

DONTSOV, G., arkhitektor; VORONKOV, I., arkhitektor

State farm villages of the near future. Zhil. stroi. no.8:27-29
'62. (MIRA 15:9)

(Virgin Territory--Rural planning)

ACC NR: AP6031288 (N) SOURCE CODE: UR/0399/66/000/009/0107/0111

AUTHOR: Konstantinov, V. P.; Dontsov, G. I.

ORG: Department of Infectious Diseases/Director—docent V. P. Konstantinov/, Omsk Medical Institute im. M. I. Kalinin (Kafedra infektsionnykh bolezney Omskogo meditsinskogo instituta)

TITLE: Clinical picture and treatment of tetanus

SOURCE: Sovetskaya meditsina, no. 9, 1966, 107-111

TOPIC TAGS: human ailment, tetanus, tetanus therapy, disease therapeutics, *epidemiology, infectious disease*

ABSTRACT: Clinical-epidemiological studies of tetanus in Omsk revealed that symptoms were fairly similar in all patients; the incubation period ranged from 3—30 days with an average between 5—11 days. Eight deaths were caused by asphyxia or cardiac paralysis. Complex therapy was effective for all survivors and revaccination was recommended. [WA-50; CBE No. 12]

SUB CODE: 06/ SUM DATE: none/ ORIG REF: 030/

Card 1/1 UDC: 616.981.551.313.13(571.13)

DONTSOV, I. I.

USTINOV, V. G., DONTSOV, I. I.

Swine.

Progressive practice in raising pigs. Sov.zoo tekhn. 7, no. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, December 1952 Unclassified.

А.С. НТСОВ, И.

USTINOV, V.G., DCMISOV, I.I.

Swine - Feeding and Feeding Stuffs

Accelerating the growth of hogs on collective farms of the Kurgan district. Sots. zhiv. 14 no. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, June 1952, UNCLASSIFIED.

ZINGARENKO, I.M.; DONTSOV, I.M.

Automatic regulator of the level of tomato concentrate in
evaporators. Kons. i ov. prom. 13 no.9:18-19 8 '58.

(MIRA 11:10)

1. Tiraspol'skiy konservnyy zavod imeni 1 Maya.
(Automatic control) (Canning industry--Equipment and supplies)

DONTSOV, K. (g.Romny, Sumskoy oblasti).

Simple winding apparatus. Radio no.11:62 N '53.

(MLRA 6:11)
(Electric coils)

Dontsov, K

Subject : USSR/Aeronautics AID P - 3119
Card 1/1 Pub. 58 - 5/24
Author : Bogachenko, V., Dontsov, K.
Title : Soaring flights should be organized. (Letter to the editor)
Periodical : Kryl. rod., 10, 7, 0 1955
Abstract : This is a complaint about the inactivity of the management of the Aviation-Technical Club of L'vov, in which soaring flights are not organized in spite of the technical possibilities.
Institution : Aviation-Technical Club, L'vov
Submitted : No date

DONTSOV, K.

107-57-5-47/63

AUTHOR: Dontsov, K. (Poltava)

TITLE: How to Convert a KV-M Receiver to Amateur Bands
(Peredelka priyemnika KV-M na lyubitel'skiye diapazony)

PERIODICAL: Radio, 1957, Nr 5, p 42 (USSR)

ABSTRACT: Many radio clubs have KV-M receivers which can hardly be used for amateur purposes because of their "compressed" bands. Use of a few additional capacitors is recommended for spreading the bands of 160, 80, 40, and 20 meters. Connections are indicated.

AVAILABLE: Library of Congress

Card 1/1

DOETSOV, K.M.

Determining pressure in a circle of wells operating under
the elastic compression of the layer during central flooding.
Izv.vys.ucheb.sav.; neft' i gas 1 no.10:55-61 '58.

(MIRA 12:4)

1. Groznenskiy neftyanoy institut.
(Oil field flooding)

DONTSOV, K.M.

Determining pressure in an unevenly permeable layer operating
under elastic compression in central oil-well flooding. Izv. vys.
ucheb. zav.; neft' i gaz 2 no.4:57-62 '59. (MIRA 12:10)

1. Gornenskiy neftyanoy institut.
(Oil field flooding)

"DONTSOV, K.M.; ORKIN, K.G.

