAV'YEV, I.M.; NYDEL'MAN, G.E.; PAVLYSHKOV, L.S.; POLUYANOV, V.A.; POLYAKOV, Ye.S.; POPOV, V.V.; POPOV, N.I.; RAKHLIN, I.Ye., RZHEVSKIY, V.V.; ROZENBERG, G.V.; ROZENTRETER, B.A.; ROKOTYAN, Ye.S.; RUKAVISHNIKOV, V.I.; RUTOVSKIY, B.N. [deceased]; RYVKIN, P.M.; SMIRNOV, A.P.; STEPANOV, G.Yu, STEPANOV, Yu.A.; TARASOV, L.Ya.; TOKAREV, L.I.; USPASSKIY, P.P.; FEDOROV, A.V.; FERE, N.E.; FRENKEL', N.Z.; KHEYFETS, S.Ya.; KHLOPIN, M.I.; KHODOT, V.V.; SHAMSHUR, V.I.; SHAPIRO, A.Ye.; SHATSOV, N.I.; SHISHKINA, N.N.; SHOR, E.R.; SHPICHENETSKIY, Ye.S.; SHPRINK, B.E.; SHTERLING, S.Z.; SHUTYY, L.R.; SHUKHGAL'TER, L. Ya.; ERVAYS, A.V.;

(Continued on next card)

ANDREYEV, A.B. (continued) .... Card 2.

YAKOVLEV, A.V.; ANDREYEV, Ye.S., retsenzent, redaktor; BEHKEN-GEYM,B.M., retsenzent, redaktor; BERMAN, L.D., retsenzent, redaktor; BOLTINSKIY, V.N., retsenzent, redaktor; BONCH-BRUYEVICH, V.L., retsenzent, redaktor; VELLER, M.A., retsenzent, redaktor; VINOGRADOV, A.V., retsenzent, redaktor; GUDTSOV, N.T., retsenzent, redaktor; DEGTYAREV, I.L., retsenzent, redaktor; DEM'YANYUK, F.S., retsenzent; redaktor; DOBROSMYSLOV, I.N., retsenzent, redaktor; YELANCHIK, G.M. retsenzent, redaktor;ZHEMOCHKIN, D.N., retsenzent, redaktor; SHURAVCHENKO, A.N., retsenzent, redaktor; ZLODEYEV, G.A., retsenzent, redaktor; KAPLUNOV, R.P., retsenzent, redaktor; KUSAKOV, M.M., retsenzent, redaktor; LEVINSON, L.Ye., [deceased] retsenzent, redaktor; MALOV, N.N., retsenzent, redaktor; MARKUS, V.A. retsenzent, redaktor; METELITSYN, I.I., retsenzent, redaktor; MIKHAYLOV, S.M., retsenzent; redaktor; OLIVETSKIY, B.A., retsenzent, redaktor; PAVLOV, B.A., retsenzent, redaktor; PANYUKOV, N.P.,retsenzent, redaktor; PLAKSIN, I.N., retsenzent, redaktor; RAKOV, K.A. retsenzent, redaktor; RZHAVINSKIY, V.V., retsenzent, redaktor; RINBERG, A.M., retsenzent; redaktor; ROGOVIN, N. Ye., retsenzent, redaktor; RUDENKO, K.G., retsenzent, redaktor; RUTOVSKIY, B.N., [deceased] retsenzent, redaktor; RYZHOV, P.A., retsenzent, redaktor; SANDOMIRSKIY, V.B., retsenzent, redaktor; SKRAMTAYEV, B.G., retsenzent, redaktor; SOKOV, V.S., retsenzent, redaktor; SOKOLOV, N.S., retsenzent, redaktor; SPIVAKOVSKIY, A.O., retsenzent, redaktor; STRAMENTOV, A.Ye., retsenzent, redaktor; STRELETSKIY, N.S., retsenzent, redaktor;

(Continued on next card)

ANDREYEV, A.V.,(continued) .... Card 3.

TRET'YAKOV, A.P., retsenzent, redaktor; FAYERMAN, Ye.M., retsenzent, redaktor; KHACHATYROV, T.S., retsenzent, redaktor; CHERNOV, H.V., retsenzent, redaktor; SHERGIN, A.P., retsenzent, redaktor; SHESTOPAL, V.M., retsenzent, redaktor; SHESHKO, Ye.F., retsenzent, redaktor; SHCHAPOV, N.M., retsenzent, redaktor; YAKOBSON, M.O., retsenzent, redaktor; STEPANOV, Yu.A., Professor, redaktor; DEM'YANYUK, F.S., professor, redaktor; ZNAMENSKIY, A.A., inzhener, redaktor; PLAKSIN, I.N., redaktor; RUTOVSKIY, B.N. [deceased] doktor khimicheskikh nauk, professor, redaktor; SHUKHGAL'TER, L. Ya, kandidat tekhnicheskikh nauk, dotsent, redaktor; BRESTINA, B.S., redaktor; ZNAMENSKIY, A.A., redaktor.

(Continued on next card)

ANDREYEV, A. V. (continued) .... Card 4

[Concise polytechnical dictionary] Kratkii politekhnicheskii slovar'. Redaktsionnyi sovet; IU. A. Stepanov i dr. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1955. 1136 p. (MLRA 8:12)

1. Chlen-korrespondent AN SSSR (for Plaksin)
(Technology--Dictionaries)

SHCHAPOV, Nikolay Mikhaylovich, professor, doktor tekhnicheskikh nauk, laureat Stalinskoy premii; LASTOCHKINA, L.A., redaktor; VORONIN, K.P., tekhnicheskiy redaktor; LARIONOV, G.Ye., tekhnicheskiy redaktor.

[Turbine equipment in hydroelectric power stations] Turbinnoe oborudovanie gidrostantsii. Izd-vo 2-e, perer. Moskva, Gos.energ. izd-vo, 1955. 272 p. (MLRA 8:4)
(Hydraulic turbines)

Reviewed in Hist. Rev. Sept. 1958, vol 9, 354

SHCHAPOV, N. M.

Book—977. Shchapov, N. M., Hydrometry of hydraulic structures and machinery (in Russian), Gosenergoizdat, 1957, 237 pp.

Water-discharge measurement is an important part of testing turbines and pumps, of investigation on spillways and other hy-

draulic structures. Many methods are known and work is being done in all countries; however, this is the first systematic treatise on this subject. Author is a pioneer in this field in Russia; he tested more than 30 power plants under various circumstances. Measurements were mostly performed with current meters: author lists 57 examples in open conduits and 20 in penstocks; these data are of particular interest. Information contained in this book is extremely large, as also are the references: 191 Russian titles, 117-foreign. The book is of great value; an English edition would be very appropriate.

There a few places only where author was unaware of work done abroad, e.g., the graphical methods of determining the Coriolis and Boussinesq coefficients. Russian method of relative conductivity in dilution method was known earlier; it was patented in Germany in 1921.

S. Kolupaila, USA

SHCHAPOV, N.M. (Moskva)

Bernoulli's equation applied to low-compressible fluids. Izv. AN SSSR.Otd.tekh.nauk no.2:117-119 F '57. (MLRA 10:5)
(Fluid dynamics)

AUTHOR: Shchapov, N.M., Professor, Doctor of Technical Sciences. 302

TITLE: Length of modern draft tubes (of Kaplan turbines) (Dliny sovremennykh otsasyvayushchikh trub.)

PERIODICAL: "Energomashinostroenie" (Power Machinery Construction), 1957, No. 2, pp. 20 - 22, (U.S.S.R.)

ABSTRACT: In earlier papers, the author tried to prove that, in the Soviet Union, the draft tubes are too short and this leads to a drop in the efficiency of the tubes. In this paper, the respective data for 10 large Soviet turbines built between 1932 and 1955 (Table 1) are compared with data of several large Western turbines, built between 1938 and 1950. The comparison clearly shows that engineers in the West fit considerably longer draft tubes. In particular, the author quotes the German specialist, R. Dziallas, to prove his point, and emphasises that excessive drive for economy leads to a reduction of the efficiency, which is considerably more detrimental.

3 figures, 3 tables. 6 Russian references plus 1 reference in the text to an unspecified issue of "Water Power".

SHCHAPOV, N.M., doktor tekhn. nauk.

Factors inadequately considered in experimental calculation of the efficiency of hydraulic turbines and other turbomachinery. Energomashinostroenie 3 no.10:23-26 O '57. (MIRA 10:12)
(Hydraulic turbines) (Turbomachines)

SHCHAPOV, N.M., prof.

