

MASURKA, Vladimir; NAVRATIL, Pavel; CERNOCH, Zdenek; ERBEN, Josef;  
KVASNICKA, Jiri

Surgical treatment of renal hypertension. Sborn. ved. prac.  
lek. fak. Karlov. Univ. 8 no.2:269-275 '65.

1. II. chirurgicka klinika (prednosta: prof. MUDr. J. Pro-  
chazka, DrSc.); Urologicka klinika (prednosta: doc. MUDr.  
J. Svab, CSc.); Radiologicka klinika (prednosta: prof.  
MUDr. J. Bastecky, DrSc.) a I. interni klinika (prednosta:  
prof. MUDr. F. Cernik) Lekarske fakulty Karlovy University  
v Hradci Kralove.

Navratil, R.

Navratil, R. Aluminum in building, p. 448.

Vol. 4, no. 12, Dec. 1956

POZEMNI STAVBY

TECHNOLOGY

Czechoslovakia

So. East European Accessions, Vol. 6, No. 5, May 1957

HAVRATIL, Stanislav, ins.

Mathematical modeling of transient phenomena in synchronous machines by means of dynamic characteristics. El tech obser 52 no.5:262-264 My '63.

NAVRATIL, Stanislav, inz.

Contribution to information on the virus mosaic disease of poplars. Les cas 9 no. 12: 1125-1134 D '63.

1. Vyzkumny ustav lesniho hospodarstvi a myslivosti, Zbraslav-Strnady, Vyzkumna stanice Kostelany.

VEZNIK, Zdenek, MVDr. CSc.; LOJDA, Ladislav, MVDr.; NAVRATIL, Stanislav,  
MVDr.

Evaluation of some physicochemical criteria of the cervical mucus  
in breeding cows. Veter medicina 9 no.5:321-328 0 '64.

1. Department of Physiology and Pathology of Domestic Animal  
Breeding of the Research Institute of Veterinary Medicine,  
Brno-Medlanky. Head of the Department : [MVDr. CSc.] Zdenek  
Veznik. Submitted February 28, 1964.

NAVRATIL, Stanislav, inz.; SUVA, Slavomir, inz., kandidat technickych ved

Model of the control circuit of a synchronous generator.  
El tech obzor 52 no.10:533-537 0 '63.

1. Statni vyzkumny ustav silnoproute elektrotechniky.

NAVRATIL, Stanislav, inz.; SULC, Zdenek, inz.

Modeling a synchronous alternator by means of analog computers  
and reactance models. El tech obzor 53 no.7:392-393 J1'64

NAVRATIL, Vilem

Casting high-speed steel instruments in sand molds made by higher pressure squeeze molding. Slevarenstvi 10 no.11:421-425 N '62.

1. Naradi, n.p., zavod Hulin.



NAVRATIL, VLADIMIR

20
100
 Vladimir Navratil in the curing of skins. Vladimir  
 Pektor and Vladimir Navratil (Leningrad, Allied Types  
 Research Inst., Gorkovskoy, Czech.). *Kozh. i Shk. 149-51*  
 (1955).—Calfskins were treated with 25, 50, and 75% of  
 HCl contg. 2% Na<sub>2</sub>SO<sub>4</sub> (I). I prevents the appearance of  
 red, violet, and hercoid salt stains. More than 25% but  
 less than 55% of HCl may be used. Calfskins, cured for  
 30, 40, and 150 days were examined. The yield and quality  
 of leathers are not impaired. The tenacity of I was studied  
 (cf. C.A. 49, 30103). A gelatin made from skins cured with  
 I contains 150-200 p.p.m. P; from normal skins 25-200  
 p.p.m. P, the chief source of P being the CaO used in liming,  
 which contains up to 200 p.p.m. P. L. Masov.

NAVRATILLOVA, A.

"Rehabilitation of blood circulation after scarlet fever." p. 253. (Časopis Lékařů Českých.  
Vol. 93, no. 9, Feb. 1954. Praha.)

SO: Monthly List of East European Accessions, Vol. 3, no. 6, Library of Cong., ~~June~~ 1954  
Uncl.

NAVRA TILOVA, A.

Our experience with the conservative treatment of pulmonary abscesses  
by endobronchial administration of antibiotics. Cas. lek. cesk. 97 no.35:  
1106-1113 29 Aug 58.

1. Vnitřní oddělení Cs. nemocnice v KLDR.  
(LUNGS, abscess  
ther., antibiotics, endobronchial admin. (Cz))  
(ANTIBIOTICS, ther. use  
abscess of lung, endobronchial admin. (Cz))

T  
CZECHOSLOVAKIA

NAVRAŤILOVA, A., MD; SEDLAK, B., Engineer

1. Second Internal Medicine Clinic of Purkyne University (II. vnitřní kliniky University J.E.P.), Brno; 2. Laboratory of Pathophysiology of the Circulatory System Connected to the Second Internal Medicine Clinic (Laborator pathofyziologie krevního oběhu při II vnitřní klinice), Brno

Prague, Vnitřní lékařství, No 11, 1963, pp 1065-1070

"Serotonin and Urinary Excretion of 5-Hydroxy-indol-acetic Acid in Some Diseases."

NAVRA TILOVA, H. /

CZECHOSLOVAKIA

SOUSEK, O., MD; NAVRA TILOVA, H., MD

1. Ward of Infectious Diseases of the Hospital (Oddeleni infekcnich zloutenek nemocnice), Motol; 2. Chair of School Hygiene of the Medical Faculty of Hygiene of Charles University (Katedra skolni hygieny lekarske fakulty hygienicke KU), Prague (for all)

Prague, Prakticky lekar, No 10, 1963, pp 369-370

"The Diagnosis of Acute Stage of Hepatitis Infection on Country Calls."

ZAVAZAL, Vladimir; LAVICKA, Josef; stasticke hodnoceni MALY, Vladimir;  
technicka spoluprace NAVRATILOVA, Jindra

Serological diagnosis of progressive arthritis. Cas. lek. cesk. 101  
no.35:1049-1055 31 Ag '62.

1. Ustav pro lekarskou mikrobiologii a epidemiologii lekarske fakulty  
KU v Plzni, prednosta doc. dr. J. Zahradnický. Klinika chorob vnitřních  
lekarske fakulty KU v Plzni, prednosta prof. dr. K. Bobek.  
(ARTHRITIS RHEUMATOID)

NAVRATILOVA, Sarka.

First stage of the reconstruction of the Beroun railroad station is finished. Zel dop tech 11 no. 12: 364-365 '63.

KHYUGEL'LAND, ADEL'KHAYD [Hügelland, Adelheid]; NAVRATSEL', MONIKA  
[Navratsel, Monica]

Cultural work in a trade-union group. Sov. profsoiuzy 17  
no.18:41 S '61. (MIRA 14:8)

1. Kul'torg profsoyuznoy gruppy brigady sotsialisticheskogo  
truda "Anna Frank 1" na narodnom predpriyatii - Berlinskom  
elektrolampovom zavode (for Navratsel').  
(Socialist competition)  
(Berlin--Trade unions)



NAVRAYEV, A. T.

"A Study of Special Showers' of Cosmic Rays with the Aid of a Microscope,"  
Dok. AN, 68, No. 2, 1949. Mbr. Physics Inst. im. P. N. Lebedev, Dept.  
Physico-Math. Sci., Acad. Sci., -c1949-.

**NAVRASHIN, P.**

"Modern methods of cleaning tanks of oil tankers" by G. Libes,  
B. Sushkov. Reviewed by P. Navrashin. Mor. flot 19 no. 4:44  
Ap '59. (MIRA 12:6)

1. Starshiy inzhener Tsentral'nogo proyekt'nogo byuro - 2.  
(Tank vessels - Cleaning)  
(Libes, G.) (Sushkov, B.)

Country : USSR  
 Category : General Biology. B  
 Individual Development. Embryonic Development.  
 Abs. Jour : RXBiol., No. 2, 1959, No. 5069  
 Author : Pavrinakaya, L. P.  
 Institut. : -  
 Title : Development of Motor Nerve Terminals in the  
 Skeletal Musculature of an Infant.  
 Orig. Pub. : Vsb.: Probl. funktsion. morfol. i vizual. in  
 apparata. L. Meagis, 1956, 131-134.  
 Abstract : The gastrocnemius of 30 infants from birth to  
 1 year & months was examined. The muscle  
 fibers in a new form are narrow and the  
 lateral striation is hardly noticeable. The  
 affluent thin axial cylinders are thickened  
 at the end. Here the sarcoplasm is of a  
 darker color and 2-3 nuclei are arranged  
 in it. The muscle fibers of a three months old  
 infant are thicker, the lateral striation is

Card: 1/3

COUNTRY : USSR  
CATEGORY :  
AES. JOUR. : RZhBiol., No. 1959, No.  
AUTHOR :  
INST. :  
TITLE :  
ORIG. PUB. :  
ABSTRACT : more clearly defined. The terminal dilations of the axial cylinders are oval or orbicular and present a fibrillar structure; sometimes they are sickle-shaped, a fact which certifies the beginning of the terminal branch formation. At 5 months 2-4 branches and granulation of surrounding sarcoplasm may be distinguished in some of the terminals. The muscle fibers in one year old children are dilated and have well defined transverse and longitudinal striation. The

CARD: 2/3

COUNTRY :  
CATEGORY :

ABS. JOUR. : RZhBiol., No. 1959, No.