Selecting an artificial method for developing the second No.16
block of the fault sole in the Starogroznyy field. Izv. vys.
ucheb. zav.; neft' i gaz 3 no.10:41-48 '60. (MIRA 14:4)

1. Grozenskiy neftyanoy institut.
(Groznyy region—Oil fields—Production methods)

DONTSOV, K.M.; POLYAKOV, G.G.; AYRAPETYAN, S.M.

Method for estimating fluid overflow when the well column is not
airtight. Izv.vys.ucheb.zav.; neft' i gaz 6 no.11:51-56 '63.
(MIRA 17:9)

1. Groznenskiy neftyanoy institut.

DONTSOV, K.M.

Processing the indicator lines of fractured reservoir rocks.
Izv. vys. ucheb. zav.; neft' i gaz 8 no.1:35-39 '65.

(MIRA 18:2)

1. Groznenskiy neftyanoy institut.

DONTSOV, K.M.

Distortion of indicator lines taken in the deep wells of a fractured
reservoir rock. Izv. vys. ucheb. zav.; neft' i gaz 8 no.4:41-44 '65.
(MIRA 18:5)

1. Groznenskiy neftyanoy institut.

LONTSOV, K.M.; ISTOMIN, A.Z.

Various methods for processing the indicator curves of wells
exploiting fractured reservoir rocks; a topic for discussion.
Vest. khoz. 43 no.2:51-54 F 1965. (MIRA 13:4)

DONTSOV, K.F.

Experience in burning pulverized anthracite culms. Sakh.prom.
37 no.6:39-42 Je '63. (MIRA 16:5)

1. Malo-Viskovskiy sakharnyy zavod.
(Boilers--Firing) (Sugar industry--Equipment and supplies)

DOMTSOV, N. V.

Signal device for automatic determination of temperature in the
canal of a dryer. Rats. i isobr.predl. v stroi. no.118:15-17 '55.
(Drying apparatus) (Thermometry) (MLRA 9:7)

DONTSOV, N.V.; YEVTRYEV, V.A.; NATANZON, S.N.

Constant temperature control of clay bricks aided by remote-
controlled electric thermometers. Rats. i isobr. predl. v stroi.
no.3:62-64 '57. (MIRA 11:1)

(Brickmaking) (Thermometry)

DONTSOV, N.V.

US3R /Chemical Technology. Chemical Products
and Their Application
Control and Measuring Devices.
Automatic Regulation.

H-3

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1579

Author : Natanzon S.N., Dontsov N.V.

Title : Automation of the Regulation and Control of
Thermal Processes in the Technology of Building
Ceramics.

Orig Pub: Gor. kh-vo Moskv, 1957, No 8, 25-31

Abstract: Description of the devices for automatic control
and regulation of thermal processes, which were
made and put in operation at the Cheremushkinskiy
brick factory. In order to check the temperature
of the block of clay, after it has been moistened
by steam treatment, a semiconductor resistance

Card 1/2

USSR /Chemical Technology. Chemical Products
and Their Application
Control and Measuring Devices.
Automatic Regulation.

R-3

Abs Jour: Referat Zhur - Khimiya, No 1, 1958, 1579

thermometer has been designed. Systems have been evolved for automatic regulation of steam pressure in the boilers and of the temperature of the heat-transfer agent in the central duct of the heated drier.

Card 2/2

DONTSOV, N.V.; YEVTIYEV, V.A., mekhanik; NATANSON, S.N.

Automatic regulation of steam pressure in low-pressure boilers
at brickmaking plants. Rats. i izobr. predl. v stroi. no.5:55-56
'58. (MIRA 11:6)

1. Nachal'nik otdela organizatsii truda Cheremushkinskogo kirpichnogo
savoda, Moskva 17 (for Natanson). 2. Master elektrotsekha Chere-
mushkinskogo kirpichnogo savoda, Moskva 17 (for Dontsov).
(Boilers) (Pressure regulators)

OGURTSOV, A.N., insh.; DONTSOV, N.V., master; RAYDAL, K.P., master

Photoelectric control of coal feeding. Stroim. 6
no.4:25-26 Ap '60. (MIRA 13:6)

1. Cherevushkinskiy keramicheskiy zavod.
(Photoelectric cells) (Automatic control)
(Ceramics)

BAYDAL, K.P.; DONTSOV, N.V.; OGURTSOV, A.N.