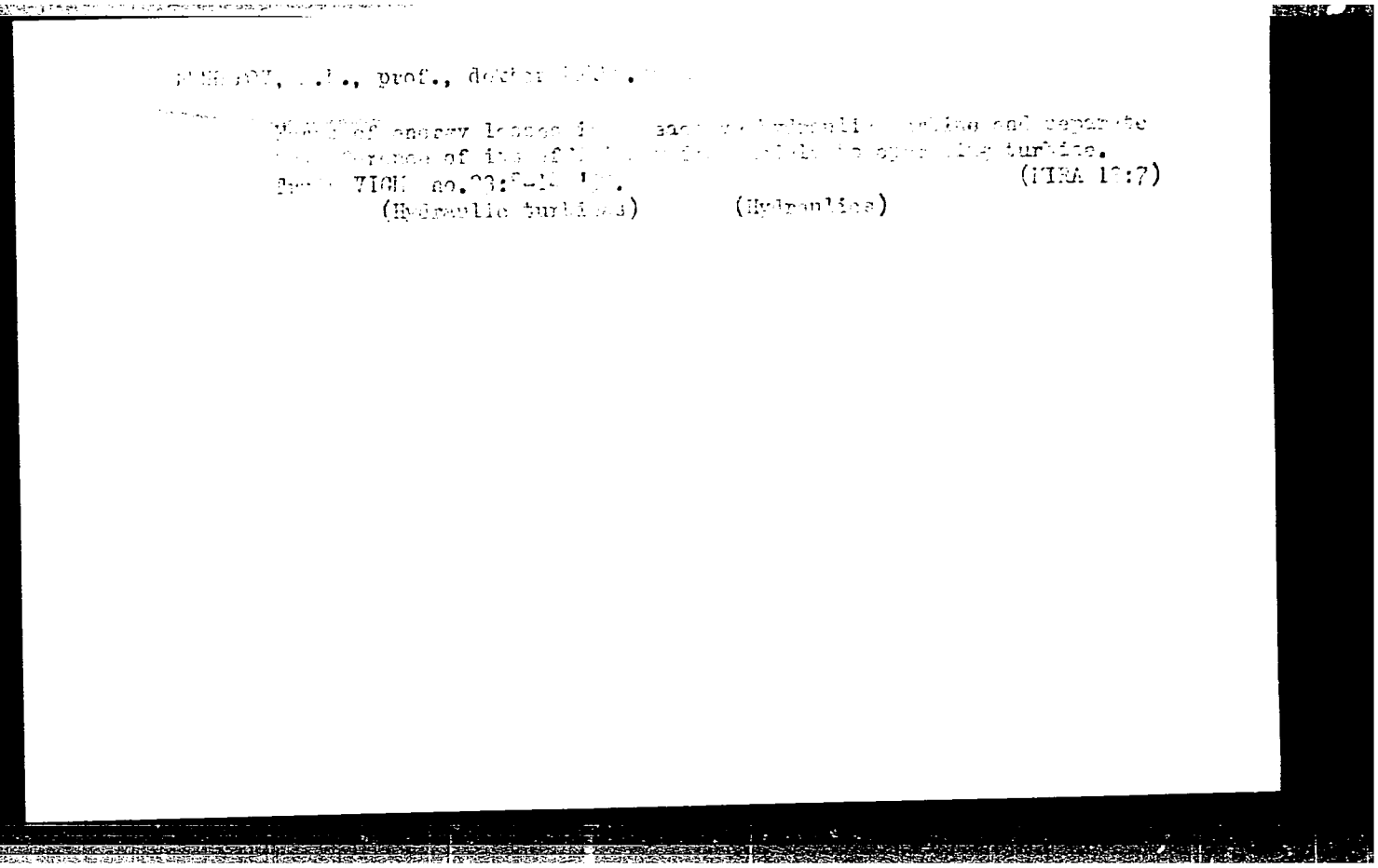
Letter to the editors. Energomashinostroenie 3 no.12:36 D '57.
(MIRA 11:1)

(Hydraulic turbines)

AUTHOR: Shchapov, N.M. (Dr. of Tech.Sci. Professor). 114-7-5/14
TITLE : A sonic method of measuring the flow of water turbines. (Zvukovoy sposob izmereniya raskhoda naturnykh gidroturbin.)
PERIODICAL: "Energomashinostroyeniye" (Power Machinery Construction) 1957, No.7, Vol.3, pp.17. (U.S.S.R.)

ABSTRACT: Foreign inventors continue to seek for new methods of measuring the flow of water in large water turbines. A method that has been proposed in the USA is the sonic method. This is based on the Doppler effect. The basic formulae are given. A number of patents have been taken out outside Russia on the sonic method but in fact the method is only in the development stage. The article describes Swengel's variant. He measures the difference between the phase angles of sinusoidal sonic oscillations. The difference is positive when the sound is transmitted in the direction of flow and its phase leads that of the applied sound. In the opposite case it is negative. Swengel has carried out two series of tests to demonstrate the use of his methods. It is concluded that the sonic method is satisfactorily accurate, simple and rapid in application, that it requires complicated special equipment, and that it requires a straight line section of flow of constant

1/2



(Hydraulic turbines) (Hydroplane)

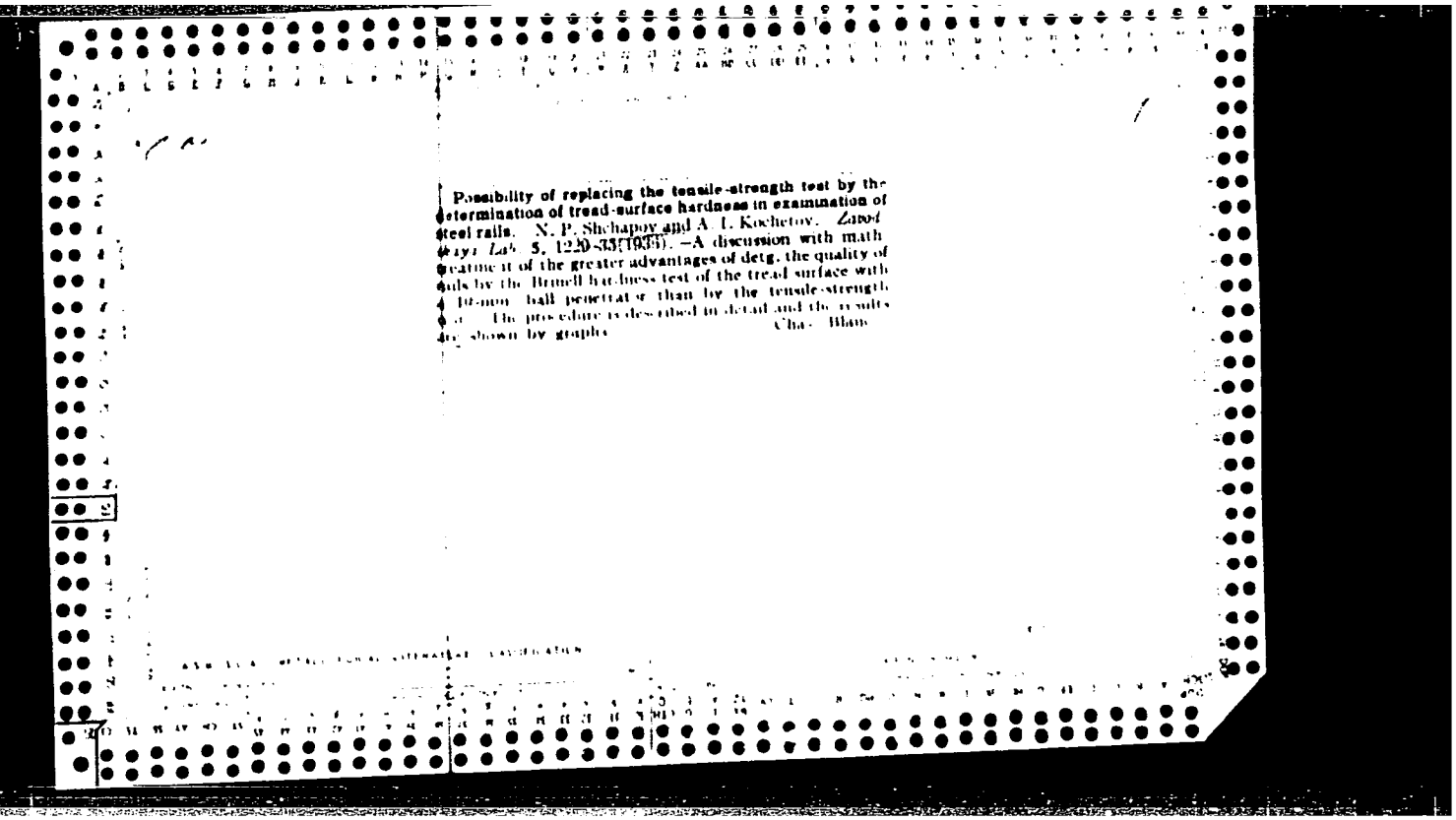
SHCHERBY, [illegible]

