83830

S/135/60/000/010/017/018/XX
A006/A001

1.9600 only 2208
18.8200 1045, 1413

AUTHOR: Navrotskiy, D. I., Candidate of Technical Sciences

TITLE: Distribution of Stresses Between Transverse Seams

PERIODICAL: Svarochnoye proizvodstvo, 1960, No. 10, pp. 10-12

TEXT: When calculating overlap weld joints with two transverse seams it is usually assumed that the stresses between the individual seams are uniformly distributed. This is, however, only correct in the case of joining parts of equal cross section loaded under certain conditions. If the rated cross section of the components to be welded are unequal or if the loading conditions are different, the aforementioned assumption may lead to serious errors. Methods are given to calculate weld joints with transverse seams permitting a more correct estimation of their operational conditions. Basic formulae are derived to determine the stresses in individual transverse seams for 3 different variants of weld joints and loading conditions:

1) $$P_1 = P_2 \left(1 + \frac{\delta_2 - \delta_1}{\delta_1} \cdot \frac{ak}{ak + \delta_2}\right)$$

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Distribution of Stresses Between Transverse Seams

where P_1 and P_2 are the stresses on the transverse seams, K is a constant coefficient whose value depends on the ratio of the weld joint dimensions; δ_1 and δ_2 are the dimensions of cross sections of the parts to be welded.

2) $$P_1 = P_2 \left(1 + \frac{\delta_2 + \delta_1}{\delta_1} \cdot \frac{ak}{2}\right)$$

3) $$P_1 = P_2 \left[1 + \frac{2\delta_2}{\delta_1} \cdot \frac{ak}{ak + 2\delta_2}\right]$$

Deformations in the seam zone are determined by dividing the weld joint into individual parts loaded by stresses which are applied to the dissected surfaces of the weld joints. The formulae obtained are analyzed and recommendations are given as to their use. There are 6 figures, 1 table and 2 references, 1 English and 1 Soviet.

ASSOCIATION: Leningradskiy politekhnicheskiy institut imeni M. I. Kalinina
(Leningrad Polytechnic Institute imeni M. I. Kalinin)

PHASE I BOOK EXPLOITATION SOV/5500

Navrotskiy, Dmitriy Ivanovich

Prochnost' svarnykh soyedineniy (Strength of Welded Joints) Moscow, Mashgiz, 1961. 174 p. 10,000 copies printed.

Reviewer: V.I. Kryzhanovskiy, Candidate of Technical Sciences; Ed.: V.N. Savel'yev, Candidate of Technical Sciences; Ed. of Publishing House: N.Z. Simonovskiy; Tech. Ed.: O.V. Speranskaya; Managing Ed. for Literature on the Design and Operation of Machines (Leningrad Department, Mashgiz): F.I. Fetis, Engineer.

PURPOSE: This book is intended for technical personnel concerned with the design and manufacture of welded structures. It may also be used by students at schools of higher technical education and tekhnikums.

COVERAGE: Characteristics of welded joints are presented and their special features and advantages outlined. Attention is given to a consideration of the strength of welded joints under various operating conditions, methods of calculating the strength and endurance of welded joints, and examples of the use of welded joints in various weldments. No personalities are mentioned. There are 43 references: 42 Soviet, and 1 English.

Card 1/4

18.8200

45236

S/758/61/000/006/002/002

AUTHORS: Navrotskiy, D.I., Savel'yev, V.N., Candidates of Technical Sciences, Chizhevskiy, S.V., Engineer.

TITLE: The strength of welded joints of the aluminum alloy AMr-6 (AMg-6).

SOURCE: Leningrad. Nauchno-issledovatel'skiy institut mostov. Sbornik trudov, no. 6,. 1961. Soyedineniya elementov konstruktsiy iz alyuminyevykh splavov. pp. 163-171.

TEXT: The paper reports strength and endurance tests of the AlMg alloy AMg-6 and AMg-6T, made on specimens 10 and 16 mm thick. The basic finding is that the alloy is significantly more susceptible to variable loads than low-carbon steel. In weldments of AMg-6 alloy the static strength is primarily determined by the strength of the heat-affected zone. In high-temperature-welded specimens the weldment strength was from 80.5 to 92% that of the parent metal. The vibrational strength of the weldment was affected even more severely: In corner-weld specimens it was reduced to 52 to 57%, in butt-welded joints to 84%. Local machining of a joint, to provide a faired transition from parent metal to weld, increases the vibrational strength of the weldment considerably. The specimens tested in this series comprised: (1) Plain sheets, (2) sheets with welded-on stiffening ribs (with and without machined smooth fairings from parent metal to weld); (3) Tee-jointed pieces (with and without machining); and (4) butt joints. The stiffening ribs were welded by hand

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with argon-shielded arc welding, with a W electrode and a 4-mm diam AMg-6 welding rod, at an I of 300-340 a. The details of the single-pass consumable-electrode automatic welding of the unmachined Tee joints and the analogous three-pass procedure for the subsequently machined Tee joint is described, and cross-sectional views of the specimens are shown. Similarly welded consumable-electrode weldments with double-V butt joints were also prepared. Testing was done on the pulsation tester ЦДМ-100 (TsDM-100). The mechanical properties of Gagarin specimens cut along and across the direction of rolling are shown in a full-page table. All mechanical characteristics are in excess of those required by Technical Specs TU15-57. The appreciable scatter of the test data is noted. Large-scale specimens were tested separately to investigate the effect of rolling surface scale and cladding. Tabulated data show that the yield limit of the parent metal on the flat specimens is somewhat higher than that of the Gagarin specimens, even though the tensile strength of both is practically the same. The static strength of specimen weldments of the various types is interpreted in terms of the heating undergone by them in the course of the welding process. The results of the vibrational tests are summarized in a table. The vibrational strength of the specimens is interpreted in terms of both the heating undergone and the notch effect represented by the change in cross-section from the unaffected parent metal to the weld. There are 4 figures and 3 tables. No references.

ASSOCIATION: None given.

Card 2/2

NAVROTSKIY, D.I.

Stress distribution in longitudinal joints in various conditions of load transfer. Avtom. svar. 14 no.2:15-23 F '61. (MIRA 14:1)

1. Leningradskiy politekhnicheskiy institut imeni M.I. Kalinina.
(Welding) (Strains and stresses)

NAVROTSKIY, D.I.

Strength calculation of lap-welded joints considering the difference of the deformation of elements. Trudy LPI no.216: 19-31 '61. (MIRA 14:11)

(Welding--Testing)
(Deformations (Mechanics))

S/124/62/000/006/021/023
D234/D308

AUTHORS: Navrotskiy, D. I. and Savel'yev, V. N.

TITLE: Investigating the influence of residual stresses on the vibrational strength of specimens with small stress concentration

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 6, 1962, 56, abstract 6V494 (Tr. Leningr. politekhn. in-ta, 1961, no. 216, 48-55)

TEXT: The authors tested three series of specimens cut from [illegible] (St.3) steel for welded bridges and having round cuts on lateral edges, owing to which there was a non-uniform distribution of stresses in the design section. The effective concentration coefficient for the above specimens was $\beta \approx 1.2$. All specimens were previously subjected to thermal treatment to remove possible residual stresses due to rolling or gas cutting. One series was tested in the initial state, the second series after heating their middle parts by gas heater in order to cause compression stresses

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Investigating the influence ...

on their lateral edges, the third series after stamping of their middle parts in order to cause tensile stresses on their lateral edges. The results of vibrational tests, re-calculated for a symmetrical cycle, showed an increase of durable strength by 4% in the specimens of the second series in comparison with the first and a decrease by 5.5% in the specimens of the third series. It is pointed out that all specimens of the second series started failing at the lateral edges in spite of the fact that the stresses in the middle of the design section amounted to approximately 2500 kg/cm^2 at the beginning of the tests and maintained a value of approximately 930 kg/cm^2 after first cycles. This is due to the fact that the negative influence of residual tensile stresses in the middle of the section was fully compensated by mechanical characteristics of the specimen's metal, increased owing to hardening. /Abstracter's note: Complete translation./

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L 16764-63 EWP(k)/EWP(q)/EWT(m)/BDS AFFTC/ASD Pf-4 JD/HM
S/124/63/000/004/062/064

AUTHOR: Navrotskiy, D. Ye.

TITLE: A study of the influence of residual stresses on vibration strength in elements with sharp cuts

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 4, 1963, 63, abstract 4V524 (Sb. Proyektir. i prochnost' svarn. konstruktsiy. M. -L, 1959, 172-184)

TEXT: The authors present the results of a test of the vibra-edges, under the following initial conditions: condition at start; condition following heating of the median of the width of the sample to obtain stretching stresses at the root of the cuts; following preliminary stretching which resulted in compression stresses and cold hardening of the metal at the root of the cuts and size in an increase in the radius of the cut; following heating of the edges at the points of cut, this resulting in stretching stress within the cuts. The set of samples was subjected to thermal processing, following which it underwent a test for vibration load. To exclude the influence of thermal processing on the properties of the basic metal, the sheets from which the samples were prepared were themselves subjected to thermal processing, so that the subsequent thermal operation could vary only those properties and stresses which were brought about by the heating, plastic compression or stretching of the samples. The character of the distribution and the magnitude of the residual stresses

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L 16764-63

S/124/63/000/004/062/064

A study of .....

created by the different processing of the samples were determined by the method of section by readings of a resistometer. The vibration strength of the samples with residual compression stresses turned out to be higher than that of the initial (without residual stresses); that of samples with residual stretching stresses — lower. The stretching of samples increased their vibration strength. Repeated thermal processing brought the samples into a condition in which their vibration strength was about the same as that of the initial, except for samples subjected to stretching. The vibration strength of these samples, as the result of repeated thermal processing, was somewhat lowered (by cold hardening and compression stresses), but nevertheless remained harder than in the initial state, since the increased radius of cut was perserved following the repeated heating.