AUTHOR :  
INST. :  
TITLE :

ORIG. PUB. :

ABSTRACT : motor nerve terminals differ from the end plate of an adult by smaller dimensions as well as by a smaller number of trenches and nuclei; the latter are arranged in the form of a crown within the dark granular protoplasm. -- I. I. Gutner

CARD:

3/3

-23-

Country : USSR  
Category : CULTIVATED PLANTS, FRUITS, Berries.

Abstr. Jour. : REF ZHUR-BIOL., 21, 1958, NO-96162

Author : Navrodskiy, S.  
Instit. : ---  
Title : A New Method of Planting Grapes

Orig. Pub. : Mashinno-trakt. stantsiya, 1957, No.3, 30-31

Abstract : The All-Union Anti-Phylloxera Station has suggested a new method of mechanized grape planting: the planting holes are made with a hydraulic bore by means of which a stream of water moistens the soil to the depth of the planting. Seedlings are dropped into the holes (their adaptability is at least 95%). The average productive output of the aggregate system (gasoline drive with tank and 3 hydraulic bores) was 800-900 bushes in one hour.--  
--Ye.T. Zhukovskaya

Card: 1/1

NAVROTSKAYA, A.M.; DROBOTOVA, Ye.L.; TAMBOVTSEVA, A.R.; SERGEYEVA, A.F.

Efficient utilization of hops in the brewing industry.

Izv. vys. ucheb. zav.; pishch. tekhn. no.4:80-85 '63.

(MIRA 16:11)

1. Zhigulevskiy pivovarennyy kombinat, issledovatel'skaya laboratoriya.

NAVROTSKAYA, A. M.

Efficient utilization of hops in brewing. *Izv. vys. ucheb. zav.;*  
*pishch. tekhn. no. 2:65-69 '64.* (MIRA 17:5)

1. Zhigulevskiy pivovarennyy kombinat, issledovatel'skaya laboratoriya.



**MODEL', A.A., NAVROTSKAYA, N.S.**

**Electrocardiographic changes in chronic hydrogen sulfide poisoning;  
Vrach. delo no.78755 JI'58 (MIRA 11:9)**

- 1. Kiyevskiy institut gigiyeny truda i professional'nykh zabolevaniy.  
(HYDROGEN SULFIDE TOXICOLOGY)  
(ELECTROCARDIOGRAPHY)**

LUCHENOK, O.S., dotsent; NAVROTSKAYA, F.R., vrach

Successful Chaoul therapy in rhinophyma. Zdrav. Belor. 5 no.11:57  
N '59. (MIRA 13:3)

1. Iz kafedry rentgenologii i radiologii (zaveduyushchiy O.S. Luchenok)  
Minskogo meditsinskogo inatituta i Respublikanskogo onkologicheskogo  
dispansera (glavnyy vrach T.T. Foddubnaya).  
(NOSE--DISEASES) (X RAYS--THERAPEUTIC USE)

KULIK, Valeriy Timofeyevich; IVAKHNENKO, A.G., prof., ~~rets~~ent; IVANOV, V.V., kand. fiz.-matem. nauk, red.; NAVROTSKAYA, L.B., inzh., red.; STARODUB, T.A., tekhn. red.; MATUSEVICH, S.M., tekhn. red.

[Principles of algorithmation and construction of control machines] Printsipy algoritimizatsii i postroeniia upravliaiushchikh mashin. Kiev, Gostekhizdat USSR, 1963. 309 p. (MIRA 17:2)

1. Chlen-korrespondent AN Ukr.SSR (for Ivakhnenko)

*NAVROTSKAYA, L.Ye.*

CHIKALO, I.I.; NAVROTSKAYA, L.Ye.

Rapidity of protein renewal in eye tissue. Oft.shur. 12 no.2:71-75  
'57. (MIRA 10:11)

1. Iz Ukrainskogo nauchno-issledovatel'skogo eksperimental'nogo  
institute glasnykh bolezney i tkanevoy terapii imeni akad. V.P.  
Filatova (dir. - prof. N.A.Pachkovskaya)  
(EYE) (PROTEIN METABOLISM)

CHIKALO, I.I., starshiy nauchnyy sotrudnik; NAVROTSKAYA, L.Ye., mladshiy  
nauchnyy sotrudnik

Influence of the implantation of heterogenous skin on the con-  
dition of proteins in certain tissues of the rabbit. Oft.shur.  
13 no.8:480-482 '58. (MIRA 12:2)

1. Iz Ukrainskogo nauchno-issledovatel'skogo eksperimental'nogo  
instituta glasnykh bolezney i tkanevoy terapii im. akad. V.P.  
Filatova (direktor - prof. N.A. Puchkovskaya).

(TISSUE EXTRACTS  
(PROTEIN METABOLISM)

CHIKALO, I.I., kand.biologicheskikh nauk; NAVROTSKAYA, L.Ye., nauchnyy  
sotrudnik

Possibility of the proteolytic action of the aqueous humor on the  
cornea in penetrating keratoplasty and penetrating wounds. Oft.  
zhur. 15 no.5:259-264 '60. (MIRA 13:9)

1. Ukrainskogo nauchno-issledovatel'skogo eksperimental'nogo instituta  
glaznykh bolezney i tkanevoy terapii im.akademika V.P. Filatova  
(director - prof. N.A. Puchkovskaya).  
(CORNEA—TRANSPLANTATION)  
(PROTEINASES—PHYSIOLOGICAL EFFECT)

NAVROTSKAYA, N.

M

Country : USSR  
Category: Cultivated Plants. Grains.

Abstr Jour: RZhBiol., No 22, 1958, No 100251

Author : Navrotskaya, N.  
Inst : Zakarpatskaya Oblast' State Agricultural  
Experimental Station.  
Title : Corn Breeding and Seed Growing.

Orig Pub: Sb. nauchn. tr. Zakarpatsk. obl. gos. s.-kh.  
opytn. st., 1950-1955 (1957), 1, 47-57.

Abstracts: Zakarpatskaya Experiment Station has been engaged in corn breeding since 1947; it has collected and studied a large collection of local specimens, which is being utilized for the separation of strains for the purpose of creating valuable double cross hybrids.

Card : 1/2

M-32

**NAVROTSKAYA, R.F.**

Immediate and late results of chaoul therapy in skin cancer. Zdrav.  
Belor. 5 no. 3:43-44 Mr '59. (NIRA 12:7)

1. Respublikanskiy onkologicheskiy dispanser (glavnyy vrach T. T.  
Poddubnaya).

(SKIN--CANCER) (X RAYS--PHYSIOLOGICAL EFFECT )



LUCHENOK, O.S., dotsent; NAVROTSKAYA, R.F.

Successful Chaul. therapy in rhinophyma. Vest. rent. 1 rad. 35  
no. 4:72-73 J1-Ag '60. (MIRA 14:2)

1. Is kafedry rentgenologii i radiologii (zav. - dotsent O.S. Luchenok) Minskogo meditsinskogo instituta (direktor I.M. Stel'mashonok) i Respublikanskogo onkologicheskogo dispansera (glavnyy vrach T.T. Poddubnaya).  
(ROFACEA) (X RAYS—THERAPEUTIC USE)

REF ID: A6521-55 EWT(m)/EPR/ENT(t)/ESP(b) PS-4 IJP(c) JD/JG/GS  
ACCESSION NR: AT5008403 S/0000/64/000/000/0038/0043

AUTHOR: Zabolotskiy, T. V.; Navrotskaya, V. A.

TITLE: Reactions of nitrilotriacetic acid with indium, gallium and aluminum ions

SOURCE: AN SSSR. Sibirskoye otdeleniye. Khimiko-metallurgicheskiy institut. Khimicheskiy analiz tsvetnykh i redkikh metallov (Chemical analysis of nonferrous and rare metals). Novosibirsk, Redizdat Sib. otd. AN SSSR, 1964, 38-43

TOPIC TAGS: indium, gallium, aluminum; nitrilotriacetic acid, titrimetry, chemical analysis

ABSTRACT: The interaction of nitrilotriacetic acid (I) with indium, gallium and aluminum were studied by measuring the specific conductance and pH of aqueous solutions of isomolar series and of series with a constant concentration of ions of the investigated metal. The electrical conductivity was measured with a bridge circuit using a frequency of 800 cps. Earphones were used as the null detector. It was found that all three metals form 1:1 complexes which are substitution products of two or three hydrogen atoms in nitrilotriacetic acid molecules. Complexes of more elaborate composition were not found. It was shown that direct chelometric titration of indium with nitrilotriacetic acid is possible in the presence of aluminum.