[illegible] (MIRA 12:7)

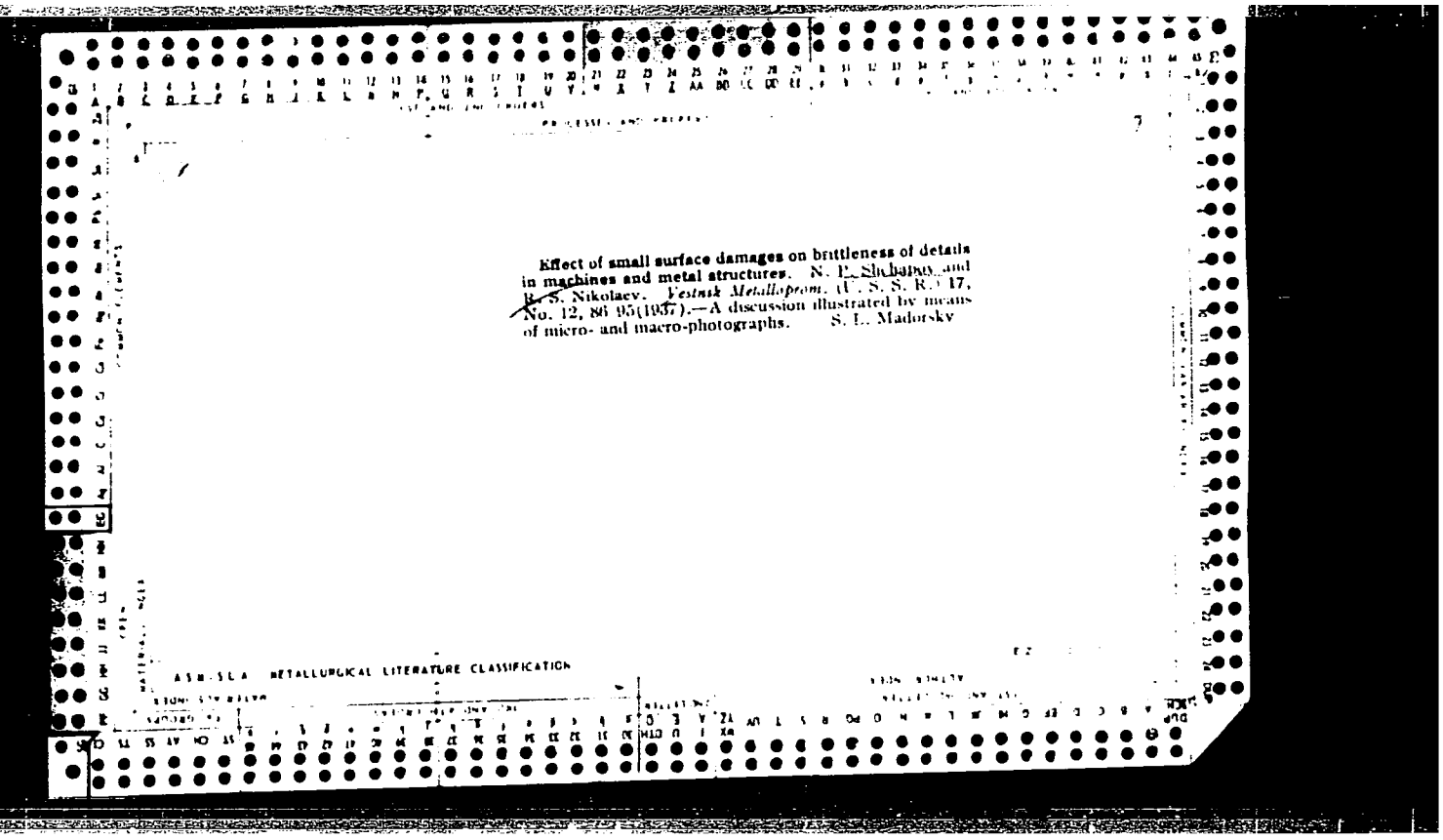
(Hydraulic motors)

SHCHAPOV, Nikolay Mikhaylovich, prof., doktor tekhn. nauk, laureat Stalinskoy premii; KRIVCHENKO, G.I., red.; BORUNOV, N.I., tekhn. red.

[Turbine equipment of hydroelectfic power plants] Turbinnoe oborudovanie gidrostantsii. Izd.3., dop. Moskva, Gos.energ. izd-vo, 1961. 318 p. (MIRA 15:2)
(Hydraulic turbines) (Hydroelectric power stations)

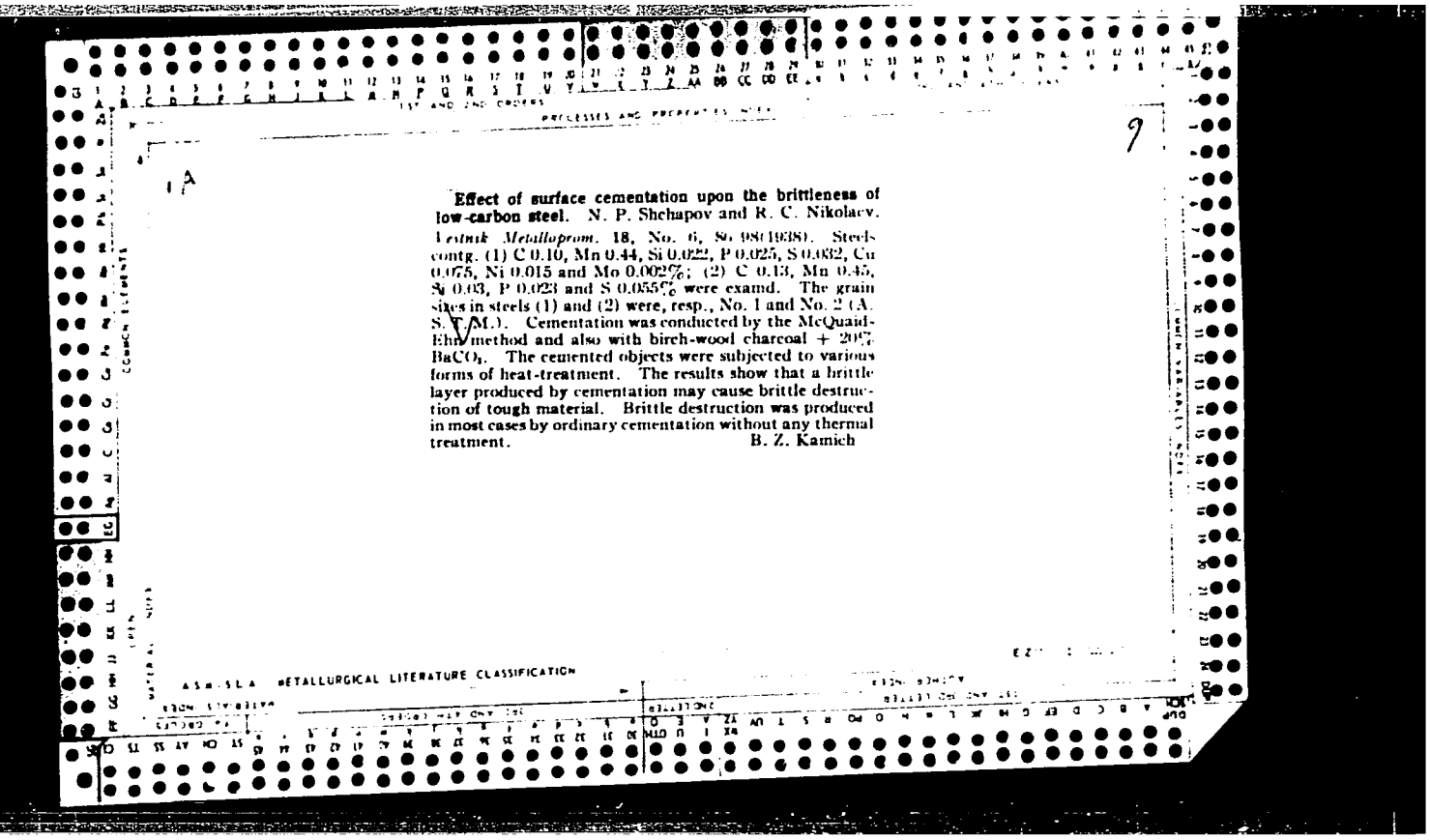


Possibility of replacing the tensile-strength test by the determination of tread-surface hardness in examination of steel rails. N. P. Shchapov and A. I. Kochetov. *Zavod. Lab.* 5, 1220-35(1936).—A discussion with mathematical treatment of the greater advantages of detg. the quality of rails by the Brinell hardness test of the tread surface with a 10-mm. ball penetrator than by the tensile-strength test. The procedure is described in detail and the results are shown by graphs. Chas. Blanc