The studies made enabled the investigators to make a more precise estimation of the influence of stresses, plastic deformations, cold hardening and variations in the sharpness of cut, on the vibration strength of samples. N. O. Okerblom.

[Abstracter's note: Complete translation.]

Card 2/2

SAVEL'YEV, Vladimir Nikolayevich, kand. tekhn. nauk; CHIZHEVSKIY, Svyatoslav Valeriyevich, inzh.; NAVROTSKIY, Dmitriy Ivanovich, kand. tekhn. nauk; KAZDUY, F.I., red.;

[Technology of welding processes and the strength of welded joints of aluminum-magnesium alloys] Tekhnologiia svarki i prochnost' svarnykh soedinenii iz aliuminievo-magnievykh splavov. Leningrad, 1963. 28 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Svarka, paika i rezka metallov, no.5) (MIRA 17:4)

NAVROTSKIY, D.I.

Stress concentration in welded joints made by transverse seam welding. Trudy LPI no.229:16-24 '63. (MIRA 17:9)

OKERBLOM, N.O.; NAVROTSKIY, D.I., kand. tekhn. nauk, retsenzent;

[Engineering and technological design of welded structures] Konstruktivno-tekhnologicheskoe proektirovanie svarnykh konstruktsii. Moskva, Izd-vo "Mashinostroenie," 1964. 418 p. (MIRA 17:6)

NAVROTSKIY, D.I., kand. tekhn. nauk

Methods of calculating welded joints, taking into account concentrations of stresses. [Trudy]LMZ no.11:39-51 '64. (MIRA 17:12)

NAVROTSKIY, D.I.

Determining tangential stresses along the foot of inclined projections in weldment transitions. Trudy LPI no.245:24-31 '65. (MIRA 18:8)

L 32848-66 EWT(m)/EWP(v)/T/EWP(t)/ETI/EWP(k) JD/HM
ACC NR: AR6000443 SOURCE CODE: UR/0137/65/000/009/E011/E011

38
B

AUTH.: Navrotskiy, D. I.

TITLE: Determining local elastic deformations in spot-welded joints

SOURCE: Ref. zh. Metallurgiya, Abs. 9E71

TOPIC TAGS: metal welding, spot welding, elastic deformation

ABSTRACT: Equations are given for use in the solution of statistically undefinable problems connected with the calculation of spot-welded joints and assemblies. The use of spot-welded joints with more than three spots in a linear row is not practical because a greater number of spot welds does not contribute to the supportive power of the joint. This is explained by the fact that the middle points carry the least load. It is recommended that the diameter of spot welds be increased rather than their number in linear row in order to increase the supportive power of spot-welded joints. V. Fomenko. [Translation] [NT]

SUB CODE: 11/ SUBM DATE: none

Card 1/1 UDC: 621.791.001.539.4

BUDYACHEVSKIY, A.T.; VEKSLERCHIK, R.A.; MOREVA, A.G.; NAVROTSKIY, D.S.; NOVINSKAYA, I.N.

Emergency aid in acute coronary insufficiency. Kardiologiia 5 no.1:87-88 Ja-F '65. (MIRA 18:9)

1. TSentral'naya stantsiya skoroy meditsinskoy (glavnyy vrach N.K. Gavrilova; nauchnyy rukovoditel' - prof. S.V. Shestakov), g. Kuybyshev.

NAVROTSKIY, D.V., assistent

Relations between the accessory nerve and the roots of the spinal nerves in man. Trudy KGMI no.10:125-128 '63. (MIRA 18:1)

1. Iz kafedry normal'noy anatomii (zav. kafedroy - prof. I.S. Kudrin) Kaliningskogo gosudarstvennogo meditsinskogo instituta.

MAVROTSKIY, P.T.

Osteosynthesis combined with bone grafting of a preserved rib for treating a nonknitting fracture of the mandible complicated by chronic osteomyelitis. Stomatologiia 36 no.3:34-35 My-Je '57. (MLRA 10:9)

1. Iz kliniki chelyustno-litsevoy khirurgii i stomatologii Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova
(JAWS--SURGERY) (BONE GRAFTING) (OSTEOMYELITIS)

NAVROTSKIY, G. A.

Kholodnoshtampovochnye avtomaty; konstruktsiia i raschet. Moskva, Mashgiz, 1944. 131 p.

(Automatic upsetting machines; design and calculation.)

DLC: Unclass.

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

NAVROTSKIY, G.A., kandidat tekhnicheskikh nauk.

The A-110 automatic one-blow cold upsetter with a one piece matrix for the production of workpieces from 3 to 25 mm. Vest.mash.27 no.3:73-74 '47. (MLRA 9:4)
(Power presses)

NAVROTSKIY, G. A.

Parovozdushnyi 1000-kg kovochnyi molot. (Vestn. Mash., 1948, no. 2, p. 49-50)

Refers to Voronezh Kalinin machine-building plant.

(1000-kg. air-steam forging hammer.)

DLC: TN4.V4

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

NAVROTSKIY, G. A.

Vysadochnye i obreznye pressy-avtomaty. Moskva, Mashgiz, 1949. 253 p. illus.

"Nastoiashchaia rabota iavliaetsia prodolzheniem knigi avtora 'Kholodnovysadochnye avtomaty.'

Bibliography: p. 250-(251).

(Automatic upsetting and trimming presses.)

DLC: TJ1450.N3

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

NAVROTSKIY, G.A., kandidat tekhnicheskikh nauk.

Economizing metals by the introduction of cold upsetting. (In: Ryzhkov, D.A., ed. Ekonomiia metallov v kuznechno-shtampovochnom proizvodstve. Moskva, 1953. p.176-193.) (MLRA 7:1)
(Forging) (Punching machinery)

NAVROTSKIY, G. A.

USSR/Engineering - Cold forging

Card : 1/1 Pub. 128 - 9/32

Authors : Navrotskiy, G. A.

Title : Problem of determining the magnitude of stress during cold forging

Periodical : Vest. mash. 34/7, 30 - 34, July 1954

Abstract : Experiments were conducted to determine the magnitude of stress during cold forging. On the bases of these experiments, the author was able to compile a formula for determining mechanical deformations, and the magnitude of stress. The cold forging of rivets was performed by means of TsNIITMSh-4, Amsler-50, 82VA, and type 70, machines. Four references. Illustration; drawing; diagram; graphs; table.

Institution : ...

Submitted : ...

NAVROTSKIY, Georgiy, Aleksandrovich, kandidat tekhnicheskikh nauk; RUSKEVICH, Mikhail Leont'yevich; SHIFRIN, S.M., nauchnyy redaktor; BUKOVA, I.V., redaktor; EGGERT, A.P., tekhnicheskiy redaktor

[Automatic cold upsetting machinery] Kholodnovysadochnye avtomaty. Moskva, Vses. uchebno-pedagog. izd-vo Trudreservizdat, 1956. 68 p. (Metal working machinery) (MLRA 9:7)

PHASE I BOOK EXPLOITATION SOV/1422

25(1,2)

Navrotskiy, Georgiy Aleksandrovich, Candidate of Technical Sciences, Docent

Pressy-avtomaty dlya kholodnoy shtampovki (Automatic Presses for Cold Working) Moscow, Mashgiz, 1956. 350 p. 8,000 copies printed.

Ed.: I.S. Pobedin, Candidate of Technical Sciences; Ed. of Publishing House: V.A. Mezhova; Tech. Ed.: S.L. Shmel'kina; Managing Ed. for Literature on Heavy Machine Building (Mashgiz): S.Ya. Golovin, Engineer.

PURPOSE: The book is intended for the engineering staff of forging and stamping plants and may be useful to students in mechanical engineering vtuzes.

COVERAGE: The book presents a classification system for automatic forging and stamping presses, methods of kinematic and kinetostatic design for basic mechanisms, a description of constructions of commonly used types of automatic presses for stamping and die forging, and a description of universal automatic bending machines. The book uses investigations conducted by TsBKM (The Central Bureau for Building

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Automatic Presses (Cont.)

Forging and Pressing Machines) and other design bureaus, and by plants building and using machinery of this kind. This book is a continuation and development of books written earlier by the same author: Kholodno-vysadochnyye avtomaty (Automatic Machines for Cold-upsetting), Mashgiz, 1945; Vysadochnyye i obreznyye pressy-avtomaty, Mashgiz, 1949. The author used theoretical principles developed in the works of I.I. Avtobolevskiy, S.I. Artobolevskiy, G.A. Shaumyan, A.I. Zimin, A.I. Tselikov, S.I. Gubkin, A.D. Tomlenov, E.P. Unksov, L.A. Shofman, M.V. Storozhev. There are 42 references, all Soviet.

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Automatic Presses (Cont.)

AVAILABLE: Library of Congress

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NAVROTSKIY, G.A.; VYATKIN, V.P.

Forty years of the Soviet forging and pressing machinery industry. (MIRA 10:12)
Stan. i instr. 28 no.11:1-4 N '57.
(Forging machinery)
(Power presses)

NAVROTSKIY, G.A.

28(1) PHASE I BOOK EXPLOITATION SOV/2156

Soveshchaniye po kompleksnoy mekhanizatsii i avtomatizatsii tekhnologicheskikh protsessov. 2nd, 1956.

Avtomatizatsiya mashinostroitel'nykh protsessov; /trudy soveshchaniya/, tom. 1: Goryachaya obrabotka metallov (Automation of Machine-Building Processes; Proceedings of the Conference on Over-All Mechanization and Automation of Technological Process, Vol 1: Hot Metal-Forming) Moscow, 1959. 394 p. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya. Komissiya po tekhnologii mashinostroyeniya.