Card 1/2

L 41621-55  
ACCESSION NR: AT5000403

using xylene orange as an indicator. Orig. art. has: 4 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 01Sep64

ENCL: 00

SUB CODE: GC,MM

NO REF SOV: 004

OTHER: 003

Card 2/2

COUNTRY USSR  
CATEGORY CULTIVATED PLANTS. General Problems.  
ABS. JOUR. REF ZHUR - BIOLOGIYA, NO. 4, 1959, No. 15546  
AUTHOR : Navrotskaya, V.S.  
INST : Odessa Hydrometeorological Inst.  
TITLE : Application of S.A. Verigo's Formula in the  
Climatological Study of Drought.

ORIG. PUB. : Tr. Odessk. gidrometeorol. in-ta, 1957, vyp.  
11, 121-129

ABSTRACT : A formula is given for determining the water losses from the tilled layer during the rainfall-less period for the phases: sprouts - formation of leaves and formation of ears and flowers. Knowing the initial reserves of productive moisture, the permissible duration of drought can be calculated by the indicated formula.

CARD: 1/1

~~NAVROTSKAYA, V.S.~~

Rainless and humid periods in the steppe of the Black Sea region.  
Trudy OOMI no.11:131-142 '57. (MIRA 11:3)  
(Black Sea region--Climate)

3(7)

PHASE I BOOK EXPLOITATION

SOV/2384

Konferentsiya po agrometeorologii i agroklimatologii Ukrainy SSR  
 Materialy konferentsii (Material of the Conference on Agricultural  
 Meteorology and Climatology of the Ukrainian SSR). Leningrad,  
 Gidrometeoizdat, 1958. 247 p. Irregularly illustrated. 700 copies  
 printed.

Sponsoring Agency: USSR. Glavnoye upravleniye gidrometeorologicheskoy sluzhby Ukrainy SSR. Ministerstvo sel'skogo khozyaystva, serkulyatsii i zhivotnovodstva, skhiy gidrometeorologicheskoy instituta, and Ukrainskaya akademiya sel'skhozoyaystvovaniya nauk.

Rep. Ed.: G.P. Pribot'ko; Ed.: V.D. Pivovarovskaya; Tech. Ed.: B.L. Bevalina.

FRONTIS: This book is intended for agriculturists, agronomists, zoologists, and instructors in related vases.

CONTENTS: This collection of articles deals with problems in agricultural meteorology in the Ukraine. Among the topics discussed are: wintering, planting time for winter crops, corn cultivation, potato degeneration, moisture supply, and adverse weather factors. References accompany individual articles.

Material of the Conference (Cont.)	SOV/2384
Sugar Beets) Soil Water Conditions in Beet Crop Rotation	111
Vlasovskiy, V.V. (Odessa Agronomy Station) Moisture Reserves for Winter Wheat in the Southern Odessa Region and the Importance of the Moisture Providing Irrigation	117
Rekhtman, I.Ya. (Ukrainian Scientific Research Hydromet. Institute) Climatic Study of Subovaya (Dry Winds) in the Ukraine	128
Rozina, Ya. S. (Ukrainian Scientific Research Hydromet. Institute) Rainless Periods in the Ukraine	141
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Suschevskaya, B.B. (Professor, Ukrainian Scientific Research Hydromet. Institute) climatic Conditions of Corn Cultivation in the Ukraine	214
Suschevskiy, A.I. (All-Union Institute of Crop Science) The Effect of Climatic Conditions on the Degeneration of Potatoes and the Appearance of Phytophthora (Parasitic Fungi)	230
A suggestion of the Scientific Methodology Council of the USSR Department of Agriculture	243

Ukrainian Scientific Research Institute

**KALININA, I.I.; NAVROTSKAYA, V.S.**

Some data on effective precipitation in steppes of the Black  
Sea region. Trudy OGMi no.16:31-41 '58. (MIRA 12:9)  
(Black Sea region--Precipitation (Meteorology))  
(Crops and climate)

ZUMBADZE, D.N.; MAVROTSKAYA, V.S.

Comparability of the results of studies on dry winds obtained  
on the basis of different criteria. Trudy OOMI no.19:31-34  
'59. (MIRA 13:5)

(Winds)



NAVROTSKAYA, V.S.; TISHCHENKO, I.M.

Arid periods in White Russia during 1950-1952 and 1954.  
Trudy OGMI no.19:35-39 '59. (MIRA 13:5)  
(White Russia--Droughts)

GNEZDILOVA, Ye.I.; DMITRENKO, I.I.; LARIONOVA, V.S.; NAVROTSKAYA, V.S.

Characteristics of the temperature regime during dry periods in  
the steppe of the Black Sea region. Trudy OGMI no.21:21-26 '60.  
(MIRA 14:10)

(Black Sea region--Droughts)

ACC NR: AR022460 SOURCE CODE: UR/0169/66/000/003/B043/B043

AUTHOR: Zaslav'saya, F. V.; Navrotskaya, V. S.; Tolmacheva, I. A.; Medvedev, G.A.

TITLE: Aerological patterns of foehns as observed in the Rion Valley OGMI expedition during September-October of 1962

SOURCE: Ref. zh. Geofiz, Abs. 3B278

REF SOURCE: Meteorol., klimatol. i gidrol. Mezhd. nauchn., vyp. 1, 1965, 17-22

TOPIC TAGS: weather forecasting, weather station, meteorologic observation

TRANSLATION: An account is given of the results of investigation of the wind and temperature patterns in the atmosphere, which was conducted by members of this expedition. The purpose of the expedition was to investigate the foehn winds on the Surah Pass which rises to 1242 m above sea level near the Mta-Sabueti station. The investigation lasted from September 19 to October 12. Supplementary data were obtained from Kutaisi, Tbilissi and other points in the TransCaucasus. At Kutaisi the easterly wind, having a velocity of 5 m/sec, lowers the relative humidity to 50% in some 80% of the cases. Such wind could be classed as foehn. However, the foehn characteristics are seldom observed and its velocity is usually less than 5 m/sec. The relationship between the temperature and the air humidity on one hand and wind velocity on the other was found to be complex. As the wind velocity increases, the relative humidity decreases and

UDC: 551.555.3(479.2)

Card 1/2

ACC NR: AR5022460

the temperature of the air rises. The foehn effect is sharper at nighttime, when the directions of the foehn and the mountain wind may coincide. In the daytime, a valley wind might develop in the Rio Valley in a direction opposite to that of the foehn. As a result, the velocity of wind from the east is increased and that of the foehn, weakened. On the days of the foehn wind over the Surah range, an inversion or an isotherm may develop. The wind from the east may be felt as far away as 2 km. Occasionally at the Kutaisi Pass, the winds from the east were stronger than at the Surah Pass. N. Davydov.

SUB CODE: 04

Card 2/2

NAVROTSKAYA, V.V.

Comparative evaluation of synthetic materials used in plastic surgery on the wall of the esophagus. Khirurgiia 39 no.5:82-87 My '63. (MIRA 17:1)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii (zav. - chlen-korrespondent AMN SSSR prof. V.V. Kovanov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova.

ROZHDESTVENSKIY, L.M., student VI kursa, NAVROTSKAYA, V.V., studentka III kursa  
LEBEDEVA, E.D., studentka III kursa.

Experimental surgery in providing a plastic tube for the trachea.  
Vest.oto.-rin. 20 no.3:105 My-Je '58 (MIRA 11:6)

1. Iz kafedry operativnoy khirurgii i topograficheskoy anatomii  
(zav. - prof. V.V. Kovanov) I Moskovskogo meditsinskogo instituta  
imeni I.M. Sechenova.  
(TRACHEA--SURGERY)

NAVROTSKAYA, V.V.

Formation of an experimental model of esophageal diverticulum  
and methods of its correction. Trudy 1-go MI 42:263-272 '65.  
(MIRA 19:2)

1. Kafedra operativnoy khirurgii i topograficheskoy anatomii  
1-go Moskovskogo ordena Lenina meditsinskogo instituta imeni  
Sechenova.

ACC NR: AP6008284

SOURCE CODE: UR/0109/65/011/003/0471/0476

AUTHOR: Lashenkov, V. M.; Il'in, V. S.; Navrotskaya, Yu. N.