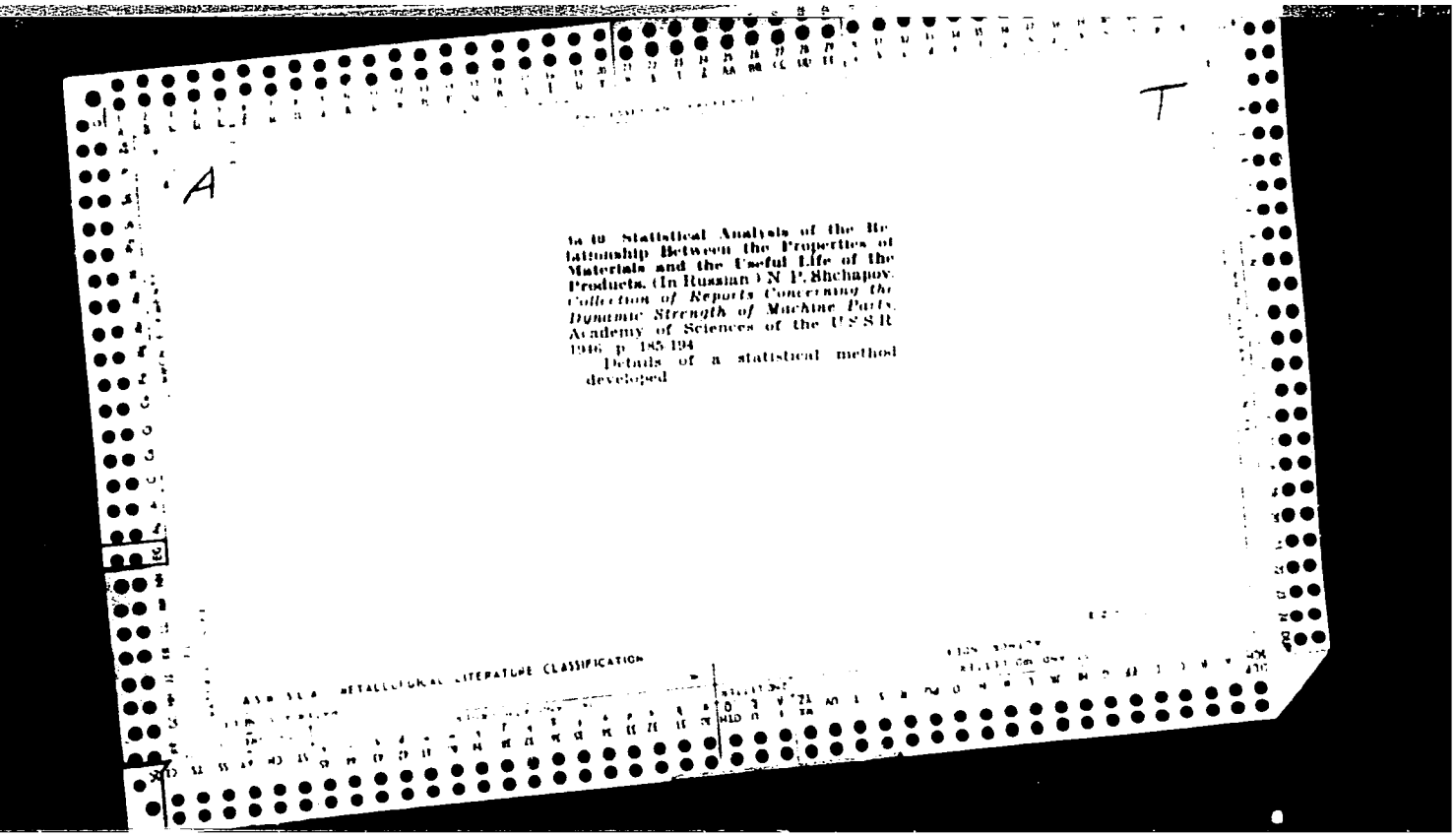


Effect of small surface damages on brittleness of details in machines and metal structures. N. P. Shchapov and B. S. Nikolaev. *Vestnik Metalloprom.* (U. S. S. R.) 17, No. 12, 86-95(1937).—A discussion illustrated by means of micro- and macro-photographs. S. L. Madorsky

A.S.M.-S.C.A. METALLURGICAL LITERATURE CLASSIFICATION



Effect of surface cementation upon the brittleness of low-carbon steel. N. P. Shchapov and R. C. Nikolaev. *Vestnik Metalloprom.* 18, No. 6, 86-98(1938). Steels contg. (1) C 0.10, Mn 0.44, Si 0.022, P 0.025, S 0.032, Cu 0.075, Ni 0.015 and Mo 0.002%; (2) C 0.13, Mn 0.45, Si 0.03, P 0.023 and S 0.055% were exaind. The grain sizes in steels (1) and (2) were, resp., No. 1 and No. 2 (A. S. T. M.). Cementation was conducted by the McQuaid-Ehn method and also with birch-wood charcoal + 20% $BaCO_3$. The cemented objects were subjected to various forms of heat-treatment. The results show that a brittle layer produced by cementation may cause brittle destruction of tough material. Brittle destruction was produced in most cases by ordinary cementation without any thermal treatment. B. Z. Kamich



A

T

Statistical Analysis of the Relationship Between the Properties of Materials and the Useful Life of the Products. (In Russian.) N. P. Shchapov. *Collection of Reports Concerning the Dynamic Strength of Machine Parts.* Academy of Sciences of the USSR. 1946. p. 185-194

Details of a statistical method developed

METALLURGICAL LITERATURE CLASSIFICATION

[illegible], N. .

No. 37355--Ila tich eskaya deformats i ya kak sredstvo povysheniya prochnosti metallov i splavov. v sb: Povyshenie prochnosti detaley mashin. M. L., 1949, s. 67-83.

So: Letopis' Zhurnel'nykk Statey, Vol. 7, 1949.

[redacted]

USSR/Metals - Metallography Oct 50

"On the Works of A. A. Baykov in the Field of Transport Metallography," N. P. Shchapov, Metallurgical Inst imeni A. A. Baykov, Acad Sci USSR

"Iz Ak Nauk SSSR, Otdel Tekh Nauk" No 10, pp 1513-1521

Baykov investigated possibility of using steel with certain amt of As for rail manuf. There is indication that large-scale statistical work was conducted with exptl rails, but results never published. Submitted by Acad I. P. Bardin.

[redacted]

173T81

B.I.R.

metals - Mechanical Properties and Tests

5468* **Letter to the Editor.** (In Russian.) N. P. Shchapov. *Izvestiia Akademii Nauk SSSR*, Section of Technical Sciences, May 1951, p. 769-770.

A discussion of the work of G. V. Uzhik in the field of strength and plasticity. (Nov. 1950 issue.) This discussion treats the question of stress concentration and the zone of plastic deformation around a fracture.

BAYKOV, Aleksandr Aleksandrovich, akademik; BARDIN, I.P., akademik, otvetstvennyy redaktor; DLUGACH, L.S., professor, vedushchiy redaktor; BAYKOVA, A.D., redaktor; LEBEDEV, V.P., redaktor; SOKOLOV, N.A., redaktor; SHUSHPANOV, L.I., kandidat tekhnicheskikh nauk, redaktor; PAVLOV, M.A., akademik, redaktor; GUDTSOV, N.T., akademik, redaktor; BRITSKE, E.V., akademik, redaktor; CHIZHEVSKIY, N.P., akademik, redaktor [deceased]; URAZOV, G.G., akademik, redaktor; VOL'FKOVICH, S.I., akademik, redaktor; KARNAUKHOV, M.M., chlen-korrespondent, redaktor; STARK, B.V., chlen-korrespondent, redaktor; KASHCHENKO, G.A., professor, redaktor; MONASTYRSKIY, D.N., professor, redaktor; PEVZNER, R.L., professor, redaktor; TUMAREV, A.S., professor, redaktor; SHCHAPOV, N.P., professor, redaktor; KIND, V.V. kandidat tekhnicheskikh nauk, redaktor; LUKASHEVICH-DUVANOVA, Yu.T., kandidat tekhnicheskikh nauk, redaktor; SMIRNOVA, A.V., tekhnicheskiy redaktor

[Collected works] Sobranie trudov. Moskva, Izd-vo Akademii nauk SSSR.
Vol. 1. [Articles, addresses and speeches] Stat'i, vystupleniia i rechi. 1952. 344 p. (MLRA 8:2)
(Baikov, Aleksandr Aleksandrovich, 1870-1946)

SHCHUKIN, N. F.