Resp. Ed.: V.I. Dikushin, Academician; Compiler: V.N. Raskatov; Ed. of Publishing House; V.A. Kotov; Tech. Ed.: I.F. Kuz'min.

PURPOSE: The book is intended for mechanical engineers and metallurgists.

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

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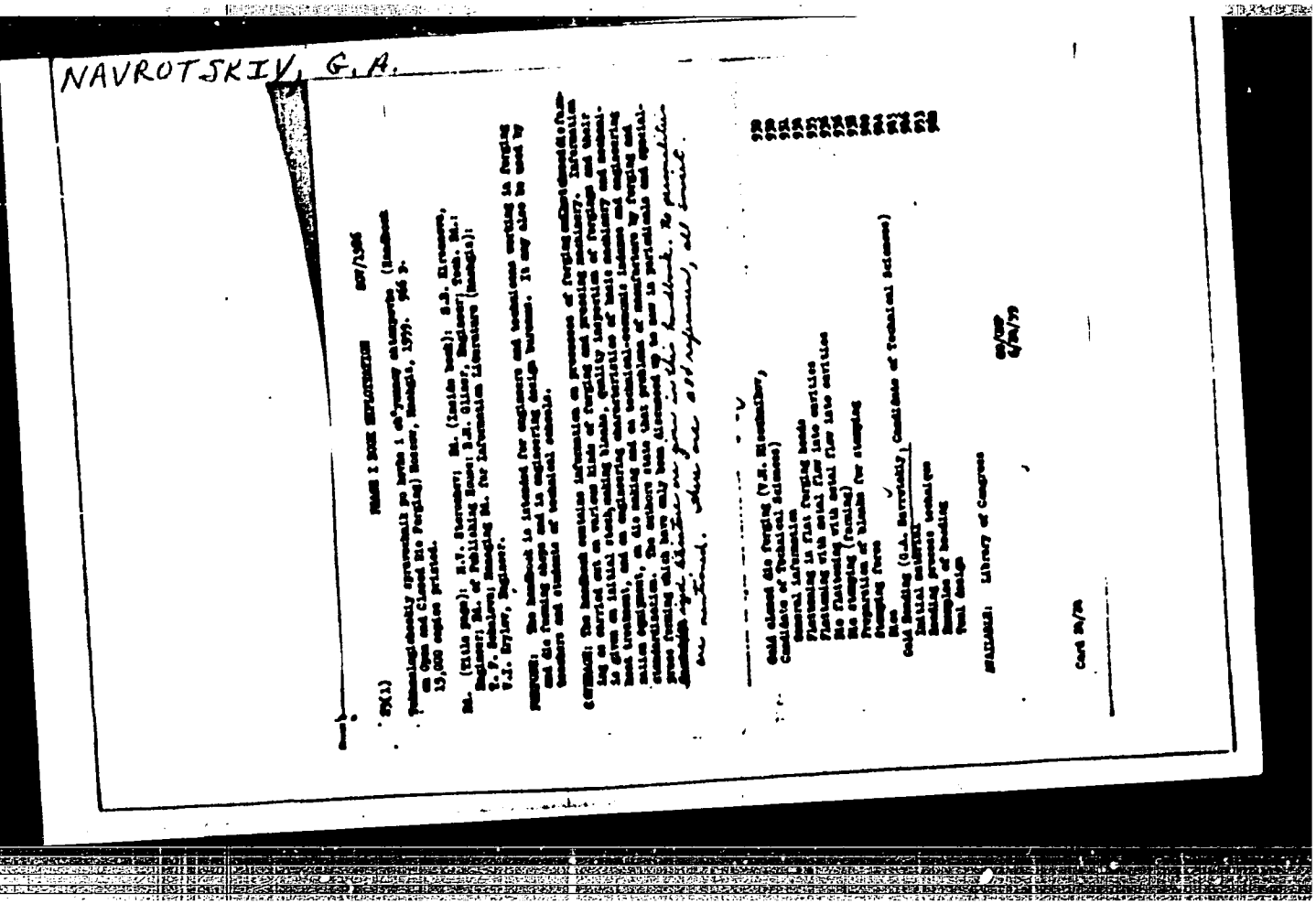

NAVROTSKIY, G.A.

S/028/60/000/011/003/007
B020/B058

AUTHORS: Yegorov, N. A., Navrotskiy, G. A.

TITLE: Grouping and Standardization in the Construction of Forging Presses

PERIODICAL: Standartizatsiya, 1960, No. 11, pp. 16-23

TEXT: The standardized units and parts assembled and tested before the assembly of the entire machine are the basis of forging presses. The various types of forging press units are schematically shown in Fig. 1. Fig. 2 shows a grouping scheme of forging press units, which shows more clearly the correlation between the various units and deals better with problems of standardization of units and parts. All units are divided into classes A (installations with translatory motion) and B (installations with rotary motion), which are subdivided into types I, II and III, IV. Units consisting of individually assembled units mounted on a machine frame belong to types I and III, while units consisting of different machines belong to types II and IV. Each type of class A machines is divided into those with one and those with several crossheads; moreover, all units and installations are divided into types. Some examples for the

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grouping of forging-press units are presented. Fig. 3 shows an open, inclined press unit from the British firm of Johns, Fig. 4 a 6-ton open hydraulic press unit from the firm of Denison, Fig. 5 the power head of a press unit from the firm of Clearing, mounted on various frames similar to metal machining units. Fig. 6 samples for the assembly of special presses using power heads from the firm of Clearing, Fig. 7 a single crank power head designed by the Tsentral'nyy byuro kuznechno-pressovogo mashinostroyeniya (Central Office for Forging-press Construction) (TsBKM), Figs. 8 and 9 examples for its mounting on presses of various types, and Fig. 10 a variant of using the same frame combined with mechanical and hydraulic power heads. Power heads with a capacity from 4 to 250 t (Table 1) enable the combination of 63 standard types of universal crank machines and 37 hydraulic machines. The average increase of the number of these highly important press parts which are most difficult to manufacture, amounts to 4 to 12 in series production. The simplification in the design of a 63-ton single-crank press unit is shown in Table 2. Fig. 11 shows that the number of joint parts for four types of single-crank presses amounts to about 70-75%. Fig. 12 shows that work expenditure for the open 63-ton presses, manufactured by the Taganrogskiy zavod kuznechno-pressovogo oborudovaniya (Taganrog Plant for Forging-press Installations),

can be reduced by using a joint power head. Finally, it is pointed out that the TsBKM and Eksperimental'nyy nauchno-issledovatel'skiy institut kuznechno-pressovogo mashinostroyeniya (Experimental Scientific Research Institute of Forging-press Construction) should elaborate standards and type samples for the individual type units and parts of the machines. There are 12 figures and 2 ta.les.

Card 3/3

YEGOROV, N.A.; MAYEROVSKIY, G.A.

Unification and standardization in manufacturing forging machinery. Standartizatsiia 24 [illegible] 16-23 N '60. (MIRA 13:11)
(Standardization) (Forging machinery)

NAVROTSKIY, G.A.

36

PHASE I BOOK EXPLOITATION SOV/5799

Unksov, Ye.P., Doctor of Technical Sciences, Professor, Ed.

Sovremennoye sostoyaniye kuznechno-shtampovochnogo proizvodstva (Present State of the Pressworking of Metals) [Moscow] Mashgiz, 1961. 434 p. 5000 copies printed.

Ed. of Publishing House: A.I. Sirotin; Tech. Ed.: B.I. Model'; Managing Ed. for Literature on the Hot Working of Metals: S.Ya. Golovin, Engineer.

Title: Kuznechno-shtampovochnoye proizvodstvo v SSSR (The Pressworking of Metals in the USSR) by: A.V. Altykis, D.I. Berezhkovskiy, V.P. Volkovitskiy, I.I. Girsh (deceased), L.D. Gol'man, S.P. Granovskiy, N.S. Dobrinskiy, A.I. Zimin, S. L. Zlotnikov, A.I. Kagalovskiy, P.V. Lobachev, V.N. Martynov, Ye.N. Moshnin, G.A. Navrotskiy, Ya.M. Okhrimenko, G.N. Rovinskiy, Ye.A. Stosha, Yu.L. Rozhdestvenskiy, N.V. Tikhomirov, Ye.P. Unksov, V.F. Shcheglov, and L.A. Shofman; Eds: Ye.P. Unksov, Doctor of Technical Sciences, Professor, and B.V. Rozanov.

Title: Kuznechno-shtampovochnoye proizvodstvo v ChSSR (The Pressworking of Metals in the Czechoslovak SR) by: S. Burda, F. Hrazdil, F. Drastík, F. Zlatohlávek

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SOV/5799

Present State of the (Cont.)

Z. Kejval, V. Krauz, F. Kupka, F. Majer, K. Marvan, J. Novák, J. Odchnal, K. Paul, B. Sommer, M. Honz, J. Částka, V. Šindelář, and J. Šolc; Eds.: A. Nejepsa and M. Vlk.

PURPOSE: This book is intended for engineers and scientific personnel concerned with the pressworking of metals.

COVERAGE: Published jointly by Mashgiz and SNTL, the book discusses the present state of the pressworking of metals in the USSR and the Czechoslovak Socialist Republic. Chapters were written by both Soviet and Czechoslovak writers. No personalities are mentioned. There are 129 references: 98 Soviet, 16 English, 8 German, 5 Czech, and 2 French.

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PRESSWORKING IN THE USSR

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Present State of the (Cont.)

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Present State of the (Cont.)