Automatic unit for signaling the presence of metal in the molding batch. Strci. mat. 6 no.10:28 0 '60. (MIRA 13:10)
(Electronic instruments)

DONTSOV, N.V.; OGURTSOV, A.H.; inzh.; BAYDAL, K.P., master otzhoga

Automatic control of lighting systems. Gor. khoz. Mosk. 34 no.11:30-31 N '60. (MIRA 13:11)

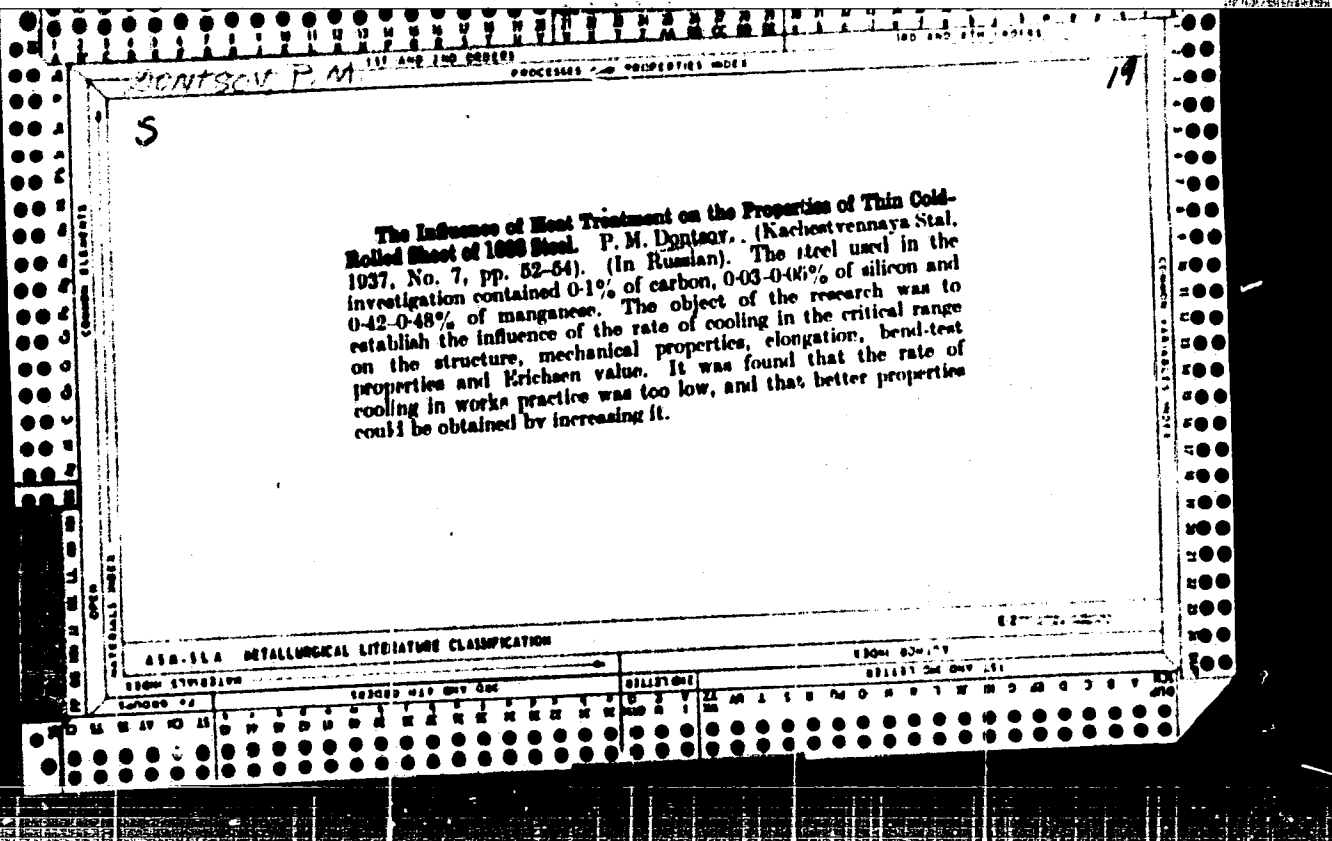
1. Cheremushkinskiy keramicheskiy zavod. 2. Master elektrotsekha Cheremushkinskogo keramicheskogo zavoda (for Dontsov). 3. Byuro soдейstviya ratsionalizatsii i izobretatel'stvu (for Ogurtsov). (Moscow--Factories--Lighting) (Automatic control)

DOMTSOV, P. F.: OL'KHOVSKIY, M. V.