"Increasing the Fatigue Strength of Machine Parts by Surface Hardening," Mashgiz, Moscow, 1952.

SHCHAPOV, N.P., professor, doktor tekhnicheskikh nauk.

[Effect of cold straightening on the strength of steel parts] Vliianie kholodnoi pravki na prochnost' stal'nykh detalei. Moskva, Gos. transp. zhel-dor. izd-vo, 1953. 134 p. (MLRA 6:9)
(Steel)

SHCHAPOV, N.P.

7
181-4E2c

Problems of Metallurgy. Academy of Sciences of the U.S.S.R., Moscow, 1953. Mechanical Properties of Bessemer Low-Alloy Structural Steel / N. P. Shchapov and E. S. Volokhvyanskaya. (409–441). [In Russian]. An account is given of a comprehensive investigation of the mechanical properties of a low-alloy Bessemer steel (0·06–0·13% C, 0·28–0·64% Mn, trace–0·44% Si, 0·044–0·051% P, 0·026–0·048% S, 0·00–0·90% Cr, 0·00–0·55% Ni, 0·04–0·44% Cu, 0·013–0·018% N_2, 0·00008–0·00010% H_2, 0·00179–0·0105% O_2). The main conclusions drawn are: through alloying, the steel is actually less liable to brittle fracture than the corresponding O.H. steel and has a higher yield point; the ageing properties and sensitivity to stress-concentration in cyclic loading remain relatively poor. It is suggested that by using other measures in addition to alloying, the properties of Bessemer steel can be improved still further. Investigation of Processes Occurring during the Tempering of Hardened Steel. K. F. Starodubov. (442–450). Changes occurring in hardened steel during tempering, mainly at 300–550° C, are described and explanations are proposed. Primary Structure of the Ingot and its Effect on the Properties of Steel. A. P. Pronov. (451–456). Unlike the finely crystalline primary structure of a carbon steel ingot, a dendritic one is characteristic of correct production conditions and results in good mechanical properties both at high and low temperatures. Factors governing the type of primary structure formed have been partially elucidated. Main Questions in the Rail Problem. L. L. Pinkhusovich. (457–461). The problem of rail quality as it has been dealt with in the U.S.S.R. is reviewed and the main factors involved are discussed.—S. K.

Mat Steel

wjp

JM
RG

SHCHAPOV, N.P.

On A.A.Baikov's contributions in the field of metallurgy as applied to railroad transportation. Trudy po ist. tekh. no.3:63-71 '53. (MLRA 7:5)

(Baikov, Aleksandr Aleksandrovich, 1870-1946)

SHCHAPOV, N. P.

FD 376

USSR/Physics - Steel, Mechanical Properties

Card 1/1

Author : Shchapov, N. P.

Title : On engineering evaluation of the resistance to brittle failure

Periodical : Zhur. tekh. fiz. 24, 537-543, Mar 1954

Abstract : Discusses resistance of metal parts to brittle failure versus temperature and loading conditions. Concludes that engineering approach to the problem of preventing brittle failure must be based not on safety guaranteed by rated stresses, but primarily on constructional and technological measures for reducing the cold shortness of metal. Determination of impact strength at various temperatures is considered by author as the best method for evaluating the degree of cold shortness. This method was introduced into Soviet practice by N. N. Davidenkov and his followers. Nine references, 4 USSR, one since 1942, others 1947-1953. Illustrations, graphs.

Institution :

Submitted : August 1, 1953

USSR/Solid State Physics - Phase Transformations in Solids, E-5

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34731

Author: Volokhvyanskaya, E. S., Shchapov, N. P.

Institution: None

Title: Procedure for Estimating the Tendency of Various Brands of Structural Steel to Mechanical Aging

Original Periodical: Zavod. laboratoriya, 1955, 21, No 10, 1215-1223

Abstract: An examination of engineering methods for estimating the tendency of structural steels to age after cold plastic deformation, primarily produced by tension. A considerable increase in the yield point σ_T as a result of aging, accompanied by a gradual restoration of the ductility area in the diagram for the interrupted tension of repeated tension in the same direction, gives grounds for assuming this characteristic to be one of the most sensitive criteria of the tendency to age. The ultimate strength σ_B changes less considerably, with the maximum change in σ_T being observed at 100°, while that of σ_B at 180°. The change of relative elongation δ as a result of mechanical aging is approximately inverse to the changes in σ_B, and is greater than the change in the necking ψ. The hardness method is convenient for

USSR/Solid State Physics - Phase Transformations in Solids, E-5

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34731

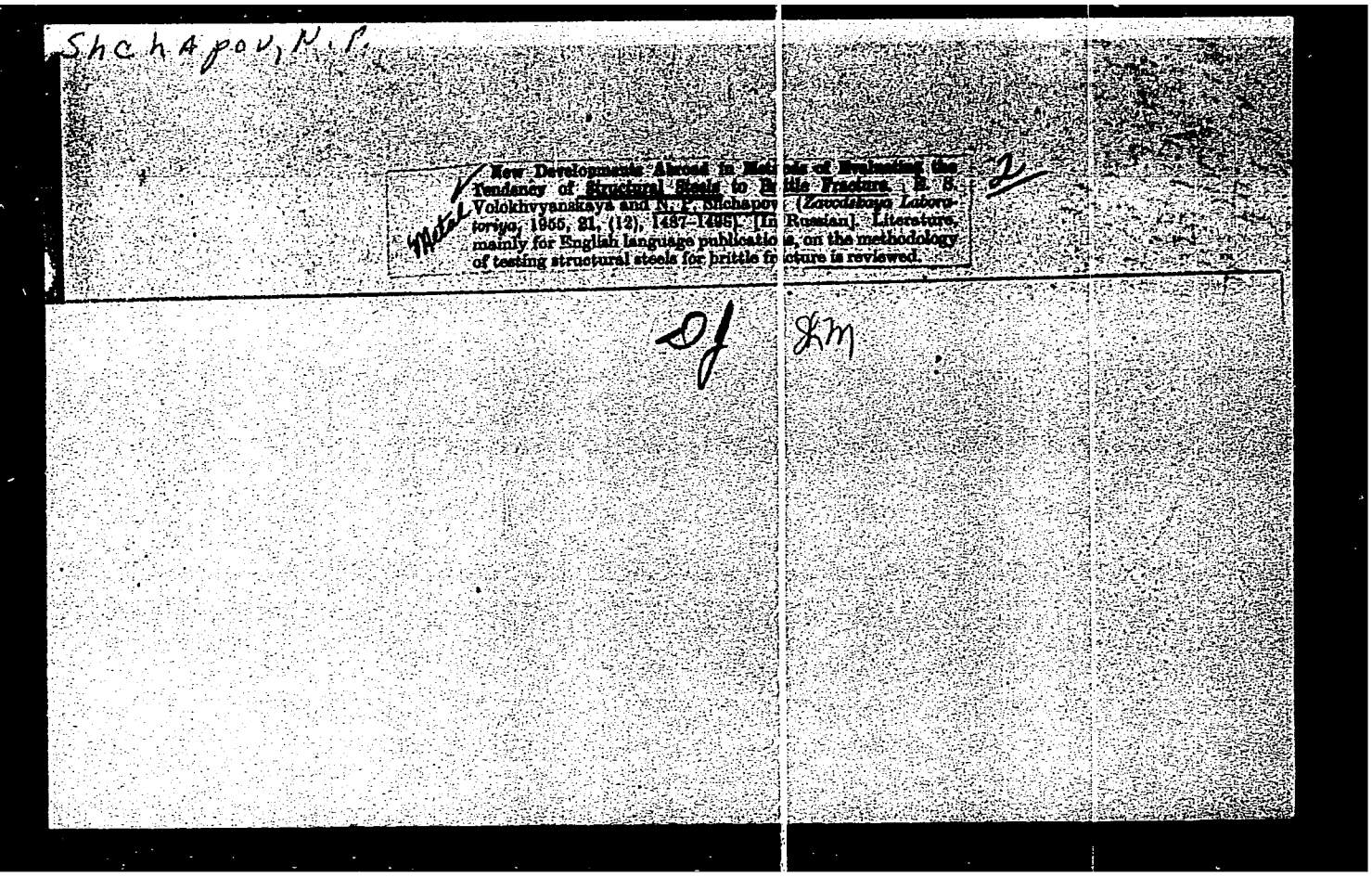
Author: Volokhvyarskaya, E. S., Shchapov, N. P.