Present State of the (Cont.) 807/5799

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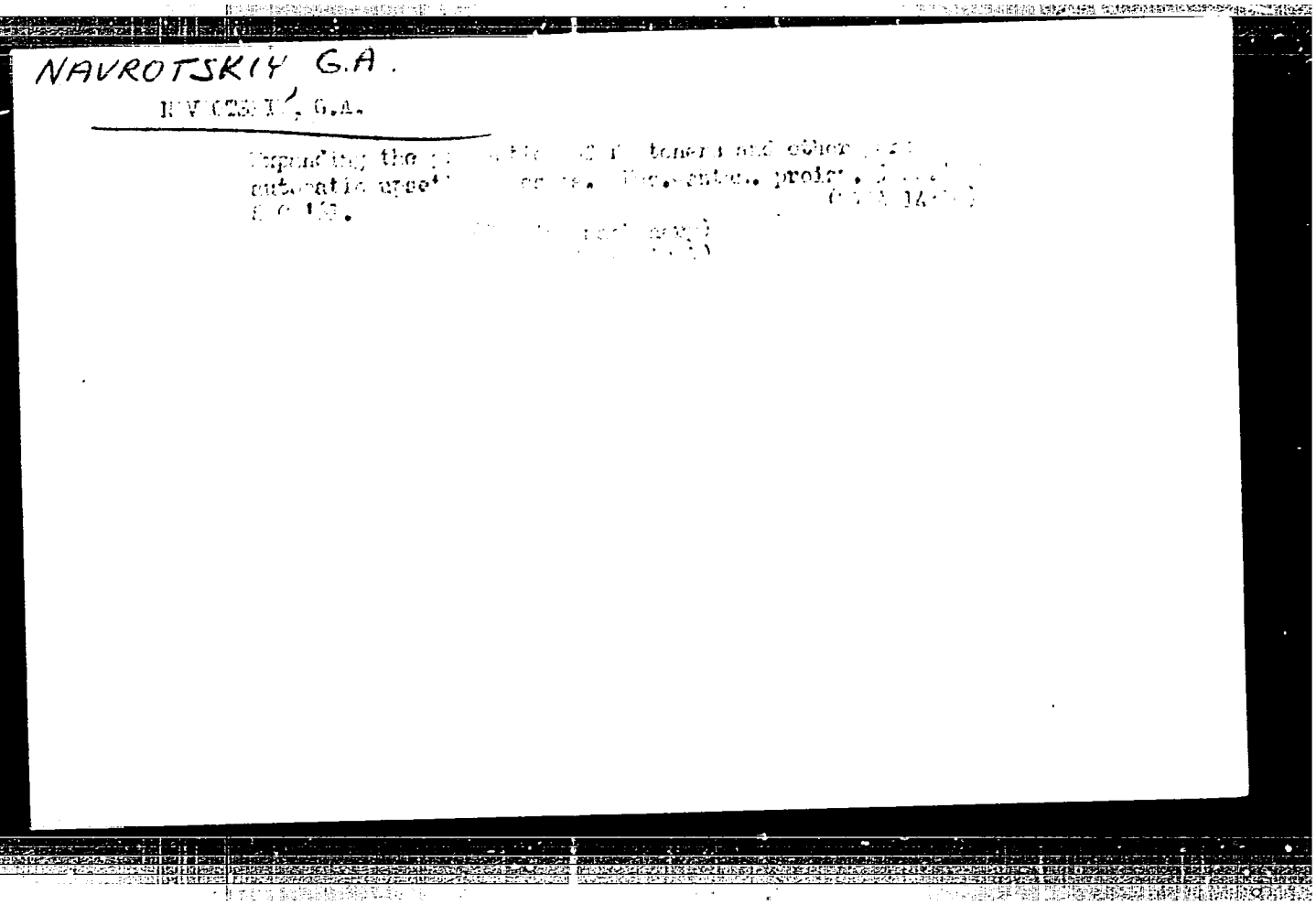
NAVROTSKIY G.A.

NAVROTSKIY, G.A.



MAVROTSKIY, G.A.

Technological use of multiple-stage presses for cold upsetting. Kuz.-shtam.proizv. 5 no.7:1-8 Jl '63. (MIRA 16:9)

POPOV, V.A., kand. tekhn. nauk; MISOZHNIKOV, V.M., kand. tekhn. nauk, retsenzent; NAVROTSKIY, G.A., kand. tekhn. nauk, retsenzent; GUMENYUK, Ye.A., inzh., red.

[Equipment for automated cold upsetting processes] Osnastka avtomatizirovannogo kholodnovysadochnogo proizvodstva. Moskva, Mashinostroenie, 1965. 174 p. (MIRA 18:8)

NAVROTSKIY, G. Ye. (Engineer)

Compressors

Use of steam-jet compressors for heating. Za ekon. top. 9, No. 5, 1952

9. Monthly List of Russian Accessions, Library of Congress, August 1952 [illegible], Uncl.

Navrotskiy I.V.

AUTHORS: Kurmanov, M.I., Navrotskiy, I.V., Yanushevskaya, Zh.F. 32-1-40/55

TITLE: A Device for the Investigation of the Damping of Oscillations in Metals (Ustanovka dlya issledovaniya zatukhaniya kolebaniy v metallakh).

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 1, pp. 101-103 (USSR)

ABSTRACT: In this paper the construction of such a device is described and examples for the computation of the logarithmic damping decrement of oscillations are given. The principal part of this device consists of a firmly welded frame which is suspended from the ceiling by means of a rope. In the upper part of the frame there is a clamp, by means of which the sample is fastened, which has the form of a metal strip, and on which oscillations are measured. At the edge of the sample a magnet is mounted in a metal setting. Under the magnet, on a table, there is a coil with 600 windings. By means of a screw it is possible to adjust the distance between the magnet and the coil. By the micrometer screw the initial bend-through of the sample is fixed by the magnet. When switching

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A Device for the Investigation of the Damping of Oscillations in Metals

32-1-40/55

off the magnet the sample begins to oscillate; oscillations slowly die down while the current formed in the coil is led to the oscillograph, and a vibrographic recording is made. The logarithmic damping decrement is then computed according to the following formula: $\delta = \frac{\ln 2}{n - 1}$,

where n denotes the number of vibrations. There are 5 figures.

ASSOCIATION: Ukrainian Scientific Research Institute for Metals (Ukrainiskiy nauchno-issledovatel'skiy institut metallov).

AVAILABLE: Library of Congress

Card 2/2 1. Oscillations-Control systems

L 24150-65 EWT(m)/EWP(b)/T/EWA(d)/EWP(w)/EWP(t) WW/JD
ACC NR: AP5002178 0032/65/031/001/0100/0103

SOURCE: Zavodskaya laboratoriya, v. 31, no. 1, 1965, 100-103

TOPIC TAGS: steel, structural strength/ 0902 steel, SKhL4 steel, St.3 steel

ABSTRACT: Tests were conducted to clarify the feasibility of using the method of N. N. Davidenkov (Problemy udara v metallovedenii. Izd. AN SSSR (1938)) to determine the critical temperature of brittleness with impact strength testing. It was found necessary to determine the coefficient K_g, defined as the coefficient relating the work of deformation to R_{max}, at high temperature (when the section of the diagram after R_{max} is completely absent) to the total work of deformation at its highest value on the temperature curve of work. R_{max} is used in the context defined by Ja. B. Fridman (Acta. Techn. Hung., 35-36, 83, 1961) and G. V. Uzhik (Prochnost' i plastichnost' metallov pri nizkikh temperaturakh. Izd. AN SSSR (1957)). The value of K_g was determined for steels 0902 and 0902 with .17% arsenic, SKhL-4, and St.3

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ACCESSION NR: AP5002178

tested according to Davidenkov's methods. Several factories prepared the specimens, various shapes, sizes, and preparation procedures of which were used. Results of the plotted test measurements are shown in Figures 1, 2, and 3 on the Enclosures. Orig. art. has: 3 figures and 3 tables.

ASSOCIATION: Ukrainskiy nauchno-issledovatelskiy institut metallov (Ukrainian Scientific Research Institute of Metals)

SUBMITTED: 00 ENCL: 03 SUB CODE: MM

NO REF SOV: 003 OTHER: 002

Card 2/5

L 24150-65
ACCESSION NR: AP5002178

ENCLOSURE: 01

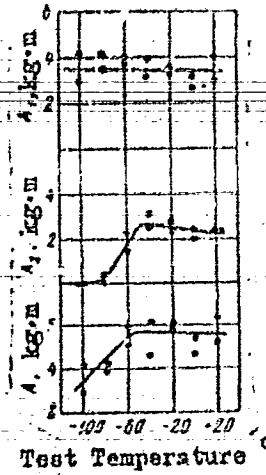

Fig. 1. Results of series tests of static deflection: A_1 - work up to R_{max}; A_2 - work after R_{max}; A_3 - total work

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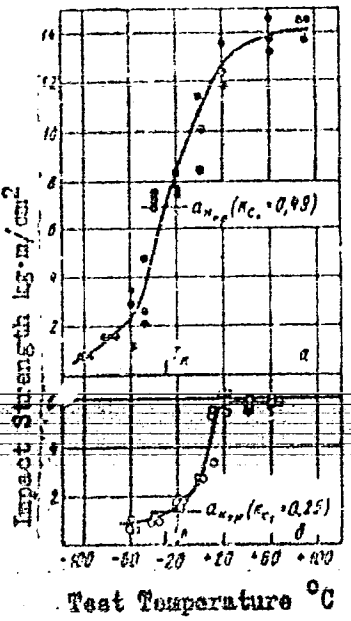
ACCESSION NR: AP5002178

ENCLOSURE: 01

Fig. 2. Graph of the relation between impact strength and temperature.
a - steel A in hot-rolled condition, type I specimens according to GOST 9454-60.
b - steel B in hot rolled condition, specimens with slot radius $\rho = 0.025$ mm



Card 4/4

L 24150-65

ACCESSION NR: AP5002178

ENCLOSURE: 03

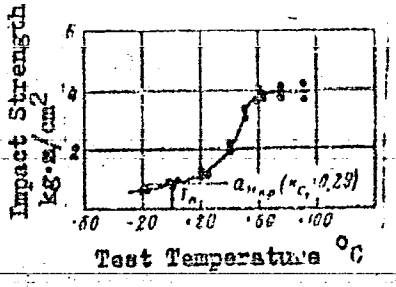


Fig. 3. Graph of the temperature relationship of impact strength of specimens with $\rho = 0.025$ mm from steel B after mechanical seasoning

Card 5/5

SOV/32-24-9-29/53

AUTHORS: Tomenko, Yu. S., Navrotskiy, I. V., Volchek, F. R.