ORG: none

TITLE: Calculating natural frequencies of axially-symmetrical resonators and critical wavelengths of regular waveguides

SOURCE: Radiotekhnika i elektronika, v. 11, no. 3, 1966, 471-476

TOPIC TAGS: resonator, waveguide

ABSTRACT: The field structure in some periodic waveguides is such that description of the delay system, with  $\varphi = 0$  and  $\varphi = \pi$ , can be reduced to consideration of the resonators whose configuration is determined by the geometry of one section of the delay system. Hence, the delay-system dispersion equation can be used for calculating the natural frequencies of such resonators. In an extreme case, when the radii of the delay system approximate infinity, the axially-symmetrical resonator "degenerates" into a shaped regular waveguide. Authors' formulas developed earlier (Rad. i elektronika, 1965, v. 10, no. 2, 269) for axially-symmetrical delay systems are adopted for single-ridge waveguides; this method is illustrated by a calculation of fundamental  $H_E$ -mode in such a waveguide. Orig. art. has: 3 figures, 35 formulas, and 1 table.

SUB CODE: 09 / SUBM DATE: 18Nov64 / ORIG REF: 004 / OTH REF:000

Card 1/1

UDC: 621.372.834.001.24



NAVROISKIY, A.K.

Unit for the preparation of epoxide compounds.  
Plast.massy no.10:63-64 '62. (MIRA 15:11)  
(Plastics industry--Equipment and supplies)  
(Epoxy compounds)

NAVROTSKIY, B.S., kand.tekhn.nauk

Effect of basic technological factors on cutting forces in machining  
steel castings on lathes with various feeds. Mashinostroenie no.2:  
29-31 Mr-Ap '62. (MIRA 15:4)

1. Kiyevskiy politekhnicheskii institut.  
(Turning)

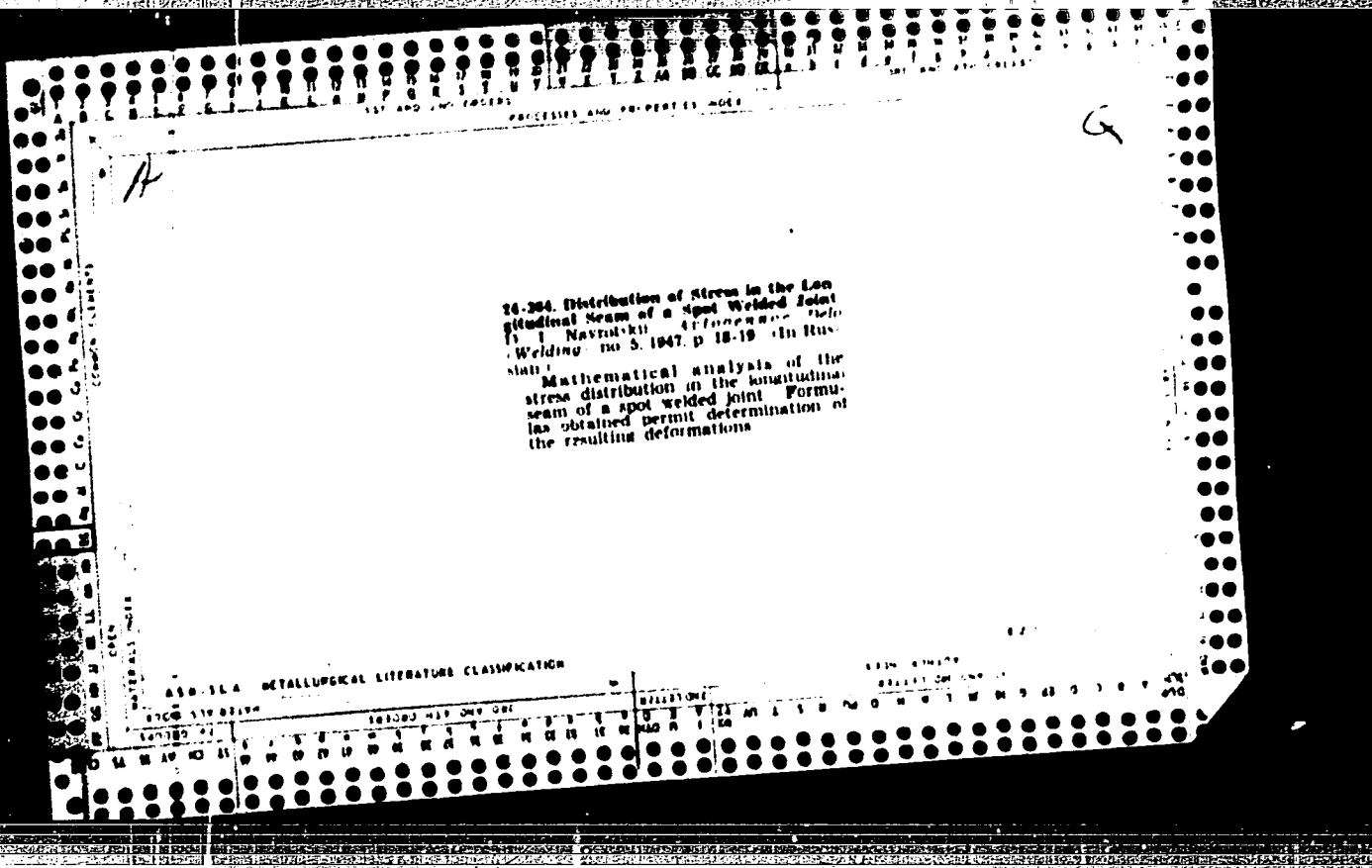
NAVROTSKIY, B.S., kand. tekhn. nauk

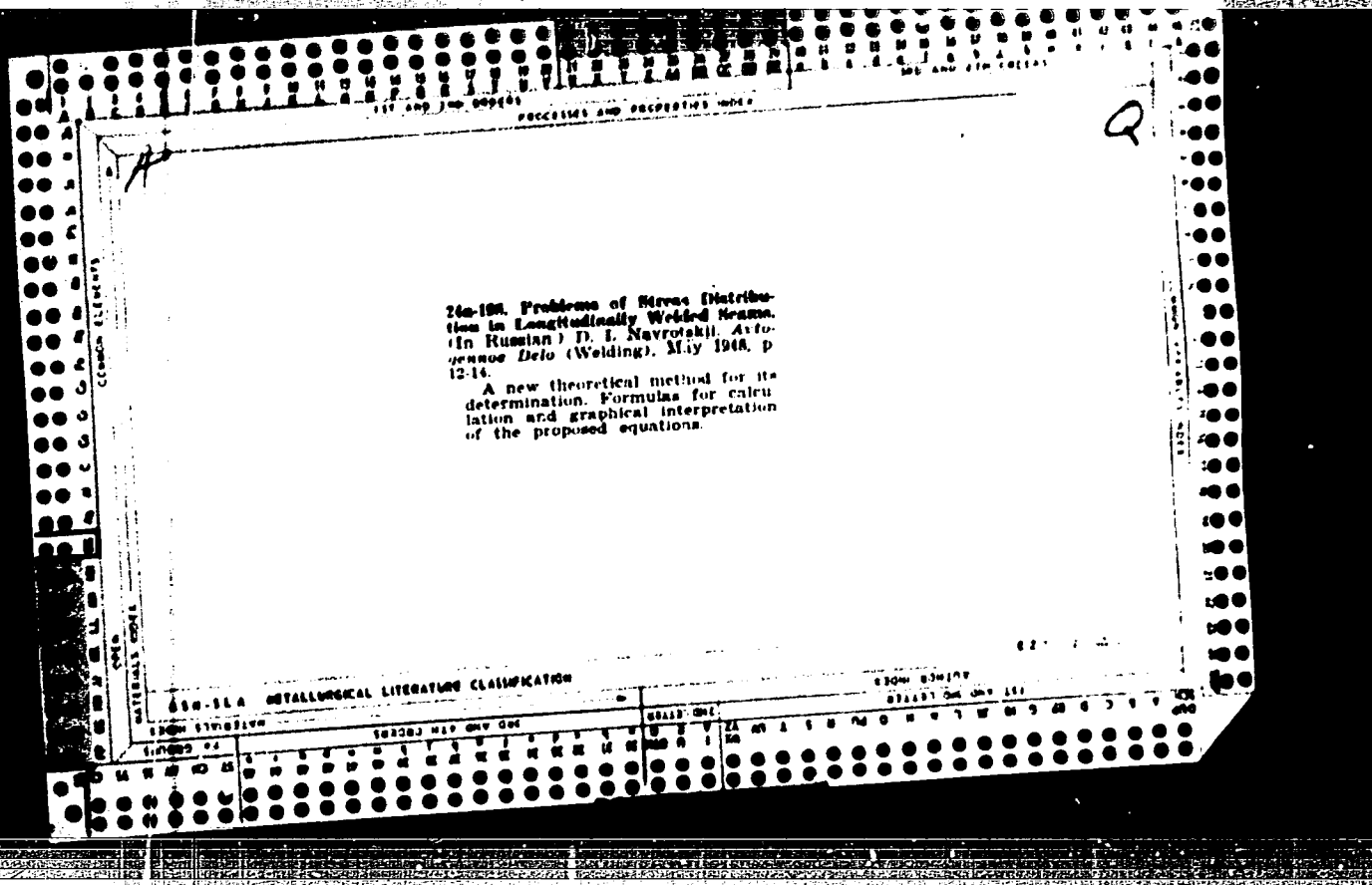
Strength of cutting tools made of the T14KB alloy during the turning of 45L steel castings. Mashinostroenie no.3:7-10 (MIRA 16:7) My-Je '63.