Institution: None

Title: Procedure for Estimating the Tendency of Various Brands of Structural Steel to Mechanical Aging

Original Periodical: Zavod. laboratoriya, 1955, 21, No 10, 1212-1223

Abstract: estimating the aging, with the deformation itself being produced by pressing a small ball into the specimen, and the hardness determined on the bottom of the formed crater using an instrument with a smaller end piece. Admittedly the most important method is measurement of the impact viscosity, inasmuch as aging increases the brittleness and cold brittleness of carbon steels. Many recommendations relating to the practical estimate of the tendency to mechanical aging are given.



Shchapov, N. P.

Metal

New Developments Abroad in Methods of Evaluating the Tendency of Structural Steels to Brittle Fracture. E. S. Volokhvyanskaya and N. P. Shchapov (*Zavodskaya Laboratoriya*, 1955, 21, (12), 1487–1495). [In Russian]. Literature, mainly for English language publications, on the methodology of testing structural steels for brittle fracture is reviewed.

2

2

SM

SHCHAPOV,N.P., professor, doktor tekhnicheskikh nauk; SHKOL'NIK,L.M., kandidat tekhnicheskikh nauk; SKAKOV,A.I., kandidat tekhnicheskikh nauk; KALASHNIKOVA,Z.V., inzhener

Selecting material and heat treatment methods for rail fishplates. Trudy TSNII MPS no.85:73-114 '55. (MLRA 8:11)
(Railroads--Rails)

IVANOV, I.A.; TSUKANOV, P.P.; SHCHAPOV, N.F.

Foreword. Trudy TSNII MPS no.111:3-4 '55. (MLRA 9:5)

1 Direktor instituta (for Ivanov); 2. Rukovoditel' otdeleniya putevogo khozyaystva (for TSukanov); 3. Rudovoditel' otdeleniya ispytaniya materialov i konstruktsiii (for Shchapov).
(Railroads--Rails)

SHCHAPOV, N. P.

"Surface toughening applied to railway equipment components" a paper presented at International Conference on Fatigue of Metals, London, Sep. 56.

DSI. No. 103

AL'TGAUZEN, O.N., kandidat fiziko-matematicheskikh nauk; BERNSHTEYN, M.L., kandidat tekhnicheskikh nauk; BLANTER, M.Ye., doktor tekhnicheskikh nauk; BOKSHTEYN, S.Z., doktor tekhnicheskikh nauk; BOLKHOVITINOVA, Ye.N., kandidat tekhnicheskikh nauk; BORZDYKA, A.M., doktor tekhnicheskikh nauk; BUNIN, K.P., doktor tekhnicheskikh nauk; VINOGRAD, M.I., kandidat tekhnicheskikh nauk; VOLOVIK, B.Ye., doktor tekhnicheskikh nauk [deceased]; GAMOV, M.I., inzhener; GELLER, Yu.A., doktor tekhnicheskikh nauk; GORELIK, S.S., kandidat tekhnicheskikh nauk; GOL'DENBERG, A.A., kandidat tekhnicheskikh nauk; GOTLIB, L.I., kandidat tekhnicheskikh nauk; GRIGOROVICH, V.K., kandidat tekhnicheskikh nauk; GULYAYEV, B.B., doktor tekhnicheskikh nauk; DOVGALEVSKIY, Ya.M, kandidat tekhnicheskikh nauk; DUDOVTSEV, P.A., kandidat tekhnicheskikh nauk; KIDIN, I.N., doktor tekhnicheskikh nauk; KIPNIS, S.Kh., inzhener; KORITSKIY, V.G., kandidat tekhnicheskikh nauk; LANDA, A.F., doktor tekhnicheskikh nauk; LEYKIN, I.M., kandidat tekhnicheskikh nauk; LIVSHITS, L.S., kandidat tekhnicheskikh nauk; L'VOV, M.A., kandidat tekhnicheskikh nauk; MALYSHEV, K.A., kandidat tekhnicheskikh nauk; MEYERSON, G.A., doktor tekhnicheskikh nauk; MINKEVICH, A.N., kandidat tekhnicheskikh nauk; MOROZ, L.S., doktor tekhnicheskikh nauk; NATANSON, A.K., kandidat tekhnicheskikh nauk; NAKHIMOV, A.M., inzhener; NAKHIMOV, D.M., kandidat tekhnicheskikh nauk; POGODIN-ALEKSEYEV, G.I., doktor tekhnicheskikh nauk; POPOVA, N.M., kandidat tekhnicheskikh nauk; POPOV, A.A., kandidat tekhnicheskikh nauk; RAKHSHTADT, A.G., kandidat tekhnicheskikh nauk; ROGEL'BERG, I.L., kandidat tekhnicheskikh nauk;

(Continued on next card)

AL'TGAUZEN, O.N.---- (continued) Card 2.
SADOVSKIY, V.D., doktor tekhnicheskikh nauk; SALTYKOV, S.A., inzhener; SOBOLEV, N.D., kandidat tekhnicheskikh nauk; SOLODIKHIN, A.G., kandidat tekhnicheskikh nauk; UMANSKIY, Ya.S., kandidat tekhnicheskikh nauk; UTEVSKIY, L.M., kandidat tekhnicheskikh nauk; FRIDMAN, Ya.B., doktor tekhnicheskikh nauk; KHIMYSHIN, F.F., kandidat tekhnicheskikh nauk; KHRUSHCHEV, M.M., doktor tekhnicheskikh nauk; CHERNASHKIN, V.G., kandidat tekhnicheskikh nauk; SHAPIRO, M.M., inzhener; SHKOL'NIK, L.M., kandidat tekhnicheskikh nauk; SHRAYBER, D.S., kandidat tekhnicheskikh nauk; SHCHAPOV, N.P., doktor tekhnicheskikh nauk; GUDTSOV, N.T., akademik, redaktor; GORODIN, A.M. redaktor izdatel'stva; VAYNSHTEYN, Ye.B., tekhnicheskiy redaktor

[Physical metallurgy and the heat treatment of steel and iron; a reference book] Metallovedenie i termicheskaia obrabotka stali i chuguna; spravochnik. Pod red. N.T.Gudtsova, M.L.Bernshteina, A.G. Rakhshtadta. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 1204 p. (MLRA 9:9)

1. Chlen -korrespondent Akademii nauk USSR (for Bunin)
(Steel--Heat treatment) (Iron--Heat treatment)
(Physical metallurgy)

SOV/137-57-1-1374

Translation from: Referativnyy zhurnal. Metallurgiya. 1957, Nr 1, p 182 (USSR)

AUTHORS: Volokhvyanskaya, E. S., In'shakov, N. N., Shchapov, N. P.

TITLE: Investigation of Structural Steel With a High Arsenic Content (Issledovaniye stroitel'noy stali s povyshennym soderzhaniyem mysh'yaka)

PERIODICAL: Tr. Vses. n.-i. in-ta zh.-d. transp., 1956, Nr 116, pp 16-46

ABSTRACT: The authors carried out a comparative investigation of St 3 steels with different As contents as well as of killed steel containing traces of As (0.01%) and of rimmed steel rolled into plates and channels. Deep etching exposed a relatively low liquation in killed steel and considerably greater liquation in rimmed steel. The character and distribution of nonmetallic impurities are not affected by a high As content. The microstructure of the steel from all the heats is identical to that of the St. 3 steel. The strength and ductility of the steel were determined by means of static tensile testing of flat specimens cut out lengthwise and crosswise from the rolled steel and of Gagarin samples. For the study of susceptibility to aging Gagarin specimens were cut out of plates that had been strain-hardened by 10% stretching with a subsequent one-hour aging at

Card 1/2

Investigation of Structural Steel With a High Arsenic Content

250°C; the Gagarin specimens were cut along the direction of stretch and perpendicularly and at a 45° angle thereto. Morecver, the hardness was determined on the Brinell apparatus with a 750-kg load and a 5-mm ball diameter; the a_K of the experimental heats was determined on standard specimens, cut lengthwise and crosswise from the rolled steel, both as delivered and after strain-hardening and aging. It was established that up to 0.23% As in open-hearth steel has no marked effect on its mechanical properties and susceptibility to aging; σ_W, the sensitivity to stress concentration and overloading, as well as σ_W in a corrosive medium are virtually the same in steel with 0.23% As as in As-free steel. A certain decrease in a_K values occurs with a >0.18% content of As. A local increase in As content is possible as the result of liquation. Consequently, a maximum As content of the order of 0.14 - 0.15 is recommended for acceptance tests

A. M.

Card 2/2

IN'SHAKOV, N.N., kandidat tekhnicheskikh nauk; SHCHAPOV, N.P., doktor tekhnicheskikh nauk, professor.