TITLE: The Computation of Impact Energy in Multiple Impact Tests (Raschet energii udara pri ispytaniyakh na povtornyy udar)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 9, pp 1122-1125 (USSR)

ABSTRACT: The latest ram impact machine models for multiple impact tests (DSVO 150) possess several construction details that have an essential influence on the impact energy. A diagram of the operation of the machine, and of the connection of an oscillograph MPO-2 is given. The oscillograph reveals the movement of the ram from the initial position to the impact. The operation of the machine is described, and the calculation methods by L. T. Timoshuk (Ref 1) is mentioned. From the analysis of the oscillograms it was found that, in principle, the machine may work in different ways, which fact is of significance for the computation of impact energy. There may be three different cases, a description of which is given. Graphs and calculation formulae are presented. The investigations of the operation of the ram at different spring tensions showed the separation factor of the roll from the ram to depend only on the clearance of the

Card 1/2

The Computation of Impact Energy in Multiple Impact Tests

spring, and not on the degree of its tension.
There are 4 figures and 1 reference, which is Soviet.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy institut metallov
(Ukrainian Scientific Institute of Metals)

Card 2/2

KURMANOV, M.I., kand.tekhn.nauk; MAVROTSKIY, I.V., inzh.; FILIPPOVA, T.F., inzh.

Effect of arsenic on the properties of M16C steel (state standard 6713-53). Trudy Ukr.nauch.-issl.inst.met. no.5: 187-200 '59. (MIRA 13:1)
(Steel--Testing) (Arsenic)

MAVROTSKIY, I.V., insh.; TOMENKO, Yu.S., insh.; GOLIK, V.R., insh.; DUBROV, V.A., insh.

Investigating the occurrence and spreading of cracks under the effect of repeated impact stress. Trudy Ukr.nauch.-issl. inst.met. no.5:237-248 '59. (MIRA 13:1)
(Metals--Fatigue) (Crystal lattices)

NAVROTSKIY, I.V., insh.; TOMENKO, Yu.S., insh.; BRONINA N.Ye.; YES'KOV, A.I.

Investigating the process of impact fatigue by a DSVO-150 testing machine. Trudy Ukr.nauch.-issl.inst.met. no.5: 287-301 '59. (MIRA 13:1)
(Metals--Fatigue) (Testing machines)

KURMAKOV, M.I.; NAVROTSKIY, I.V.; TOMENKO, Yu.S.

Evaluation of the cold brittleness of structural sheet steel. Zav. lab. no.11:1370-1372 '59. (MIRA 13:4)

1.Ukrainskiy nauchno-issledovatel'skiy institut metallov.
(Steel --Brittleness)

NAVROTSKIY, I. V.

PHASE I BOOK EXPLOITATION SOV/5305

Moscow. Institut stali

Relaksatsionnyye yavleniya v metallakh i splavakh; trudy Mezhvuzovskogo soveshchaniya (Relaxation Phenomena in Metals and Alloys; Transactions of the Inter-Institute Conference) Moscow, Metallurgizdat, 1960. 326 p.

Sponsoring Agency: Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya RSFSR and Moskovskiy institut stali imeni I.V. Stalina.

Ed. (Title page): B.N. Finkel'shteyn; Ed. of Publishing House: Ye.I. Levit; Tech. Ed.: A.I. Karasev.

PURPOSE: This collection of articles is intended for personnel in scientific institutions and schools of higher education and for physical metallurgists and physicists specializing in metals. It may also be useful to students of these fields.

COVERAGE: The collection contains results of experimental and theoretical investigations carried out by schools of higher education and scientific research institutions in the field of the relaxation phenomena in metals and alloys. Several articles are devoted to the investigation—by the internal-friction method—of the decomposition of supersaturated solid solutions. Also analyzed are the defects of the crystalline lattice, plastic deformations, high-temperature behavior of alloys, and creep. Problems of the relation between internal friction and temper brittleness, t.. use of the method of internal friction in the investigation of powder-metallurgy products, and the mechanism of impact fatigue are discussed. The collection also contains articles on the damping characteristics of materials, elastic after-effect, and the new slow-detection method. No personalities are mentioned. Re.v.ences follow most articles. There are 366 references: 192 Soviet and 174 non-Soviet.

Relaxation Phenomena in Metals (Cont.) SOV/5305

[illegible], and [illegible] Go-Sen [Khar'kovskiy gosudarstvennyy universitet (Khar'kov State University)]. Analysis of the Internal Friction of Powder-Metallurgy Products 295

Mišek, Karel [Institute of Technical Physics of the Czechoslovak Academy of Sciences]. Magnetomechanical Phenomena in the Alternating Magnetic Field as a Relaxation Process 305

Selisskiy, Ya.P. [Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (Central Scientific Research Institute of Ferrous Metallurgy)]. Magnetostriction, Modulus of Elasticity, and Internal Friction of Certain Iron-Base Ferromagnetic Solid Solutions 307

Navrotskiy, I.V., Ya.S. Tovstenko, V.R. Golik, and V.A. Dubrov [Ukrainskiy nauchno-issledovatel'skiy institut metallov (Ukrainian Scientific Research Institute of Metals)]. Study of the Impact-Fatigue Mechanism by the Damping Method of Measuring 316

AVAILABLE: Library of Congress

VK/wrc/gmp
7-20-61

Card 8/8

18 8200

2*558
S/137/61/000/009/043/057
A060/A101

AUTHORS: Navrotskiy, I.V., Tomenko, Yu.S.

TITLE: On the magnitude of maximal loading for brittle fracture

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no.9, 1961, 38, abstract 9Zh232 ("Sb. tr. Ukr. n.-i. in-t, metallov", 1960, no. 6, 206 - 216)

TEXT: Investigations were carried out on Izodberg specimens made of low-alloy structural steels 10ХСНД, 10ХГСНД, 15ГДЮТ (10KhSND, 10KhGSND, 15GDYuT), low-carbon steel М16С and Ст.3 (M16S and St.3) with As content 0.18 and 0.27%. The specimens were cut out in the transverse direction to the rolling from sheets 12 mm thick. The value of the critical load at static rupture and at a blow on the stressed specimen was determined. The experiments were carried out at 20,0, -20, -40 and -60°C. The maximum value of the static strength of the metal under brittle fracture in the presence of a sufficiently rigid concentrator depends on the off-the-center position of the applied load, the level and orientation of the residual stresses and the gradient of the normal stresses over the specimen cross section. In the absence of these factors the brittle strength of the metal

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28558
S/137/61/000/009/043/087
A060/A101

On the magnitude of maximal loading ...

cannot be lower than the values of σ_s in smooth specimens. The nature of the variation in σ_b as a function of temperature then need not correspond to the variation in the ductility properties.

M. Matveyeva

[Abstracter's note: Complete translation]

Card 2/2

KURMANOV, M.I.; NAVROTSKIY, I.V.; TOMENKO, Yu.Sh.; DOBRUSKINA, Zh.R.

Structural strength of certain high-resistance low-alloy steels. Trudy Ukr. nauch.-issl. inst. met. no.6:217-229 '60. (MIRA 14:3)

(Steel alloys--Testing)

S/137/62/000/005/088/150
A006/A101

AUTHORS: Navrotskiy, I. V., Tomenko, Yu. S.

TITLE: The effect of elastic-energy storage upon the mechanical properties of pipe steel

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 33, abstract 5I188 ("Sb. tr. Ukr. n.-i. in-t metallov", 1961, no. 7, 245 - 257)

TEXT: The authors studied the mechanical properties of 19 Г (19G), 16 Г 2 ФТ (16G2FT) and 16 Г 2 (16G2) steel pipe specimens with different V content and possessing different elastic-energy stores in tensile and static bending tests. In a non-insulated system, an increase in the elastic-energy storage does not affect the mechanical properties of the metal in uniaxial elongation. Crack formation stress does not depend on the elastic energy storage. The development of cracks decreases with a greater elastic-energy storage. As regards the possibility of crack formation and development in a system with a higher elastic energy storage, type 16G2 steel alloyed with 0.05% V, is preferable to steel 16G2 and to steel with 0.1% V. There are 6 references. T. Fedorova
[Abstracter's note: Complete translation]

Card 1/1

NAVROTSKIY, I.V.; KRIVENKO, L.V.

Effect of banded structure in structural steels on the anisotropy of their mechanical properties and the limit of cold brittleness. Stal' 21 no. 4:350-354 Ap '61. (MIRA 14:4)

1. Ukrainskiy nauchno-issledovatel'skiy institut metallov.
(Steel, Structural--Metallography) (Strength of materials)

25635

S/032/61/027/007/006/012
B110/B203

18.8200

AUTHORS: Tomenko, Yu. S., and Mavrotskiy, I. V.