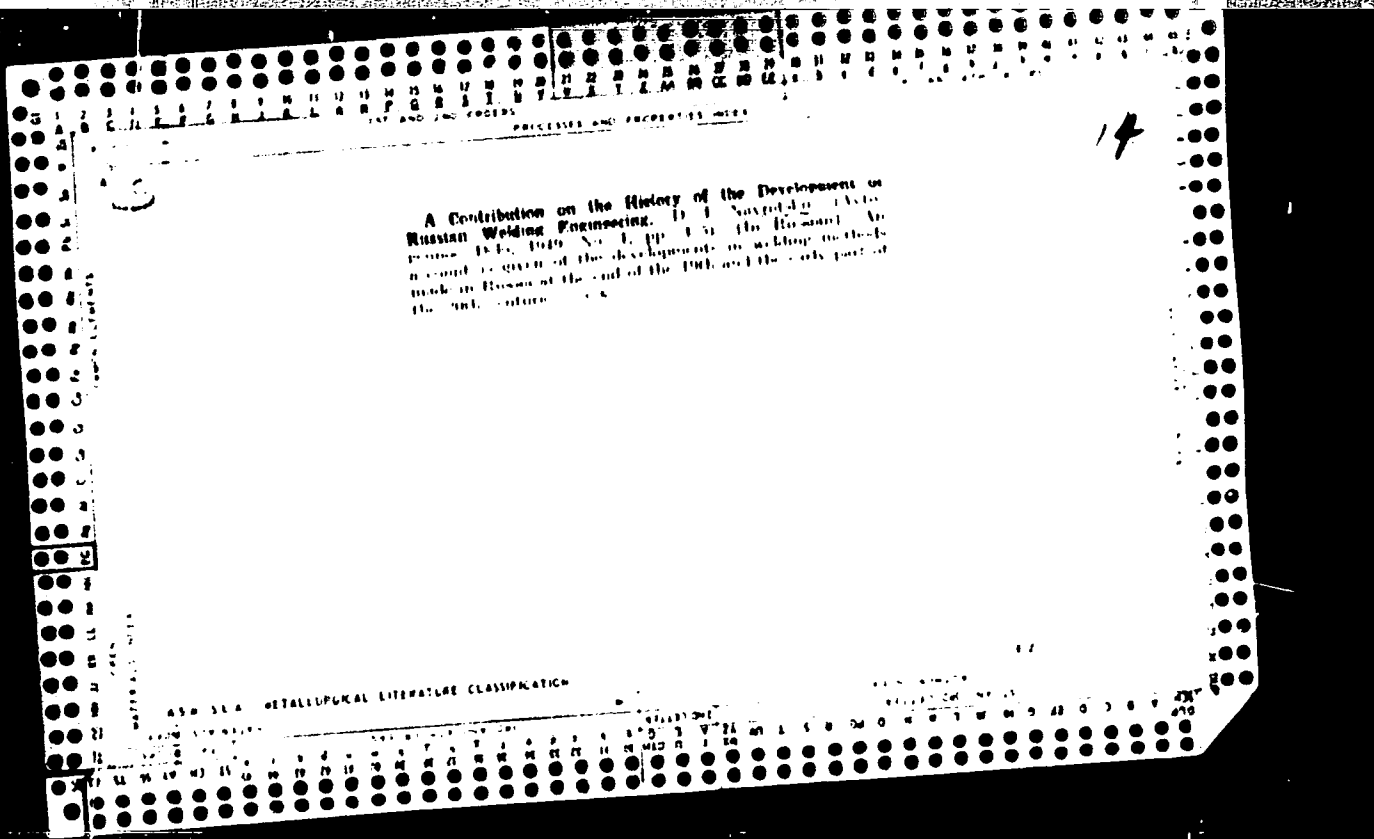
1. Kiyevskiy politekhnicheskii institut.  
(Metal cutting tools)

NAVROTSKIY, B.S., kand. tekhn. nauk

Increasing the strength of the T5K10 cutting tools in turning  
steel castings. Mashinostroenie no.6:41-42 N-D '64  
(MIRA 18:2)







NAVROTSKIY, D. I.

USSR/Engineering - Welding, Strength Construction, Welded Job 90

PA 160719  
"Effect of Welding Stresses on the Strength of Welded Constructions," D. I. Navrotsky, Chair of Welding Production, Leningrad Polytech Instiment & Kalinin, 5 1/2 pp

"Avtozen Delo" No 2

Experiments for determining influence of welding stresses and methods of relieving them demonstrate that welding stresses, in cases of metals with sufficient plasticity, have no harmful effect on structural members under either static or impact loads. Therefore, any operation for elimination of those stresses is unnecessary.

160719



1. D. I. NAVROTSKIY
2. USSR (600)
4. Bridges, Iron and Steel
7. Ancient Tiflis bridge across the Vera. I. Z. Gzelishvili. Soob. AN Gruz. SSR  
11 no. 2. 1950.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

GUSEL'SHCHIKOV, M.K., professor; GUTMAN, M.G., redaktor; MAVROTEKIY, D.I.,  
redaktor; FIRSOV, M.Ye., redaktor.

[Electric and gas welding in shipbuilding and ship repair] Elektri-  
cheskaya i gazovaya svarka v sudostroenii i sudoremonte. 2 izd., dop.  
i perer. Leningrad, Izd-vo Ministerstva morskogo i rechnogo flota  
SSSR, 1953. 397 p. (MLRA 7:7)

(Electric welding) (Oxyacetylene welding and cutting)  
(Shipbuilding)

7.04.0075111 - D.T.  
HAYABUSA, D.F.

3  
mit

1228. Mowbray, M. ...  
double-V welded joints ...  
no. 1, 37-59, 1955; Rev. no. 349, Rev. 26, March 1956.

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...

in the most stressed part of the ...  
the change of section ...  
mental data shows their basic agreement.

NAVROTSKIY, D. I.

6898 Navrotskiy, D. I., Savel'yev, V. N. i Luchkin, P. N. Issledovaniya  
raspredeleniya napryazheniy v uzle s dvustenchatoy fasonkoy. M., Tranzhelforizdat,  
1954. 12s. s chert. 22sm. (MPS SSSR. Nauch. - issled. in-t mostov pri  
LII ZhT. Soobshcheniye No 16.) 50: ekz. Bespl. --(55-1735)  
624.2.014.057:621.791+621.791.056

SO: Knizhnaya Letopis' No. 6, 1954

**MAVROTSKIY, D.I., kandidat tekhnicheskikh nauk**

**Investigating the strength of main truss connections in all-weld span structures. Svar. proizv. no.7:4-7 JI '55. (MIRA 8:9)**

**1. Nauchno-issledovatel'skiy institut mostov pri Leningradskom Institute inzhenerov zhelezнодорожников.  
(Trusses—Welding)**

**NAVBOTSKIY, D.I.**, kandidat tekhnicheskikh nauk.

Impact tests of weldings. Svar.proizv. no.6:14-17 Je '56.

(MLBA 9:9)

1.Leningradskiy politekhnicheskii institut imeni M.I.  
Kalina.

(Welding--Testing)

AID P - 5271

Subject : USSR/Engineering

Card 1/2 Pub. 107-a - 7/18

Authors : ~~Navrotskiy, D. I.,~~ Kand. of Tech. Sci. and V. YU. Shishkin,  
Kand. of Tech. Sci. (Leningrad Polytechnic Institute  
im. Kalinin).

Title : Surface metal-structure in butt welding

Periodical : Svar. proizvod., 9, 22-23, S 1956

Abstract : The authors describe the automatic butt welding procedure from the view point of the constantly vibrating load or vibrating loading faced by the welded joints. The importance of the surface metal structure on the base metal, and the sharp transitions from surface of the seam to base metal while butt welding is done are particularly underlined. Two formulae, 1 drawing, 1 table and 1 GOST standard.