Mbr., Gor'kiy Milling Machine Plant (-1945-)

"High-Speed Milling," Stanki I Instrument, 16, Nos. 7-8, 1945

BR-52059019



18
 Evaluating the Quality of Steel Sheet from the Fracture Structure. P. M. Donigoy. (ZNA, 1956, (9), 561-565). (In Russian). The mechanism of the formation of fracture structures in steel-sheet test pieces and the possible ambiguity in quality evaluations based on these structures are discussed. The two possible types of lamination that exist in the metal before testing and that developed during the test must be distinguished. —c. r.

2
 452c

788

*Zhdanovskiy filial Tsentral'nogo nauchno-issledovatel'skogo
 instituta ministerstva stroitel'nogo promyshlennosti,*

14(9,10)

SOV/95-59-4-3/12

AUTHORS: Krasil'shchikov, Z.H., Schmidt, M.V., Dontsov, P.M., Candidates of Technical Sciences, Shvach, Ye.N., Pavičenko, N.T., Nechepurenko, S.Ye., Engineers. (Zhdanov)

TITLE: Experimental Industrial Lot of Pipes Made From Thermically Hardened Carbon Steel (Opytnaya promyshlennaya partiya trub iz termicheski uprochnennoy uglerodisty stali)

PERIODICAL: Stroitel'stvo truboprovodov, 1959, Nr 4, pp 8-11, (USSR)

ABSTRACT: Welded pipes from thermically hardened carbon steel St.3 (sp) were manufactured in accordance with "Temporary technical conditions" approved by the Glavgaz USSR. The work has been carried out by a branch of TsNII GKS in cooperation with the welding laboratory of VNIIST in the Zhdanovskiy zavod imeni Il'icha (Zhdanov Plant imeni Il'ich). Steel sheets 6,300 x 1,750 x 8 mm were rolled from slabs on mill Trio-Lauta at a starting temperature of 1,250°C and a final temperature of 900-1,000°C. The chemical composition is shown in Table Nr 1. During the hardening process the sheets in packages of 6-10 sheets were placed in an oven having a temperature of up to 1,000°C and were heated to a

Card 1.

0000-59-4-5/12

Experimental Industrial Lot of Pipes Made From Thermically Treated Carbon Steel

temperature of $950 \pm 10^\circ\text{C}$; each sheet was then cooled in water during 1 minute in a vertical position. The tempering process consisted in the heating of each sheet separately to a temperature of $540 \pm 10^\circ\text{C}$ during 20 minutes and subsequent cooling by air. In all tested sheets temporary tensile strength was 50-60 kg/mm^2 ; yield point was 35 kg/mm^2 and relative elongation (δ_r) over 15%; after artificial aging, toughness at a temperature of -20°C exceeded 3 $\text{m kg}/\text{cm}^2$; bending angle was 180° . Ratio of the yield point to temporary tensile strength was less than 0.8. After thermal treatment the sheets were subjected to cold dressing in a 7-roller mill during 5-7 minutes and bent to shape in a 4-roller mill, the bending process lasting from 3-5 minutes for each sheet. Automatic welding was done with electrode rods Sv10GS under flux OSTs-45 with a current of 38-44 v and 750-850 a. After welding the pipes were subjected to cold rolling during 3-5 minutes. Ends of pipes were calibrated and chamfered. In this condition reception tests were made on 2 pipes of the same smelt, to determine mechanical properties of the welded joint and of the fused on metal;