TITLE: Effect of the reserve in elastic energy on the magnitude of true tensile strength

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 7, 1961, 883-887

TEXT: It is known that the reserve in elastic energy and the flexibility of the loading device affect considerably the destruction kinetics. The authors studied the effect of the reserve in elastic energy on the magnitude S_k of the true tensile strength in the loaded system. Since the deformation range is considered with dropping tensile strength of the sample (after P_{max}), the results obtained should follow the laws of the unloaded system. The authors studied the steels (I) 16Г2ФТ (16G2FT) developed at the Ukrainskiy nauchno-issledovatel'skiy institut metallov (Ukrainian Scientific Research Institute of Metals) (0.16% C; 1.58% Mn; 0.27 Si; 0.09% V; 0.025% Ti; 0.016% S; 0.020% P), and (II) 19Г (19G) (0.23% C; 0.99% Mn; 0.27% Si; 0.040% S; and 0.021% P) after rolling and mechanical

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Effect of the reserve in elastic energy ...

aging (10% elongation and 1-hr tempering at 250°C). For (I), σT=50.9kg/mm^2; σB=70.8kg/mm^2; δ_{10}=15.5%, and ψ_k=44%; for (II), σT=32.8kg/mm^2; σB=50kg/mm^2; δ_{10}=18.8%, and ψ_k=42.3%. Cylindrical octuple samples with 4.5 mm diameter were tested on an ИМ-4Р (IM-4R) machine with different flexibility of the loading device (A) 1, (B) 5.5, and (C) 17.2mm/t. (A) resulted from the initial rigidity of the test machine, (B) and (C) were obtained by introduction of elastic elements. With great flexibility, the rupture load (Fig. 2, P_k) could not be determined with ordinary inertion machines due to the high deformation rate preceding rupture. An increase in the reserve of elastic energy effects an increase of the load P_x of the instantaneous beginning of destruction, as well as a decrease in concentrated deformation between P_x and P_{max}. For determining the true tensile strength, the absolute elongation Δl_k is plotted on the deformation axis (Fig. 2). From here, a straight line is drawn parallel to the

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elastic deformation section, the intersection of which with the perpendicular of P_x gives the load P_k (Fig. 2). According to V. G. Ulegin (Ref. 5: Zavodskaya laboratoriya, XXV, 10 (1959)), S_k increases linearly with increasing reserve of elastic energy, which is explained by a delayed retrogression of the load toward P_x. T. K. Zilova et al. (Zavodskaya laboratoriya, XXV, 1, (1959)) showed that retrogression of the outer load is the slower, the higher the flexibility and the reserve in elastic energy of the system, and the lower the plasticity of the metal. A slower decrease of the outer load as compared with the load on the sample was found oscilloscopically. This difference grows with time up to destruction. With the maximum accumulated reserve in elastic energy, A_y=2-3 kgm, at the end points of the oscillogram, it is 5-15 kg, with A_y =10-12 kgm, it is 90-100 kg. In this connection, P_x tends toward P_{max}, but theoretically it never attains it. Now, the effect of the reserve in elastic energy on the total course of the curve for true tensile strength was to be established. For calculating the sample cross section

Effect of the reserve in elastic energy ...

at every instant after P_{max}, the following is written down: $F_B l_{neck} = (l_{neck}+dl)(F_B-dF)$, where F_B is the sectional area corresponding to d_B (Fig. 5a); F the sectional area corresponding to d (Fig. 5b); $dF=(F_B-F)/2$; and l_{neck} the length of the neck formed under load. According to V. I. Egis (Ref. 6: Zavodskaya laboratoriya, XXV, 12 (1959)), the error is ≤2%, even in steels with ψ_k=65%. $l_{neck}/(l_{neck}+dl) = (F_B-dF)/F_B$. For the cross section (F) of the neck, the following holds at any test time: $F=\left[F_B(1-\lambda_{neck})\right]/(1+\lambda_{neck})$ (3), where $\lambda_{neck}=dl/l_{neck}$ (4). The distances 1-2; 1-3; 1-4 (Fig. 5β) are the increase in length dl of the neck, substituted in (4). F is determined in every point according to (3). The following reduction of sectional area is obtained: $\psi=(F_o-F)/F_o$. The S values are obtained by dividing the load by the area. The curves of Fig. 6 are the true tensile strength of both hot-rolled steels. For curve 1, the test was made without elastic element. It was plotted for the points ϑ by means of a diagram, and for the points ϑ by means of ordinary cross-

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25635
S/032/61/027/007/006/012

Effect of the reserve in elastic energy ..B110/B203

section measurement. The curvature begins with increasing reserve in elastic energy. This can only be explained by an increase in the deformation rate in the section of concentrated deformation after point P_x. The increase, in turn, is connected with the delayed retrogression of the outer load(after P_{max}) and the increase of the reserve in elastic energy. There are 6 figures and 6 Soviet-bloc-references

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy institut metallov (Ukrainian Scientific Research Institute of Metals)

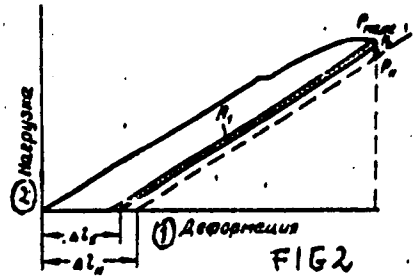

FIG 2

Fig. 2. Elongation diagram with a yieldingness Y of the loading system of 17.2 mm/t. Legend: A_1-deformation work in the section between maximum load and beginning of "instantaneous" destruction (P_x). (1) deformation, (2) load.

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21398

S/032/61/027/012/011/015
B104/B102

18 8200

AUTHORS: Navrotskiy, I. V., and Tomenko Yu. S.

TITLE: Influence of the strain gradient on tensile strength in brittleness tests

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 12, 1961, 1520 - 1522

TEXT: The mean and actual strains in samples of varying diameter occurring in brittleness tests, were studied. Ст 3 (St. 3) steel samples were cooled with liquid oxygen before the test. The hot junctions of two thermocouples were placed in the incision of the samples, and strain gauges were fixed parallel to the horizontal axis, at distances of 2 mm. During the test, strains were recorded by an МПО-2 (MPO-2) oscilloscope. The tests were carried out with a 200-t press at -70°C. It is inferred from graphs of the results that the decrease in the mean tensile strengths is connected with an increase in the sample diameter and with a variation in the strain gradient. For a sample diameter between 175 and 1000 mm tensile stress is between 44 and 11 kg/mm^2. This is attributed to the

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Influence of the strain gradient ...

increase in strain gradient with increasing sample diameter. The tensile stress of 11 kg/mm^2 obtained in brittleness tests is much lower than the creep strength, and is close to the value obtained for previously cracked samples. Strain around the incision was independent of the sample diameter and, consequently, of the strain gradient. F. Fili et al. (Sb. "IV Mezhdunarodnyy neftyanoy kongress" (IV International Petroleum Congress), v. VIII, p. 68. Gostekhizdat (1956)) is mentioned. There are 4 figures and 8 references: 4 Soviet and 4 non-Soviet. The three references to English-language publications read as follows: A. B. Bagsar. Welding J., v. 28, no. 10, p. 484 - S (1949); H. E. Boodberg, H. E. Davis, E. R. Parker, G. E. Troxell. Welding J., v. 27, no. 4, p. 186 - S (1948); N. A. Kahn, E. A. Imbembo. Welding J., v. 27, no. 4, p. 169 - S (1948).

ASSOCIATION: Ukrainskiy institut metallov (Ukrainian Institute of Metals)

Card 2/2

MAKUKHIN, S.I.; NAVROTSKIY, I.V.; KAZARNOVSKIY, D.S.

Investigating the contact strength of steel for railroad rails.
Stal' 22 no.9:838-842 S '62. (MIRA 15:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut metallov.
(Railroads--Rails--Testing)

NAVROTSKIY, I.V.; MAKUKHIN, S.I.

Investigation of the contact strength of rail steel. (MIRA 15:10)
Zav.lab. 28 no.10:1234-1245 '62.

1. Ukrainskiy nauchno-issledovatel'skiy institut metallov.
(Railroads—Rails) (Steel—Testing)

S/032/63/029/001/020/022
B101/B186

AUTHORS: Navrotskiy, I. V., and Tomenko, Yu. S.

TITLE: Effect of the margin of energy on the destruction of steels having different plasticity in impact tearing tests

PERIODICAL: Zavodskaya laboratoriya, v. 29, no. 1, 1963, 87 - 90

TEXT: It is concluded from a paper by T. K. Zilova et al. (Zavodskaya laboratoriya, 25, 1, 1959, 76) that metals of high plasticity show a greater rate of deformation under the same overload than those which have low plasticity. It may therefore happen that the destruction time of a more plastic metal with high rate of deformation becomes equal to the destruction time of a less plastic metal. With great margins of elastic energy, in a series of steel types the sequence of destruction times may be different from the sequence as regards plasticity. The authors studied this problem by making impact tearing tests with a drop weight on cylindrical specimens of low-alloy steels, of 5 mm diameter, with a plasticity modulus of 0.818 - 1.272, a Brinell hardness of 48.5 - 92.0, and different margins of potential energy of the load. With increasing margin of energy, the curve for destruction time versus potential energy was found to

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approach the same value for all specimens, namely about 200 kgm and $0.6 \cdot 10^{3}$ sec. This might result from a [illegible] of plastic steels at high deformation rates. If the test bars were notched, the margin of energy at which steels of different plasticity had the same destruction time decreased to 20-40 kgm. A greater margin of energy increases considerably the sensitivity of strength to notching but does not affect the sensitivity to deformation. There are 5 figures.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy institut metallov (Ukrainian Scientific Research Institute of Metals)

Card 2/2

NAVROTSKIY, I.V.; BAGUZIN, V.I.; TOMENKO Yu.S.