SOV/137-58-7-15007

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 156 (USSR)

AUTHOR: Okerblom, N.O., ~~Navrotskiy, D.I.~~

TITLE: New Approaches to the Problems of Strength and Ease of Manufacture of Welded Structures (Novoye v voprosakh prochnosti i tekhnologichnosti svarnykh konstruktsiy)

PERIODICAL: V sb.: Svarochnoye proiz-vo. Leningrad, Lenizdat, 1957, pp 125-142

ABSTRACT: An examination of various aspects of employment of combined welded structures (WS), the influence of the structural shaping on the strength (S) of the WS, and the effect of stresses induced by welding on the performance of the WS. It is noted that the replacement of cast elements intended for turbines of the Kuybyshev hydroelectric station at the Leningrad metal plant by combined welded components resulted in a reduction in the weight of parts from 527 to 338 t, a reduction of standard man-hours from 21,542 to 14,664, and a reduction in cost from 2,479,000 to 1,563,000 rubles. The following data are provided: a) characteristics of mechanical S of joints composed of cross members; b) the reduction in the value of  $\sigma_b$  under the

Card 1/2



SOV/137-58-7-15007

New Approaches to the Problems of Strength and Ease of Manufacture (cont.)

combined influence of abrupt stress concentrations and extremely low temperatures; c) the critical brittleness temperature of specimens (parent metal and butt, T-, and bead joints) made of steel St 3 and NL-2; d) S and plasticity under impact and static loading; e) vibration S of butt joints of steel M16S, etc. It is pointed out that, according to static and dynamic data, welded joints are superior to riveted connections. Endurance characteristics for various types of steel and different welded joints are given as a function of the stress-concentration factors. It is recommended that the standards for vibrational S be established on the basis of tests performed on specimens and structures after these have been subjected to loads rather than on the basis of tests carried out on specimens in their original state.

A.K.

1. Structures--Welding
  2. Structures--Mechanical properties
  3. Welded joints
- Effectiveness

Card 2/2

NAVIROTSKIY, D.I.

135-5-2/14

**SUBJECT:** USSR/Welding

**AUTHOR:** Navrotsky, D.I., Candidate of Technical Sciences.

**TITLE:** Strength of Joint-Widenings under Vibrational Load. (Prochnost' uzlovykh ushireniy pri vibratsionnoy nagruzke).

**PERIODICAL:** "Svarochnoye Proizvodstvo", 1957, # 5, pp 6-9 (USSR)

**ABSTRACT:** The Scientific Research Institute for Bridge Construction, in cooperation with the Leningrad Polytechnical Institute investigated the strength of joint widenings of different designs in welded bridge trusses. It was established that the transition area from a bar element to a gusset is the most dangerous spot of the joint and consequently the configuration of this transition area will determine the strength and durability of the joint as a whole. The shape of the joint widenings was defined according to the span designs as suggested by the Scientific Research Institute for Bridge Construction and the article contains detailed descriptions of the test samples.

In order to prove that the quality of welded joint widenings is not inferior to the riveted ones, samples of riveted joint widenings were also tested. The experiments showed that joint

Card 1/3

135-5-2/14

**TITLE:**

**Strength of Joint-Widenings under Vibrational Load. (Prochnost' uslovykh ushireniy pri vibratsionnoy nagruzke).**

transitions of riveted connections under vibrational loads are considerably inferior with respect to strength when compared to those made by welding. The relative strength of riveted joints amounts to only 44-46 %.

The article concludes with recommendations concerning the designing of welded joint transitions of bridge trusses as follows:

1. Joint widenings must have an even configuration. The curvature radii of the outer contours of gussets within the contact area of stretched elements must not be less than 100 mm.
2. Butt welds connecting separate profile parts of bar elements fastened to gussets must be carried away from the start of the curvature of the gussets (or other stress concentrators) at a distance at which an even stress distribution is achieved.

For two-wall gussets, this distance is not less than 50 mm; for single-wall gussets it is  $l = B$ , whereby B is the width of the flange of the bar element.

3. In order to increase the reliability and strength of joints, and to simplify their design, it is desirable to select a profile of stretched bar elements with narrow flanges for those cases in which single-wall gussets are to be used. When bar

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135-5-2/14

**TITLE:** Strength of Joint-Widenings under Vibrational Load. (Prochnost' uslovykh ushireniy pri vibratsionnoy nagruzke).

elements have wide flanges, the irregularity of stress distribution at joint transitions increases and joint designs become more complicated.

4. In order to increase the strength of welded joints, besides providing the necessary uniformity at those areas where the shape changes, it is suitable to increase the profile area locally, which may be achieved by increasing the thickness of the gusset.

**ASSOCIATION:** "НИИ МКТОВ" (Research Institute for Bridge Construction).

**PRESENTED BY:**

**SUBMITTED:**

**AVAILABLE:** At the Library of Congress.

Card 3/3

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

Comparing the strength of welded and riveted joints under the  
effect of dynamic loading. Sudostroenie 23 no.8:7-11 Ag '57.  
(MIRA 10:11)

(Welding--Testing) (Rivets and riveting--testing) (Strains and stresses)

SOV/137-58-11-22610

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 113 (USSR)

AUTHORS: Savel'yev, V. N. , Navrotskiy, D. I. , Makurin, V. A. , Shishkin, V. Yu.

TITLE: An Investigation of the Vibrational Strength of Welded Connections in Low-alloyed Steel of the NL-2 Type (Issledovaniye vibratsionnoy prochnosti svarnykh soyedineniy iz nizkolegirovannoy stali marki NL-2)

PERIODICAL: Soobshch. N. -i. in-t mostov pri LIIZhT, 1957, Nr 55, 28 pp, ill.

ABSTRACT: In order to obtain more accurate parameters for technological processes of welding of steel NL-2, and to establish the conditions necessary to obtain welded connections (WC) which, under operational conditions involving alternating loading, are equivalent in strength to the parent metal, the effect of the rate of cooling (RC) on the  $R_C$  and  $a_k$  values of the weld and of the adjoining zone was investigated together with the effect of various welding-rod materials on the mechanical properties of the WC. Preliminary to testing, metal plates (600x400-x20-30 mm), which had been welded with UONI-13/45 electrodes in an automatic welding machine as well as manually (seven combinations of flux and welding rods were employed), were subjected to an X-ray examination. It was established that butt-welded connections made of

Card 1/2

SOV/137-58-11-22610

An Investigation of the Vibrational Strength of Welded Connections (cont.)

NL-2 steel can be as strong as the parent metal both under static and vibrational loads. By appropriate selection of welding procedures the shape of the weld may be controlled so as to produce a connection which is equivalent in strength to the parent metal without requiring any additional mechanical treatment [machining]. If the above condition is not observed, or if the welding conditions are not carefully observed, local mechanical treatment [machining] of the connection becomes mandatory. The NL-2 steel lends itself to welding at conditions ranging from  $q_n/V=7000$  cal/cm to  $q_n/V=13500$  cal/cm, i. e., conditions which produce cooling rates in the weld zone ranging from 5.6 to 18.3°C/sec. WC equivalent in strength to the parent metal may be obtained by employing the following welding materials: a) AN-10 flux in conjunction with welding rods of the Sv-08A, Sv-08GA, and Sv-12M types; b) fluxes OSTs-45 and AN-348 in conjunction with welding rods of the Sv-08GA type. Since the NL-2 steel is sensitive to stress concentration, it is essential that in the course of future investigations the effect of residual stresses on the strength of the WC be verified, the technological and strength characteristics of WC of 30-mm thick sheets be determined more precisely, and that additional TUPIM-sv-55 technical welding specifications be developed for the design and fabrication of welded-bridge structures.

V. S.

Card 2/2

SOV/137-58-8-17051

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 121 (USSR)

AUTHOR: Navrotskiy, D.I.