Card 2

000095-59-4-3/12

Experimental Industrial Lot of Pipes Made From Thermically Hardened Carbon Steel

Results of tests are shown in Table Nr 3. Values of toughness under dynamic tests are shown in Table 4. At room temperature the toughness is 8.5-14.0 m kg/cm^2 . The lower the temperature the lower the toughness and the greater the amount of crystalline portions; at -40°C for instance the fracture is almost entirely crystalline and the toughness is 4.0-7.0 m kg/cm^2 . The fused on metal differs from basic metal by a lower toughness under all temperatures. A comparative Graph Nr 1 shows the difference in tensile strength between basic metal, fused on metal and metal in intermediate zones. Chemical composition of fused on metal is shown in Table Nr 5. At first it appeared as though welded, thermically hardened carbon steel pipes should work out slightly more expensive than pipes from low-alloy steel of MK grade. Successive improvements of thermal treatment will, however, lower the cost of production of the pipes from St.3(sp) steel, which will work out cheaper in the end than the pipes from

Card 3/4

SOV/95-59-4-3/12
Experimental Industrial Lot of Pipes Made From Thermically Hardened Carbon Steel

low-alloy, MK grade steel. The industrial trial lot of 42 tons of welded, thermically hardened carbon steel pipes proved their fitness for high pressure gas and oil pipeline work.

There are 5 table, 1 graph and 2 microphotographs.

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18(3)

SOV/170-59-5/18

AUTHOR: Dontsov, F.M.

TITLE: On Crystalline Fracture as a Criterion of Steel Brittleness (O kristallicheskom izlome kak kriterii khrupkosti stali)

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1959, Nr 5, pp 28-35 (USSR)

ABSTRACT: There is a wide-spread concept, advocated in particular by V.A. Delle [Ref 4], S.I. Sakhin [Ref 5] and others, that the crystalline structure of steel fractures always indicates its brittle state. However, there are experimental data pointing out that this is not necessarily the case. The author describes these data, analyzes them and criticizes the above mentioned concept. He shows that steel may possess considerable toughness in spite of having crystalline structure of fracture. For an explanation of this phenomenon the author adopts the theoretical scheme of A.F. Ioffe and statements of N.N. Davidenkov on the brittle strength and resistance of metals to brittle and viscous tearing off. In addition to these, he makes use of the "load-sagging" diagram obtained during the statical testing of notched specimens for bending and a theoretical analysis of this diagram

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SOV/170-59-5-5/18

On Crystalline Fracture as a Criterion of Steel Brittleness

performed by I.L. Shimelevich [Ref 12]. To check the theoretical notions the author carried out statical tests on a 12-ton tensile testing machine of the TsNIITMASH design and impact tests on a pile-driver with a power of 30 kg m. The results of the tests are compiled in Table 3. The author discusses the results and draws conclusions as to the cases in which metal displaying crystalline fracture may have considerable toughness and when crystalline fracture is an indication of the brittle state or of a state immediately preceding it. The temperature of testing has a considerable effect on the kind of behavior of steel. There are 3 graphs, 3 tables and 15 references, 11 of which are Soviet, 3 German and 1 English.

Card 2/2

DONTSOV, P.M., kand.tekhn.nauk (g.Zhdanov); SHVACH, Ye.G., inzh. (g.Zhdanov)

A study of methods which provide increased strength and
toughness of pipes. Stroi. truboprov. 7 no.10:10-13

0 '62.

(MIRA 15:11)

(Pipe, Steel)

DONTSOV, B.M.; SHVACH, Ye.N.

Efficient methods of hardening low-alloy and low-carbon steel.
Stal' 22 no.2:165-167 F '62. (MIRA 15:2)
(Steel alloys—Hardening)

SHMIDT, N.V.; DONTSOV, P.M.; KRASIL'NIKOV, Z.N.; SHVACH, Ye.N.;
OVSYANNIKOV, I.I.

Heat treated carbon steel for shipbuilding. Sudostroenie 28
no.9:44-48 S '62. (MIRA 15:10)
(Plates, Iron and steel—Testing) (Shipbuilding)

ACCESSION NR: AR4041537

S/0137/64/000/004/D016/D016

SOURCE: Ref. zh. Metallurgiya, Abs. 4D92

AUTHOR: Dontsov, P. M.; Kuz'min, V. I.