NL-2 low-alloy structural steel. Trudy TSNII MPS no.116:165-187 '56. (MLRA 9:11)

(Steel, Structural)

SHCHAPOV, N.P.

SHCHAPOV, N.P., prof.; OBUKHOV, A.V. inzhener.

Achievements in metallurgy by the railroad industry during the 40 years of the Soviet system. Vest.TSNII MPS 16 no.6:21-27 S '57. (MIRA 10:10)

(Metallurgy) (Railroads)

ABRAMOV, F.O.; BUSHE, N.A.; SHCHAPOV, N.P.

Fracture test for defining conditions of rupture. Zav. lab. 23 no.5: 600-601 '57. (MLRA 10:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta.

(Steel--Fatigue)

AUTHOR: Shishkov, A. P. Professor, Doctor of Technical Sciences 20-10-39/32

TITLE: Comments

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol 23, Nr 10, pp. 1266 (USSR)

ABSTRACT: In his report delivered on the occasion of the 40th anniversary of the October revolution, the author states that it is difficult to describe in a few words the development of mechanic methods of investigation in the USSR. He therefore confined himself to a comparison between pre-revolutionary conditions when he was still a student, with the actual state of progress in the USSR. He describes the state of scientific research work in previous times as extremely modest. Nevertheless, in some individual cases, there were scholars of science also at that time who made a name for themselves in the period after the revolution. The author mentions Davidenkov, N. N. as an example of such a scientist still alive whose scientific lectures made a deep impression (already in the first time succeeding the revolution) on the author. One of the first of Davidenkov's lectures which he held at that time still with the assistance of Lenin, in the scientific-experimental institute of the Commissariat for traffic, induced the author to

Card 1/2

Comments

devote his life to the investigation of materials. In his further statements the author gives a brief view on the development of the afore-mentioned field of science in the USSR, and that corresponding to the requirements of rail service, by giving, above all, preference to the investigation works in the field of refractory kinds of metals. The author distinguishes between two parallel running tendencies within this development: On the one hand,(the author believes), the Soviet scientists endeavor to develop the classical methods of investigation of micro- and submicro-phenomena by the analysis of X-ray structure electron microscopical observations, on the other hand they endeavor to force the mechanical-mathematical investigation-methods stipulated by nature, which according to the author's opinion, are nearest to the requirements of Soviet energetics, chemical industry, electrotechnics, naval construction, procuring of building materials, machine building, and of the peaceful utilization of atomic energy.

ASSOCIATION: Central Scientific Research Institute of Railroad Transportation (Tsentral'nyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta).

AVAILABLE: Library of Congress

Card 2/2

1. Science-USSR-Progress 2. Refractory materials 3. Chemistry 4. Electronics

SVECHNIKOV, V.N., akademik; STARODUBOV, K.F., akademik; DYMOV, A.M., prof.; YEL'YANOV, A.A.; CHERNIKHOV, Yu.A., prof.; SHCHAPOV, N.P., prof.; BLANTER, M.Ye., prof.

Lev Samuilovich Dlugach; obituary. Zav. lab. 23 no.12:1527-1528 '57. (MIRA 11:2)

1. AN USSR (for Svechnikov, Starodubov).
(Dlugach, Lev Samuilovich, 1887-1957)

SHCHAPOV, P.I., tekhnik

Results of inspecting the implementation of safety rules. Bezop.truda v prom. 2 no.5:31 My '58. (MIRA 11:4)

1. Uchastkovyy inspektor Bugul'minskoy rayonnoy gornotekhnicheskoy inspektsii Tatarskogo okruga Gosgortekhnadzora SSSR.
(Oilfields--Safety measures)

SHCHAPOV, N.P., doktor tekhn.nauk, prof.

Low-alloy steels, their properties and uses. Trudy TSNII MPS no.164:4-13 '58. (MIRA 12:2)
(Steel, Structural)

VLADIMIRSKIY, Tikhon Alekseyevich; SHCHAPOV, N.P., prof., doktor tekhn.nauk, retsenzent; CHERNOVA, Z.I., tekhn.red.

[Steel brittleness] Khrupkost' stalei. Moskva, Gos.nauchno-tekhn. izd-vo mashinostr.lit-ry, 1959. 232 p. (MIRA 12:10)
(Steel--Brittleness)

ACHKASOV, L.G., inzh.; SHCHAPOV, N.P., prof.

Effect of temperature, time, and stress conditions of the type of destruction occurring in low-carbon steel. Vest.TSNII MPS 18 no.1:41-44 F '59. (MIRA 12:3)

(Steel--Testing)

05737

28(5) SOV/32-25-10-26/63

AUTHOR: Shchapov, N. P., Professor

TITLE: The Problem of the Classification and the Manifestation of Residual Stresses. (Answers to the Article by Academician N. N. Davidenkov Published in Nr 3 of the Periodical for 1959 Have Arrived at the Editorial Office of the Periodical "Zavodskaya Laboratoriya". These Answers Are Given Below in the Form of a Discussion). I.

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 10, pp 1224-1226 (USSR)

ABSTRACT:

I

The author explains the advantages of subdividing stresses into classes, and mentions, among other things, that N. N. Davidenkov's renunciation of a classification of residual stresses from X-ray data is too categorical, and may also be due to an incorrect interpretation of the term "stress" and its subdivision into classes. It is pointed out that there is no experimentally found dependence, permitting a rating of strength according to stresses of second or third degree, between a tensor of stress of second or third degree and e.g. the reserve of technical

Card 1/3

05737

SOV/32-25-10-26/63

The Problem of the Classification and the Manifestation of Residual Stresses. (Answers to the Article by Academician N. N. Davidenkov Published in Nr 3 of the Periodical for 1959 Have Arrived at the Editorial Office of the Periodical "Zavodskaya Laboratoriya". These Answers Are Given Below in the Form of a Discussion). I.

strength. On reducing the overstresses to microscopic or submicroscopic dimensions the amount of stress is no longer a criterion of strength. The descriptions of the deformation mechanism in X-ray structure investigations of plastic deformations are not clear in many papers. In spite of it, a quantitative determination of the variation of different phenomena in X-ray structure investigations (such as the blurring of lines, the line extension, etc) is expedient for investigating the plastic deformation, the degree of brittleness, the corrosion fatigue, aging, etc. The interpretation of the physical causes bringing about the variation of characteristics is particularly wrong, not so much their practical application. To obtain an unequivocal interpretation it would be necessary to find a quantitative relation between the variation of the X-ray

Card 2/4

The Problem of the Classification and Manifestation of Residual Stresses. (Answers to the Article by Academician N. N. Davidenkov Published in Nr 3 of the Periodical for 1959 Have Arrived at the Editorial Office of the Periodical "Zavodskaya Laboratoriya". These Answers Are Given Below in the Form of a Discussion). I.

characteristics and the laws of change in the relative position and interaction of atoms in the real body. As long as this problem is not solved, the stresses of 2nd and 3rd degree must be applied as conditional quantities in the comparative rating of material qualities.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta (All-Union Scientific Research Institute of Railroad Transport)

S/028/60/000/010/015/020
B013/B063

AUTHORS: Shchapov, N. P., Volokhvyanskaya, E. S.