TITLE: An Investigation of Tensile Strength of Welded Connections Under Independent Action of Residual Stresses and Local Plastic Deformations (Issledovaniye prochnosti svarnykh soyedineniy pri razdel'nom deystvii ostatochnykh napryazheniy i mestnykh plasticheskikh deformatsiy)

PERIODICAL: Tr. Leningr. politekhn. in-ta, 1957, Nr 189 pp 43-50

ABSTRACT: Variations in  $\sigma_w$  occurring during testing of cruciform structural specimens with various residual stresses (RS) were investigated. A cruciform specimen of St 3 steel ( $\sigma_b$  42.6 kg/mm<sup>2</sup>) was prepared by welding together (with the aid of UONI-13/45 electrodes) two side plates (14x150x350 mm) with slots into which a central plate (9x150x300 mm) was inserted and welded against the side by means of corner welds with a K=8 mm; a small gap was left between the side plates. Experimental and calculated data were employed to construct a diagram showing the distribution of stresses in the critical cross section of the specimen under the action of loads

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SOV/137-58-8-17051

## An Investigation of Tensile Strength of Welded Connections (cont.)

$\sigma$  computed  $40.2 \text{ kg/mm}^2$  in the central section over a length of approximately 25 mm,  $\sigma_{\text{exper}} = 4 \text{ kg/mm}^2$  nearer to the edges of the plate, and  $\sigma_{\text{mean}} = 11.4 \text{ kg/mm}^2$  throughout the entire cross section. After welding, the specimen was annealed for a period of two hours at a temperature of  $650^\circ\text{C}$  in order to relieve the RS due to welding. RS were also introduced by means of cold forging of the edges of the central plate ( $b=20 \text{ mm}$ ) with a pneumatic hammer, as well as by heating them locally. In the first instance, tensile RS were calculated for the central portion of the specimen ( $\sigma$  computed  $12.7 \text{ kg/mm}^2$ ); in the second, compressive RS were computed ( $\sigma$  computed  $15.3 \text{ kg/mm}^2$ ). In symmetrical fatigue tests employing  $N=2 \times 10^6$  cycles, the  $\sigma_w$  of specimens without RS amounted to  $\sigma^0 = 400 \text{ kg/cm}^2$ , for specimens with tensile RS,  $\sigma^1 = 285 \text{ kg/cm}^2$ , and for specimens with compressive RS,  $\sigma^2 = 535 \text{ kg/cm}^2$ . A diagram showing how the  $\sigma_w$  of the specimens varies with RS was constructed together with a simplified endurance curve. Formula employed in the computation:  $\sigma_w^2 = \sigma^0 \cdot \sigma_{\text{resid}}^2 \cdot \sigma_b$ . It is shown that the RS combine with stresses due to external loads and, depending on their sign, they exert a positive or a negative influence on the tensile strength of the specimen. 1. Welded joints--Stresses 2. Welded joints--Card 2/2 Tensile properties 3. Welded joints--Deformation 4. Stress analysis

SOV/137-58-8-17044

Translation from: Referativnyy zhurnal, Metallurgiya 1958, Nr 8, p 120 (USSR)

AUTHOR: Navrotskiy, D.I.

TITLE: Low-temperature Tensile Strength Tests of Welded Structural Members With Abrupt Variations in Profile Subjected to Various Degrees of Stress (Ispytaniye prochnosti elementov s rezkim izmeneniyem formy pri nizkoy temperature i razlichnom napryazhenom sostoyanii)

PERIODICAL: Tr. Leningr. politekhn. in-ta, 1957, Nr 189, pp 51-57

ABSTRACT: Changes in  $\sigma_b$  of welded cruciform joints were investigated earlier under various stress concentrations (SC). Variation of SC is brought about by means of varying the distance between the end ribs which transmit the loads onto the central flange. It is shown that within a sufficiently wide range of distance variations between ribs the  $\sigma_b$  is unaffected by SC, but that when the latter reach a certain value the value of the  $\sigma_b$  is reduced, the reduction being more significant at low temperatures. Abrupt SC coupled with very low temperatures result in brittle fracture accompanied by a sharp decrease in over-all tensile strength. It is assumed that under these conditions the effect

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SOV/137-58-8-17044

Low-temperature Tensile Strength Tests of Welded Structural Members (cont.)

of residual welding stresses (RWS) may be definitely established. In order to verify this assumption, tests were carried out on welded cruciform structural members manufactured from steel St 3 (0.16% C, 0.6% Mn). The specimens were prestressed to various degrees by means of welding followed by one of two methods for relieving RWS: Preliminary elongation ( $P=70\text{ t}$ ,  $\sigma_{\text{mean}}=2000\text{ kg/cm}^2$ ) and subsequent annealing (at  $650^\circ\text{C}$  for a period of 3 hrs, followed by a 10-hr cooling period in the furnace to a temperature of  $150^\circ$ ). The specimens were subjected to tensile tests on a tensile-strength testing machine (200 t) at temperatures of  $20-68^\circ$ . It is noted that the  $\sigma_b$  of specimens with abrupt SC decreases sharply within a definite interval of low temperatures. The tensile strength changes sharply in the critical-temperature range ( $-49\pm 3^\circ$ ). Under conditions producing destruction of specimens at temperatures below the critical range, the effect of initial RWS is considerably less than the influence of temperature changes. This makes the evaluation of the influence of the RWS on the tensile strength of specimens more difficult and shows that the tensile strength of a specimen will not be increased as a result of removal of RWS under these conditions, and that the employment of such a procedure would be of small practical value in the present case.

1. Welded joints--Stresses 2. Welded joints--Mechanical properties 3. Stress analysis V.K.

Card 2/2

SOV/137-58-10-21001

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 89 (USSR)

AUTHOR: Navrotskiy, D. I.

TITLE: Determination of Tangential Stresses in a Welded Butt Joint  
(Opredeleniye kasatel'nykh napryazheniy v svarnom stykovom shve)

PERIODICAL: Tr. Leningr. politekhn. in-ta, 1957, Nr 189, pp 58-67

ABSTRACT: A description of procedures involved in computation of tangential stresses in a butt joint; in the course of the computations the contour of the true weld reinforcement was replaced by a contour with rectangular projections (P) and P formed by inclined planes. The formulae derived for this case may be employed for determination of stress concentrations (SC) in butt welds. An analysis of these formulae reveals that when the P are sloping the SC are considerably smaller than in the case of a rectangular P. A reduction in the height of the P and an increase in its width also reduce the SC in the butt weld.

Card 1/1

1. Welds--Stresses    2. Stress analysis    3. Mathematics    V. S.  
--Applications

PHASE I BOOK EXPLOITATION

807/3692

Mavrotkiy, Dmitriy Ivanovich

Primeneniye svarnykh konstruktsiy iz stali povyshennoy prochnosti

(Application of High-Strength Steel Weldments) Leningrad, 1958. 22 p.  
(Series: Informatsionno-tekhnicheskiy listok, Nos. 93/94, Svarka i payka)  
6,200 copies printed.

Sponsoring Agencies: Leningrad. Dom nauchno-tekhnicheskoy propagandy, and  
Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy SSSR.

Ed.: Z. M. Ryzhik, Engineer; Tech. Ed.: D. P. Freger.

PURPOSE: This booklet is intended for welders.

COVERAGE: The author discusses the importance, use and nature of low-  
alloy steels for various types of weldments. He also deals with some  
aspects of the welding process. No personalities are mentioned. There  
are 7 references, all Soviet.

TABLE OF CONTENTS: None given. The booklet is divided as follows:  
Card 1/2

Application of High-Strength (Cont.)

80V/3692

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AVAILABLE: Library of Congress

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7-11-60

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NAVROTSKIY, D. I.

"Strength of Welded Connections in Which Residual Stresses are Present,"

p. 81, Strength of Welded Structures, Moscow, Mashgiz, 1958, 147pp.  
Sbornik, Nauchno-Tekh. Obshchestvo mashinostroitel'noy promyshlennosti., kn. 48.

The book contains the principal reports of a conference held in Leningrad and sponsored by Leningrad Branch, of All-Union Sci., Engineering and Technical Soc (VNITO) of welders..

NAVROTSKIY, D.I.

PHASE I BOOK EXPLOITATION

927

Mezhvuzovskaya konferentsiya po svarke, 1956

Sbornik dokladov... (Reports of the Interuniversity Conference on Welding, 1956) Moscow, Mashgiz, 1958. 266 p. 7,000 copies printed.

Sponsoring Agency: Moscow. Vyssheye tekhnicheskoye uchilishche.

Ed.: Nikolayev, G.A., Doctor of Technical Sciences, Professor; Ed. of Publishing House: Mezhova, V.A., Tech. Ed.: Tekhanov, A.Ya.; Managing Ed. for Literature on Heavy Machine Building (Mashgiz): Golovin, S.Ya., Engineer.

PURPOSE: This book is intended for welding engineers and technical personnel of scientific research organizations.

Card 1/6



Reports of the Interuniversity (Cont.) 927

COVERAGE: This is a collection of technical papers and reports presented by the representatives of various educational, industrial, and research organizations at the 1956 welding conference. They deal with problems of strength of welded connections and structures, automatic arc and resistance welding of steels, and nonferrous metals and alloys. No personalities are mentioned. There are 109 references, 95 of which are Soviet, 12 English, and 2 German.