TITLE: Riveting of austenitic steels during beding and straightening

CITED SOURCE: Sb. nauchn. tr. Zhdanovsk. metallurg. in-t, vy*p. 11, 1963, 123-126

TOPIC TAGS: austenitic steel, bending, straightening, riveting

TRANSLATION: During manufacture of high-quality profiles from austenitic steel with high content of Mn (up to 17%) the necessary level of mechanical properties is ensured when hot rolling is finished at a temperature $\leq 850^\circ$. This is connected with the special physical properties of the steel, due to which recrystallization in the process of hot plastic flow is sharply braked at a definite temperature and strength of the steel increased due to work hardening. Rolling of steel at a

Card 1/2

ACCESSION NR: AR4041537

higher temperature inevitably is accompanied by lowering to greater or lesser degree the strength of the steel (σ_s usually decreases by 2-8 kg/mm²), per and articles become off-grade. The investigated metal by standard sizes of profiles was divided into 2 groups: group I — equal side angle irons 25 x 25 x 3, 25 x 25 x 4, 30 x 30 x 4, 40 x 40 x 5 millimeters; group II — equal side angle irons 60 x 60 x 8, 65 x 65 x 8, 90 x 90 x 8, 75 x 75 x 6 millimeters. Strips rejected for insufficient magnitude σ_s were subjected in cold state to additional bending and straightening; here the roller-type straightening machines are aligned such that the arrow of sag and the wave of the strip were the maximum possible for a machine of the given design. As an example there are given conditions of bending and straightening of one of the experimental profiles on a 9-roller machine with the step of the rollers 600 millimeters. The investigation gave the possibility to offer a simple method of improvement of mechanical properties of high-quality rolling from austenitic steels.

SUB CODE: MM

ENCL: 00

Card 2/2

DONTSOV, P.M.; DONTSOVA, A.Ya.

Characteristics of the volume state of iron-carbon alloy phases.
Izv. vys. ucheb. zav.; Chern. met. 6 no.5:168-174 '63.

(MIRA 16:7)

(Iron alloys—Metallography)
(Phase rule and equilibrium)

ACCESSION NR: AP4014252

S/0133/64/000/002/0119/0152

AUTHORS: Dontsov, P. M. (Candidate of technical sciences); Papush, A. G. (Candidate of technical sciences); Aristov, V. S. (Candidate of technical sciences); Malakhovskiy, L. G. (Engineer); Shcherbak, M. A. (Engineer); Dontsova, A. Ya. (Engineer); Gorbachev, A. F. (Engineer)

TITLE: Production of plated formed iron by electric-arc fusing and rolling

SOURCE: Stal', no. 2, 1964, 149-152

TOPIC TAGS: plated iron, steel, electric arc fusing, profile iron, SVLKh18N9T electrode, MS 1 steel, ADS 1000 2 welder, AN 26 flux, stainless steel, SVLKh18N9T solder, rolling mill, 620 rolling mill, 450 rolling mill, 400 rolling mill

ABSTRACT: The authors describe a new technique for plating formed iron of different shapes. Several layers of stainless steel were fused onto the samples by the automatic multi-electrode welding method. The chemical composition of the metal plate proved satisfactory (Cr > 16%, Ni > 8%) when the MS-1 steel and 3-mm SVLKh18N9T electrodes with AN-26 flux were used. The automatic welding assembly ADS-1000-2 was designed to produce simultaneous operation with three electrodes.

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ACCESSION NR: AP4014252

Samples were rolled in mills 620, 450, and 400. Tests showed a strong union of plate with the base metals. In structure, the first layer of the fused-on metal proved to be martensitic and the following layers austenitic. It was determined that the optimal thickness of the metal plate was 1-2 mm. The samples withstood tests for intergranular corrosion even when the angle of bending was 180 degrees. Orig. art. has: 2 tables, 4 figures, and 4 formulas.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 03Mar64

ENCL: 00

SUB CODE: ML

NO REF SOV: 001

OTHER: 000

Card 2/2

DONTSOV, P.M., kand.tekhn.nauk; PAPUSH, A.G., kand.tekhn.nauk; ARISTOV, V.S.;
kand.tekhn.nauk; MALAKHOVSKIY, L.G., inzh.; SHCHENBAK, M.A., inzh.;
DONTSOVA, A.Ya., inzh.; GORBACHEV, A.F., inzh.