Effect of certain factors on the impact strength of various types of specimens. Zav. lab. 30 no.1:81-85 '64. (MIRA 17:9)

1. Ukrainskiy nauchno-issledovatel'skiy institut metallov.

SANDLER, N.I.; GUREVICH, A.B.; NAVROTSKIY, I.V.; YUNASH, V.M.; TURUBINER, L.M.; KIRZHNER, O.M.

Phase distribution of vanadium, tungsten, and niobium in low-alloy steels. Sbor. trud. UNIIM no.9:349-356 '(.
(MIRA 18:1)

L 1575-65 EPF(n)-2/EWT(m)/EWP(t)/EWP(b) Pc-4 IJP(c) JD/JH

ACCESSION NR: AR5008956 S/0277/65/000/001/0015/0015

SOURCE: Ref. zh. Mashinostroitel'nyye materialy, konstruktsii i raschet detaley mashin, Otd. vyp., Abs. 1.48.53

AUTHOR: Mavrotskiy, I. V.; Tomenko, Yu. S.; Kurmanov, M. I.

TITLE: The effect of minor admixtures of V, W and Nb on the structural strength of manganese steel

CITED SOURCE: Sb. tr. Ukr. n.-i. in-t metallov, vyp. 9, 1964, 357-376

TOPIC TAGS: manganese steel, steel vanadium alloying, tungsten alloying, niobium alloying, steel structural strength, manganese content

TRANSLATION: The following mechanical characteristics were selected as factors governing the structural strength of the steel: crack formation load P_{cr}; load corresponding to tensile strength = P_{max}; tensile sensitivity to stress concentration; time to failure; and strain sensitivity to stress concentration. V, W and Nb had a beneficial effect on the structural strength only in terms of an improved deformation resistance. Sensitivity to stress concentration and the tendency to cold brittleness depended on the content of the alloying element and the content of Mn. Alloying of a steel with a high Mn content by adding

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ACCESSION NR: AR5008956

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0.29% Nb, of a low Mn content steel by adding 0.55% V, produces the best structural properties for materials with σ_b = 70 to 80 kg/mm^2. Optimal properties in materials with σ_b= 60-65 kg/mm^2 are obtained by alloying high manganese steel with 0.08% Nb or 0.05% V. Bibl. with 27 titles. V. Olenicheva

SUB CODE: MM ENCL: 00

Card 2/2 pb

L 41335-65 EWT(m)/EWP(w)/EPF(n)-2/EWA(d)/EPR/T/EWP(t)/EWP(z)/EWP(b)/EWA(c)
IJP(c) JD/JG
ACCESSION NR: AR5000593 S/0137/64/000/008/I044/I044

SOURCE: Ref. zh. Metallurgiya. Sv. t., Abs. 8I266

AUTHOR: Navrotskiy, I. V.; Sandler, N. I.; Kurmanov, M. I.

TITLE: The nature of hardening of low alloy manganese steels by vanadium, niobium and tungsten

CITED SOURCE: Sb. tr. Ukr. n.-i in-t metallov, vyp. 9, 1964, 377-393

TOPIC TAGS: vanadium containing alloy, niobium containing alloy, tungsten containing alloy, manganese containing alloy, manganese steel, metal hardening, steel hardening

TRANSLATION: The physical nature of the hardening of manganese steel alloyed with small additions of vanadium, niobium and tungsten has been investigated. For study of the effect of manganese on the hardening of low alloy steel, two groups of melts were made with identical contents of the alloying elements, but with a different content of manganese: high (1.3-1.5%) and low (0.5-0.7%). In

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addition, melts were made with different manganese contents, but without supplementary alloying. A study was made of the mechanical properties of the steel, the metallographic structure, the change in the width of X-ray interference lines, and the phase distribution of alloying elements in the steel. The hardening of manganese steel, arising from fragmentation during the process of deformation, can be explained on the following basis: 1) microdistortions of the solid solution lattice (with alloying by small additions of vanadium), 2) microstresses in the solid solution lattice and change in the structure (on alloying with tungsten), 3) the effect of the carbide phase, with microstresses and the nature of the distribution of the alloying atoms in the solid solution lattice (on alloying with niobium. 19 literature titles.

SUB CODE: MM ENCL: 00

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BAGUZIN, V.I.; NAVROTSKIY, I.V.

Method for determining the critical temperature of brittleness in impact strength tests. Zav. lab. 31 no.1:100-103 '65. (MIRA 18:3)

1. Ukrainskiy nauchno-issledovatel'skiy institut metallov.

NAVROTSKIY, N.V., mekhanik

Performance of turbobits on heavy clay muds. Neftianik 5 no.5:14-15 My '60. (MIRA 13:6)

1. Shebelinskaya kontora bureniya tresta Kharburneftegaz. (Turbodrills)

14(6) SOV/98-59-6-2/20

AUTHORS: Strokov, G.I., and Navrotskiy, P.A., Engineers

TITLE: A Wide-Seam Cyclopic Stonework

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 6, pp 9-12 (USSR)

ABSTRACT: The method of wide-seam cyclopic stonework was proposed by the authors in collaboration with engineers I.T. Novikov, V.Ya. Sherskov and N.V. Khvoshchinskiy, and was tried out during the construction of the left bank pier of the Kremenchug GES from July to November 1958. Large stone blocks (volume 2 cu m and more) were cut out from a near-by quarry. The already cleared foundation was covered by a layer of vibrated concrete, 20 to 30 cm thick, and the rocks were then placed on it by cranes at 20 cm intervals, 20 cm from the edge of the lining. Intervals between the rocks are necessary so that the concrete which fills the intervals or seams can be thoroughly vibrated. The first layer thus obtained is again covered with con

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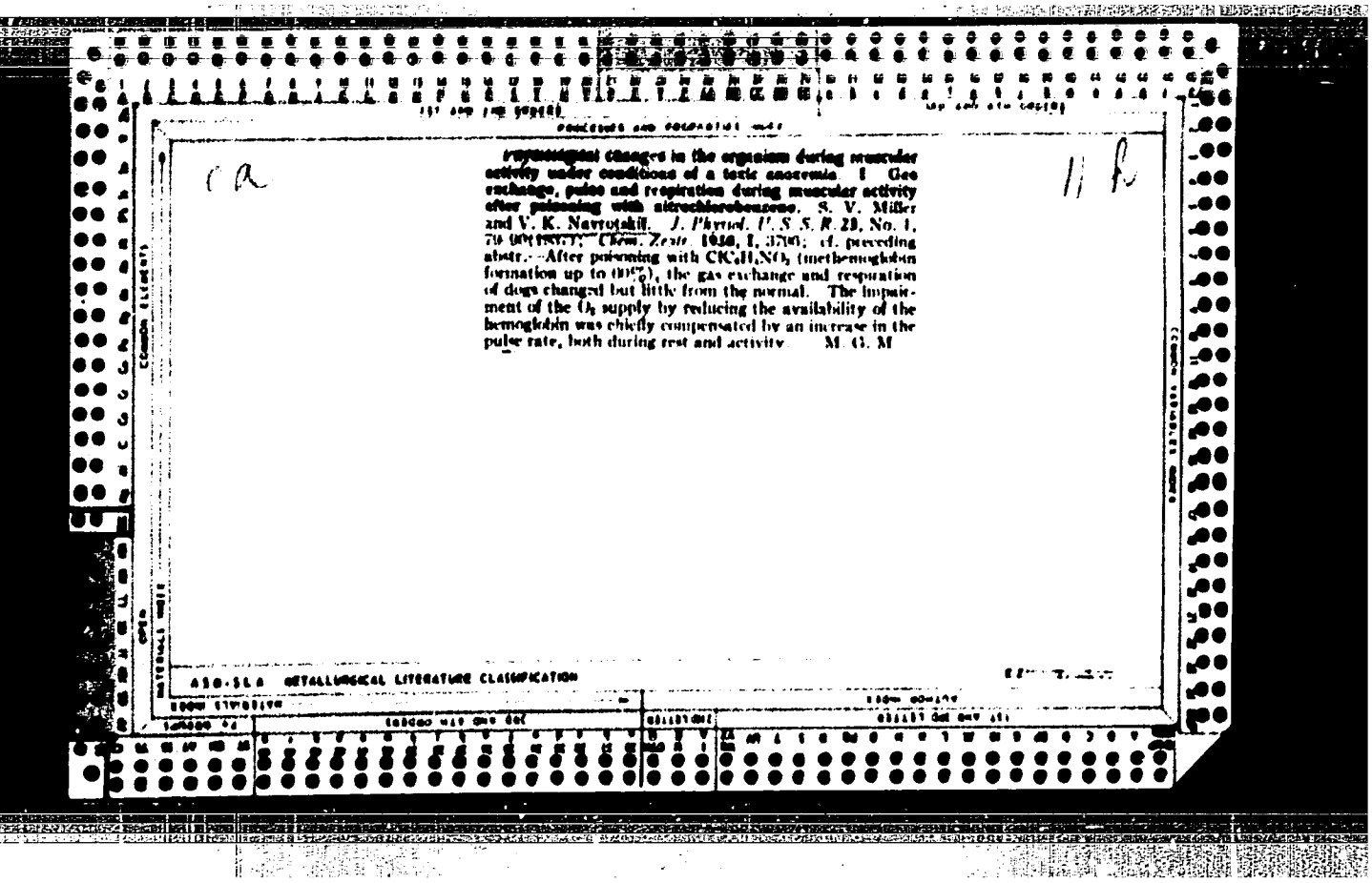
A Wide-Seam Cyclopic Stonework

crete, and the operation is continued until the needed height is reached. The authors describe different tests made to ascertain the strength of such structures. All operations were timed, and it was found that considerable savings in material, time and money could be achieved, provided, a sufficient number of blocks are prepared in advance. There are 4 photographs.