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12-15-58

Card 6/6

NAUROTSKIY D /

125-58-5-5/13

**AUTHORS:** Manilova, R.Z., Navrotskiy, D.I., Shishkin, V.Yu.

**TITLE:** Investigation of the Vibration Endurance of Welded T-Joints.  
(Issledovaniye vibratsionnoy prochnosti svarnykh tavrovykh soyedineniy)

**PERIODICAL:** Avtomaticheskaya Svarka, 1958, Nr 5, pp 32-40 (USSR)

**ABSTRACT:** T-joint specimens (automatically welded under flux) in the form of the standard joints used in welded bridge beams, were tested under vibration load. Detailed information is given on the shape and preparation of specimens, the tested metal, and the results of tests. The optimum fusion depth of joints was determined, and the effective coefficient of stress concentration -  $\beta$  - was experimentally established. It was concluded that the vibration endurance of automatically-welded-under-flux T-joints considerably exceeds the strength of corresponding riveted joints. The obtained data is recommended for use to calculate the endurance of automatically-welded joints. It was found that the vibration resistance of unchamfered T-joints is insufficient for work under tear

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Investigation of the Vibration Endurance of Welded T-Joints. 125-58-5-5/13

stress, and that they should only be used in light stressed bridge joints. Chamfering must be used for joints in critical sections. The main trusses of the experimental all-welded span across the river Bolva, is mentioned as an example of such critical applications. The features of joints in this bridge are briefly described. The specimens for the tests were prepared at the Voronezhskiy mostovoy zavod (Voronezh Bridge Plant).

There are 5 figures and 4 tables.

ASSOCIATION: NII mostov pri LIIZhTe (Bridge Research Institute at LIIZhT)

SUBMITTED: December 30, 1957

AVAILABLE: Library of Congress

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135-58-8-4/20

AUTHORS: Savel'yev, V. K., ~~Haykotskiy, D. I.~~; Shishkin, V. Yu., Candidates of Technical Sciences, and Makurin, V. A., Engineer.

TITLE: Vibration Resistance of Butt-Welded Joints of "NL-2"-Steel (Vibratsionnaya prochnost' svarnykh stykovykh soyedineniy iz stali NL2)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 8, pp 14 - 18 (USSR)

ABSTRACT: The article gives results of investigations into the vibration resistance of butt and T-welded joints in "NL-2"-steel (composition given in table 1). A detailed description of the technology of the tests is given. The following conclusions are made: equal resistance of butt-welded joints in "NL-2" steel under static and vibration load can be ensured by the use of "AN-10" flux with "SV-08", "Sv-08GA", "Sv-12M", electrodes and "OSTs-45" and "AN-348" fluxes with "Sv-08GA" electrodes. It was possible to obtain the required seam surface by proper selection of the welding process parameters without additional mechanical treatment (only necessary in case of violation of this

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135-58-8-4/20

Vibration Resistance of Butt-Welded Joints of "HL-2"-Steel

technology). The cooling rates for zones adjacent to seams are recommended to be from 5.6 to 18.3 degrees per second. There is 1 diagram, 4 graphs and 8 tables.

ASSOCIATION: NII mostov (Scientific Research Institute of Bridges)

1. Welded joints--Vibraticn resistance

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SOV/137-59-3-5819

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 3, p 125 (USSR)

AUTHOR: Navrotskiy, D. I.

TITLE: The Strength of Welded Connections in the Presence of Residual Stresses Therein (Prochnost' svarnykh soyedineniy pri nalichii v nikh ostatochnykh napryazheniy)

PERIODICAL: V sb.: Prochnost' svarn. konstruktsiy. Moscow-Leningrad, Mashgiz, 1958, pp 81-98

ABSTRACT: The author examines the effect of residual stresses (RS) on the strength of welded connections in mild steel under static, impact, and vibrational loadings. On the basis of an analysis and a survey of numerous experiments and theoretical investigations the author reaches the conclusion that, regardless of the type of loading, the RS's do not influence the mode under which the welded connections operate. The operational conditions of structures having RS's may be classified as elastic, because the first application of the test load rules out any possibility of subsequent plastic deformations. A certain degree of work hardening (WH) of the metal in the vicinity of the weld results in an increase in the values of  $\sigma_s$  and  $\sigma_b$ , as

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The Strength of Welded Connections in the Presence of Residual Stresses Therein

well as in the value of  $\sigma_w$  which is related to these characteristics. The favorable effect of a local WH is significantly greater than the effect of the tensile RS's. Therefore, relieving the RS's by means of annealing, which also eliminates the desirable effects of the WH, results in a reduced value of the  $\sigma_w$ . RS's may lead to a reduction in strength in certain instances of particularly adverse conditions of welding (e.g., welding of rigidly clamped components) combined with high stress concentrations due to live loads and severe operating conditions which may lead to brittle failure of the structure. However, even in these instances, the adverse effects of the RS's may be completely eliminated by applying appropriate technological and design measures.

M K.

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~~NAVROTSKIY, D.I.~~

Stresses in longitudinal joints. Trudy LPI no.199:5-17 '58.  
(MIRA 12:9)  
(Welding—Testing) (Strains and stresses)

NAVROTSKIY, D.I.

Effect of residual stresses on the strength of structural elements  
with sharp change of shape under static load. Trudy LPI no.199:18-25  
'58. (MIRA 12:9)  
(Structural frames--Welding) (Strains and stresses)

NAVROTSKIY, D.I.; SAVEL'YEV, V.N.

Investigating the effect of welding stresses on the vibration strength of welded low-alloy steel structures. Study LPI no.199: 53-63 '58. (MIRA 12:9)  
(Structural frames--Welding) (Steel alloys--Welding)

SHEVANDIN, Ye.M.; NAVROTSKIY, D.I.; RASHETNIKOVA, R.Ye.

Fatigue testing of welded joints in low-alloy and low-carbon  
steels. Trudy LPI no.199:64-74 '58. (MIRA 12:9)  
(Steel alloys—Welding)

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SOV/135-59-3-8/24

**AUTHORS:** Shishkin, V.Yu., Navrotsky, D.I., Savel'yev, V.N., Candidates of Technical Sciences, and Makurin, V.A., Engineer

**TITLE:** The Mechanical Properties of Welded Joints of "10G2SD (MK) Steel" (Mekhanicheskiye svoystva svarykh soyedineniy stali 10G2SD(MK))

**PERIODICAL:** Svarochnoye proizvodstvo, 1959, Nr 3, pp 12-15 (USSR)

**ABSTRACT:** The described experimental investigation of the base metal and welded joints of the low-alloy steel "10G2SD(MK)" ("GOST 5058-57"-standard) proved its good weldability, and its suitability for steel frame structures including railway bridges. The cold-brittleness point of this steel is below - 60° C. The composition of the specimens (Table 1) was the following (in %): 0.12-0.14 C, 1.36-1.58 Mn, 0.72-1.0 Si, 0.024-0.032 P, 0.027-0.042 S, 0.10-0.30 Cr, 0.17-0.23 Ni, 0.12-0.33 Cu. The mechanical properties and the details of the welding technology applied in the experiments are given. Recommendations are made as to the combinations of the electrode

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The Mechanical Properties of Welded Joints of "10G2SD (MK) Steel"

wire and the flux grades to be used. There are 5 tables,  
7 graphs, 2 diagrams and 3 Soviet references.

ASSOCIATION: NII mostov (NII of Bridges)

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NAVHOTSKIY, D.I., kand.tekhn.nauk

Judging the strength of welded elements under dynamic load. Trudy  
NII mostov no.5:123-134 '59. (MIRA 12:?)  
(Welding--Testing)

S/125/60/000/03/007/018  
D042/D001

25(1)

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

TITLE: On the Influence of Residual Stresses upon the Static Strength of Notched Specimens

PERIODICAL: Avtomaticheskaya svarka, 1960, Nr 3, pp 51-59

ABSTRACT: It was stated in previous experiments [Ref. 1,2] that residual stresses in welded joints do not impair strength even in low temperature and under high stress concentration. In described tests, notched specimens with less stress concentration than in the first experiments were used, and the shape and dimensions of the specimens were uniform. Details of tests are given and the specimens shown (Figure 1). Five series of specimens were used: 1) Reference series free of residual stresses; 2) with indentation made in a press - with heated mid and residual compression stress caused by heating with a gas torch; 3) with 2100 kg/cm<sup>2</sup> prestretching (1.5 times higher than permissible for this steel in bridge structures) and also with heated edges. Part of the specimens was subjected to additional annealing to

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remove the stress. Residual stresses were measured by cutting and readings of resistance pickups. It was concluded that under static load (even under the most difficult conditions with low temperature and high residual stress) the influence of residual stresses is considerably weaker than the positive effect of factors which caused these stresses (local plastic deformation and the changes of dimensions and properties caused by it), hence it can be practically ignored. There are 2 diagrams, 4 graphs, 3 tables and 4 Soviet references.

ASSOCIATIONS: Leningradskiy politekhnicheskij institut (Leningrad Poly-technical Institute (D.I. Navrotsky); NII mostov pri LIIZhT (Scientific Research Institute of Bridges at LIIZhT) (V.N. Savel'yev)

SUBMITTED: September 22, 1959  
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