Manufacture of clad rolled shapes by the method of electric arc
hard facing with subsequent rolling of the blank. Stal' 24 no.2:
149-152 F '64. (MIRA 17:9)

SOV/136-58-11-13/21

AUTHORS: ~~Dontsov, S.N.~~
Berman, S.I.

TITLE: Strength Characteristics of Titanium Alloy with 5% Aluminium Under Hot Pressing Conditions (Prochnostnyye kharakteristiki splava titana s 5% alyuminiya v usloviyakh obrabotki davleniyem v goryachem sostoyanii)

PERIODICAL: Tsvetnyye Metally, 1958, Nr 11, pp 71-77 (USSR)

ABSTRACT: A binary alloy of titanium with 5% aluminium has found application in Soviet industry and the work described has been carried out with the object of determining the mechanical properties and degree of permissible deformation at high temperatures and rates of deformation, including the true yield-point strength, the rate coefficients and the mean specific pressures produced during rolling in smooth rolls at high temperatures and various degrees of deformation. 90 x 220 x 330 mm forgings containing 0.11% Fe, 0.07% Si, 0.03% C, 0.02% O₂, 0.04% N and 0.015% H₂ were cut into 14 x 14 x 330 mm blanks from which suitable

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SOV/136-56-11-13/21

Strength Characteristics of Titanium Alloy with 5% Aluminium
Under Hot Pressing Conditions

test pieces were made. The speeds of deformation used corresponded to those of Soviet rolling practice. A series of resistance strain gauges were used (fig.1) for following the tensile test, the specimen being contained in a furnace. Maxima of relative-deformation in tension and compression and of toughness and minima were found (fig.2) at 1000-1150 and 900-950°C respectively. True yield-point strengths were determined at 800-1150°C and deformation rates of 0.33, 280, 560, 740 and 1120% per second from tensile test results, the relations obtained (fig.4) confirming that the degree of deformation must be taken into account when studying the effect of deformation rate on the true yield-point strength at such temperatures. The rate coefficients were taken as the ratio of the yield-point strength at the higher rates to that at 0.33% per second for the given temperature and degree of deformation (values tabulated on p 75). A two-high laboratory rolling mill with strain gauges was used to find the total force between metal and rolls, from

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SOV/136-58-11-13/21

Strength Characteristics of Titanium Alloy with 5% Aluminium
Under Hot Pressing Conditions

which the mean specific pressures for various temperatures (700-1100°C) and degrees of deformation per pass were calculated (fig.5). These experimental specific-pressure values obtained were compared with those calculated by A.I. Tselikov's equations (ref.12) from the true yield-points strength allowing for the rate and degree of deformation: the latter differed by 10-15% from the experimental. Tselikov's equation was also used to construct graphs of the coefficient of friction in rolling the alloy at various degrees of deformation (15-50%) as functions of the

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SOV/136-58-11-13/21

Strength Characteristics of Titanium Alloy with 5% Aluminium
Under Hot Pressing Conditions

temperature (fig.6): the values of the coefficient
varied from 0.085 to 0.36 . There are 6 figures,
1 table and 12 references of which 7 are Soviet and
5 English.

ASSOCIATION: Mintsvetmetzoloto

Card 4/4

DONTSOV, S. N.: Master Tech Sci (diss) -- "A study of the plastic and strength properties of alloys based on titanium at various temperatures and rates of deformation, and the establishment of certain parameters for their pressure treatment". Moscow, 1959. 13 pp (Min Higher Educ USSR, Krasnoyarsk Inst of Nonferrous Metals im M. I. Kalinin), 150 copies (KL, No 17, 1959, 108)

DONTSOV, S.N.; BERMAN, S.I.