TITLE: Methods for the Determination of the Impact Strength of Metals

PERIODICAL: Standartizatsiya, 1960, No. 10, pp. 53-55

TEXT: This is a report on new standards which were enforced on January 1, 1961 and replace ГОСТ 1524-42 (GOST 1524-42). The standards were worked out by the Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta (All-Union Scientific Research Institute of Railroad Transportation) and approved by the Komitet standartov, mer i izmeritel'nykh priborov (Bureau of Standards, Measures, and Measuring Instruments). GOST 9454-60: "Metals. Method of Determining Impact Strength at Normal Temperature"; GOST 9455-60: "Metals. Method of Determining Impact Strength at Low Temperature". The test method and cooling conditions were specified and the use of explosive liquids was forbidden. GOST 9455-60: "Metals. Method of Determining Impact Strength at High Temperatures" was worked out for the first time, and specifies tests at temperatures up to 1000°C and

Card 1/2

Methods for the Determination of the Impact Strength of Metals

S/028/60/000/010/015/020
B013/B063

safety measures. The new standards are based on GOST 1524-42 in which test rods with 2 mm deep notches and a radius of curvature of 1 mm (Fig. 1) are specified. Apart from the "flat notches" commonly used in West and East Germany (Fig. 4), these are the softest compared with those used in other countries (Figs. 2 and 3). Additional test rods are permissible in exceptional cases, namely, 5 mm deep notches with r = 1 mm (Fig. 2) and 2 mm deep notches with r = 0.25 mm (Fig. 5) which were adopted by ISO. Furthermore, test rods with notches 3 mm deep and a radius of 1 mm (Fig. 3) used in the German Federal Republic and some Communist countries are permissible. The most frequently used dimensions (10 · 5 · 55 mm) were specified for smaller specimens. For the standardization of still smaller or larger specimens, the experimental material available in the USSR is insufficient. Specimens with a cross section of 30·15 mm or 20·20 mm are sometimes used abroad, such as the specimens shown in Fig. 6 which are used in Germany for testing boiler plate. The standardization of impact test methods should be continued. There are 6 figures.

Card 2/2

SHCHAPOV, N.P., prof., doktor tekhn.nauk

Potentialities for saving ferrous metals in railroading.
Vest.TSNII MPS 19 no.5:7-11 '60. (MIRA 13:8)
(Metals) (Railroads)

SHCHAPOV, N.P.

Problem of a scale factor. Zav.lab. 26 no.3:321-323 '60. (MIRA 13:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta.
(Materials--Deterioration)

VOLOKHVYANSKAYA, E.S., kand.tekhn.nauk; SHCHAPOV, N.P., doktor tekhn. nauk, prof.

Comparative investigations of low-alloy 10KhGN steel. Trudy TSNII MPS no.195:5-41 '60. (MIRA 13:9)
(Nickel-manganese alloys--Testing)
(Steel, Structural--Testing)

BAYKOV, Aleksey Vasil'yevich, inzh.; VARFOLOMEYEV, Ye.A., retsenzent; SHCHAPOV, N.P., retsenzent; KRUSHTAL', L.I., red.; BOBROVA,

[Standardization in railroad transportation] Standartizatsiia na zheleznodorozhnom transporte. Moskva, Transzheldorizdat, 1962. 107 p. (MIRA 15:7)
(Railroads) (Standardization)

SHCHAPOV, N.P., doktor tekhn.nauk, prof.; KRASOVSKIY, A.I., kand.tekhn. nauk; VOLOKHVYANSKAYA, E.S., kand.tekhn.nauk; KRAYCHIK, M.M., kand.tekhn.nauk; MAKSIMOV, V.N., inzh.; KOZEL'NIKOV, V.L., inzh.; KUZNETSOV, V.A., inzh.

Properties and the weldability of St. 3kp steel with a high arsenic content. Svar. proizv. no.2:1-7 F '62. (MIRA 15:2)
(Steel alloys--Welding)

ACCESSION NR: AT4014054 S/3073/63/000/000/0270/0274

AUTHOR: Shkol'nik, L. M.; Shchapov, N. P.; Savel'yeva, R. A.; Lyutina, R. V.

TITLE: Effect of cyclic loading on the hydrogen concentration in steel

SOURCE: Prochnost' metallov pri peremenny*kh nagruzkakh; materialy* tret'yego soveshchaniya po ustalosti metallov, 1962 g. Moscow, Izd-vo AN SSSR, 1963, 270-274

TOPIC TAGS: steel alloy, loading, cyclic loading, stress, plastic deformation, steel, hydrogen, metal fatigue

ABSTRACT: The concentration of hydrogen in steel is known to affect its structure and properties. The effects of cyclic loading on the concentration of hydrogen in console-type and rail-type steel was investigated using two devices at 66-1400 cycles/minute, the hydrogen concentration being determined by gas analysis. The rupture strength at these frequencies was also determined. This procedure showed that during cyclic loading, the concentration of H is decreased, its desorption from the metal is accelerated, and its mobility is increased. The concentration of H, however, increases in the area of the highest stress. This depends on the duration of the cyclic loading and not on maximum level in the exposed cross section, although the rate of diffusion of H is increased by plastic deformation.

Ca: Card 1/2

S/028/63/000/002/001/003
D217/D308

AUTHORS: Volokhvyanskaya, E.S. and Shchapov, N.P.

TITLE: Revision of the standard specification for bridge steel

PERIODICAL: Standardizatsiya, no. 2, 1963, 19-22

TEXT: In connection with the construction of bridges in northern districts for which the conditions, both climatic and service-wise, are severe, the Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta (All-Union Scientific Research Institute of Railroad Transportation) has drawn up a scheme for a new standard specification for structural bridge steel, to supplement the existing specification GOST-6713-53. The new document specifies the fatigue strength, the As content and the impact resistance for various thicknesses of rolled steel. The thickness of sheet and wide strip steel as normalized must not be less than 20 mm. There are 2 figures.

Card 1/1

SHCHAPOV, N.P., doktor tekhn.nauk, prof.

Evaluation of the suitability of converter and low-manganese alloy steel for railroad-car construction. Trudy TSNII MPS no.252:4-8 '63. (MIRA 16:8)
(Steel, Structural) (Railroads--Cars--Design and construction)

ACHKASOV, L.G.; SHCHAPOV, N.P.

Failure of low-carbon and manganese steels. Metalloved. i term. obr. met. no.9:28-32 S '63. (MIRA 16:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta.

VOLOKHVYANSKAYA, E.S., kand.tekhn.nauk; SKVORTSOVA, E.I., inzh.;
SHCHAPOV, N.P., doktor tekhn.nauk

Studies of the mechanical properties of converter steel of experimental melts. Trudy TSNII MPS no.252:9-53 '63. (MIRA 16:8)
(Steel--Testing)

SHCHAPOV, N.P., doktor tekhn.nauk, prof.; ZOLOTARSKIY, A.F., kand.tekhn.nauk; TSUKANOV, P.P., kand.tekhn.nauk

Serviceability of the rail steel and ways to improve it. Vest. TSNII MPS 22 no.6:3-7 '63. (MIRA 16:10)

SHCHAPOV, N.P., prof., doktor tekhn. nauk, retsenzent;
ZHUKHOVITSKIY, A.A., prof., doktor khim. nauk, retsenzent

[Machines and instruments for the testing of metals and plastics] Mashiny i pribory dlia ispytaniia metallov i plastmass; sbornik statei. Moskva, Mashinostroenie, 1965. (MIRA 18:2)
134 p.

PARYSHEV, Yu.M.; SHCHAPOV, N.P.

Determining the conditional elastic limit in contact loading. (MIRA 18:7)
Zav. lab. 31 no.2:212-215 '65.

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta.

SHCHAPOV, P.I.

Experience in training specialists. Bezop.truda v prom. 2 no.10:29-30 O '58. (MIRA 11:11)

1. Uchastkovyy insh.-inspektor Bugul'minskoy rayonnoy gornotekhnicheskoy inspetsii Tatarskogo sovnarkhoza.
(Bugulma--Petroleum workers)

TEODOROVICH, G.I.; PALANT, I.B.; SHCHAPOVA, N.F.

Stratigraphy of Upper Tournai and Lower Visean terrigenous sediments in Orenburg Province. Izv. AN SSSR. Ser.geol. 30 no.11:118-120 N '65. (MIRA 18:12)

1. Orenburgskaya kompleksnaya laboratoriya Vsesoyuznogo nauchno-issledovatel'skogo geologorazvedochnogo neftyanogo instituta, Moskva, i Institut geologii i razrabotki goryuchikh iskopayemykh, Moskva. Submitted December 31, 1964.

SHCHAPOVA, T.F.; VOZZHINSKAYA, V.B.

Littoral algae at the western shore of Sakhalin. Trudy Inst. okean. 34:123-146 '60. (MIRA 13:10)
(Sakhalin--Algae)

SHCHARANSKIY, B. M.

At the conference of mine mechanics for the central Donets Basin. Ugol' Ukr. 7 no.4:48 Ap '63. (MIRA 16:4)

(Donets Basin—Coal mining machinery)

SZCZAPOWA, J. L. [Shchapova, Yu. L.]

Contribution to research methods of the chemical composition of glass from archeological excavations by spectral analysis. Szklo 12 no.11: 325-329 N '61.

1. Katedra Archeologii, Uniwersytet, Moskwa.