PANADIADI, A.D., kand. sel'khoz. nauk; VOLOVSKIY, S.P., kand. sel'khoz. nauk; NAVROTSKIY, S.K., kand. sel'khoz. nauk; PANADIADI, Ye.A., inzh.; SPIRIDONOV, A.L., kand. sel'-khoz. nauk; TIMOFEYEV, A.F., kand. sel'khoz. nauk; LAPIDOVSKIY, K.I., red.

[Agricultural melioration] Sel'skokhoziaistvennaia melioratsiia. Moskva, Kolos, 1965. 502 p. (MIRA 18:7)



Physiological changes in the organism during muscular activity under conditions of a toxic anoxemia. I. Gas exchange, pulse and respiration during muscular activity after poisoning with nitrochlorobenzene. S. V. Miller and V. K. Navrotskii. *J. Physiol. U. S. S. R.* 23, No. 1, 70 (1937); *Chem. Zentr.* 1938, I, 3706; cf. preceding abstr.—After poisoning with $CC_6H_4NO_2$ (methemoglobin formation up to 80%), the gas exchange and respiration of dogs changed but little from the normal. The impairment of the O_2 supply by reducing the availability of the hemoglobin was chiefly compensated by an increase in the pulse rate, both during rest and activity. M. G. M

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION

NAVROTZKII, V. K.

USSR/Medicine - Histology. May/Jun 1947
Chemistry - Aniline

"The Distribution of Aniline in the Animal Tissues," V. K. Navrotzkiy, I. M. Orlik, 3 pp

"Farmakol i Toksikol" Vol X, No 3

Results of a study of the distribution of aniline as representative of a large group of amino and nitro derivatives of benzol, injected into the femoral vein of dogs. It is concluded, among other points, that the aniline content in the blood at a later stage of the poisoning is an average index of the aniline content in the whole organism.

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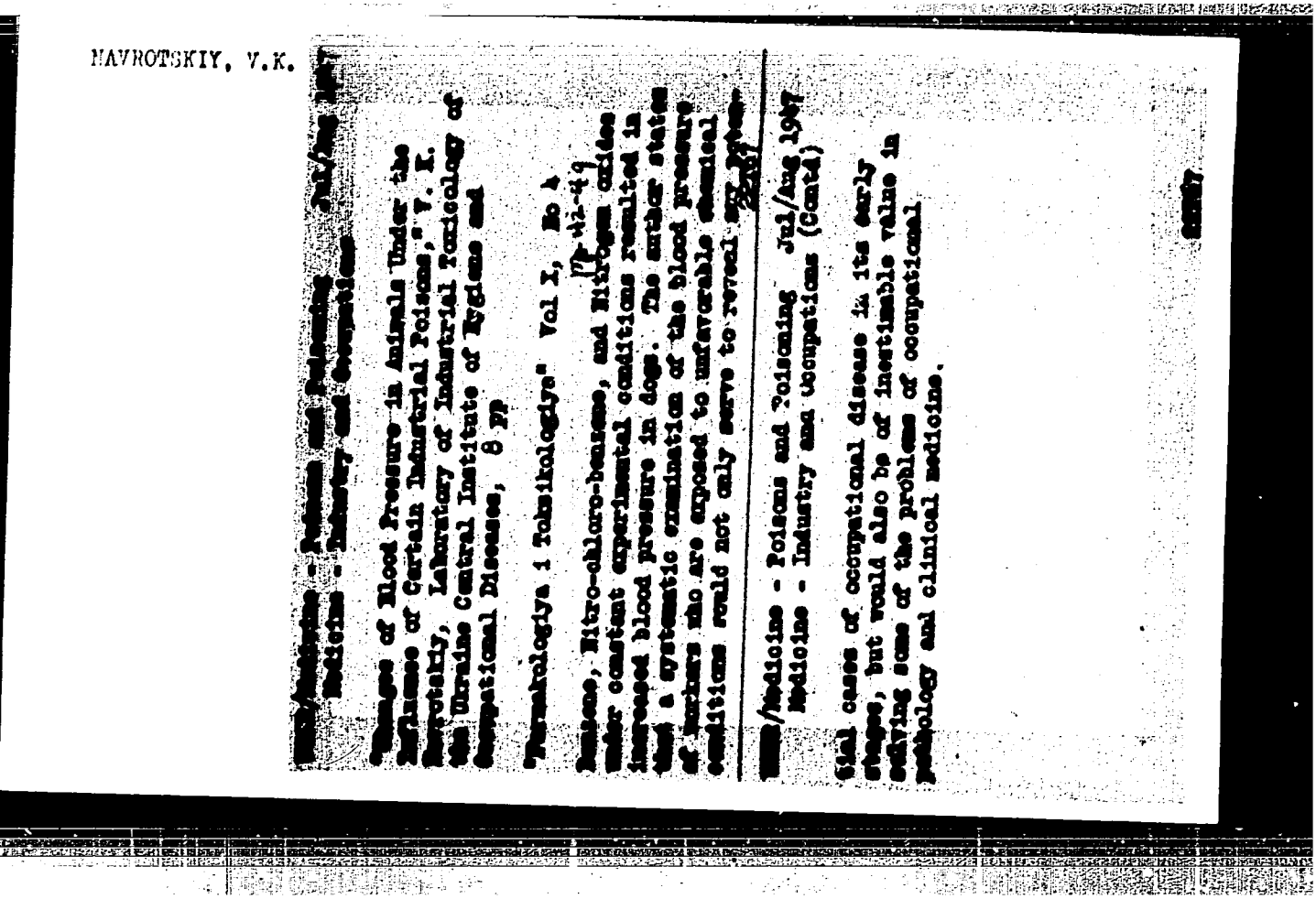
NAVROTSKIY, V.K.



Changes of Blood Pressure in Animals Under the Influence of Certain Industrial Poisons," V. K. Navrotskiy, Laboratory of Industrial Toxicology of the Ukraine Central Institute of Hygiene and Occupational Diseases, 8 pp

"Farmakologiya i Toksikologiya" Vol X, No 4 [illegible]-49

Nitro-chloro-benzene, and Nitrogen oxides under constant experimental conditions resulted in increased blood pressure in dogs. The author states that a systematic combination of the blood pressure of workers who are exposed to unfavorable chemical conditions could not only serve to reveal [illegible]

/Medicine - Poisons and Poisoning Jul/Aug 1947
Medicine - Industry and Occupations (Contd)

[illegible] cases of occupational disease in its early stages, but would also be of inestimable value in solving some of the problems of occupational pathology and clinical medicine.

NAVROTSKIY, V. K.

25806 Navrotskiy, V. K. Nauchno - Issledovatel'skiye Problemy [illegible] Gigiene Truda V Ugol'noy Promyshlennosti. Gigiena I Sanitariya 19[illegible], No. 7, S. 27-30

SO: Letopis' Zhurnal Statey, No. 3[illegible], Moscow, 1948

[APPR]OVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP[illegible]

NAVROTSKIY, V. K.

25806 Navrotskiy, V. K. Nauchno - Issledovatel'skiye Problery Po Gigiene Truda V Ugol'noy Promyshlennosti. Gigiena I Sanitariya 1948, No. 7, S. 27-30

SO: Letopis' Zhurnal Statey, No. 30, Moscow, 1948

NAVROTSKIY, V.K.

37551 Voprosy gigiyeny truda v ugol'noypromyshlennosti v poslevoyennoye vremya, V SB:XII vsesoyuz. S'yezd gigiyenistov, epidemiologov, mikrobiologov i infektsi Stov. T.I.M.,1949, 134-39

SO: Letopis'Zhurnal'nykh Statey, Vol. 37,1949

NAVROTSKIY, V. K.

Navrotskiy, V. K. "The basic tasks of labor hygiene in the industry of the Ukraine in the immediate future," Vracheb. delo, 1949, No. 3, paragraphs 253-58.

SO: U-3736, 21 May 53, (Letopis 'Zhurnal 'nykh Statey, No. 18, 1949).

NAVROTSKIY, V.K.

Position and problems of hygiene in the light of I.P.Pavlov's physiologic teaching. Gig.sanit.,Moskva No.2:3-8 Feb 51. (CLML 20:6)

1. Professor, Corresponding Member of the Academy of Medical Sciences USSR.

NAVROTSKIY, PROF V. K.

PA 193T67

USSR/Medicine - Toxicology Aug 51

"Effect of Industrial Poisons on the Organism of Animals at High Temperatures," Prof V. K. Navrotskiy, Corr Mem. Acad Med Sci USSR. S. M. Dubashinskaya, Ukrainian Cen Sci Res Inst of Labor Hygiene and Occupational Diseases. Khar'kov

"Gig i San" No 8, pp 22-28

By exposing white mice, white rats, dogs, and rabbits to the effects of gasoline, benzene, aniline, or carbon monoxide at 20, 25, 30, 35,

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USSR/Medicine - Toxicology (Contd) Aug 51

40, 45, and 50° found that the lethality of animals due to the effect of the poison is sharply increased at some temp above 35°. When the animals have been adapted to high temps, the lethality at these temps from poison is reduced.

193T67

NAVROTSKIY, V.K.

The area of industrial toxicology as an aspect of Pavlov neurology. Gigiena i Sanit. '53, No.4, 3-11. (MLRA 6:4)
(CA 47 no.21:11536 '53)

A detailed discussion on the varied effects of commercial poisons on the central nervous system. Describes experiments on animals. Lists several laboratories concerned with toxicology. 261T44

Translation M-751, 30 Aug 55