Characteristics of strength and plasticity in titanium-aluminum-vanadium alloys under the effect of hot working. Izv. vys. ucheb. zav.; tsvet. met. 2 no.3:108-117 '59. (MIRA 12:9)

1. Moskovskiy institut tsvetnykh metallov i zolota, Kafedra obrabotki metallov davleniyem.

(Titanium-aluminum-vanadium alloys)
(Deformations (Mechanics))

18-1285
18.8200

31741
S/136/61/000/012/005/006
E193/E383

AUTHORS: Dontsov, S.N., Yermanok, M.Z., Candidates of
Technical Sciences and Chizhov, I.N., Engineer

TITLE: Strength characteristics of titanium alloys and their
application in calculating stresses during plastic-
working operations

PERIODICAL: Tsvetnyye metally, no. 12, 1961, 74 - 76

TEXT: Lack of experimental data on the resistance of Ti
alloys to deformation at various temperatures and deformation
rates causes difficulties in designing equipment for plastic-
working of these materials and in establishing optimum working
schedules. Hence the present investigation, which is concerned
with the properties of pure Ti (BT1 (VT1)) and Ti alloys
(BT6 (VT6), BT 5 (VT5) and OT4). In Fig. 1, the hot tensile
strength (σ_B , kg/mm²) of these materials is plotted against
temperature (°C). It will be seen that at 1 050 - 1 150 °C,
i.e. in the hot-working temperature range, σ_B of all four
materials is very much the same. These values, however, cannot

Card 1/5c/

31741

S/136/61/000/012/005/006

E193/E383

Strength characteristics of

be used as the basis for calculating stresses during hot-working operations because they represent strength of undeformed material, whereas the strength of an alloy near the exit end of the deformation region depends on the deformation (rolling) rate. The effect of strain rate on σ_B of the alloys studied is illustrated in Fig. 2, where σ_B of the alloy VT5 is plotted against test temperature ($^{\circ}\text{C}$), curves 1-4 relating, respectively, to strain rates of 0.33, 280, 740 and 1 120 %/sec; (similar results were obtained for the alloy VT6). The data presented in Fig. 2 are reproduced in a different manner in Fig. 3, where the so-called strengthening coefficient (c) is plotted against the strain rate (N, %/sec) at temperatures indicated by each curve. If it is assumed that the average resistance of a metal to deformation during rolling, S_{cp} , is an arithmetical mean of its tensile strength near the entry and exit ends of the deformation region, it can be calculated from the formula:

X

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31741

S/136/61/000/012/005/006
E193/E383

Strength characteristics of

$$S_{A,CP} = \frac{1+c}{2} \cdot \sigma_{\sigma_{CTAT}} \quad (2)$$

where $\sigma_{\sigma_{CTAT}}$ is the tensile strength determined by the static test at a given temperature and c is the strengthening coefficient corresponding to a given rolling temperature and speed. If, as has been postulated by Perlin, $\sigma_{A,CP}$ is a geometrical means of σ_{σ} near the exit and entry ends of the deformation region, Eq. (2) becomes: X

$$S_{A,CP} = \sigma_{\sigma_{CTAT}} \cdot \sqrt{c} \quad (3)$$

The magnitude of c is independent of the rate of deformation in cold-rolling and the average resistance to deformation in this case is simply

Card 3/34

Strength characteristics of ... ³¹⁷⁴¹
 S/136761/000/012/005/006
 E193/E383

the arithmetical mean of UTS of the alloy before and after rolling. A more accurate value of $S_{\Delta, \text{cp}}$ in cold-rolling is given by the formula proposed by M.Z. Yermanok in Ref. 5 (IVUZ, Tsvetnaya metallurgiya, 1959, no. 6):

$$S_{\Delta, \text{cp}} = \frac{\sigma_{\text{внач}} \cdot F_{\text{нач}} + \sigma_{\text{вкон}} \cdot F_{\text{кон}}}{F_{\text{нач}} + F_{\text{кон}}} \quad (5)$$

where $\sigma_{\text{внач}}$ and $\sigma_{\text{вкон}}$ denote, respectively, the UTS of the alloy before and after rolling, $F_{\text{нач}}$ and $F_{\text{кон}}$ denoting the cross-sectional area of the stock at the entry and exit ends of the deformation region.

Card 4/34

ACC NR: AT70041/1

SOURCE CODE: UR/0000/66/000/000/0178/0190

AUTHOR: Andreyeva, V. V.; Glukhova, A. I.; Dontsov, B. N.; Moiseyeva, I. S.;
Mel'nikova, L. V.

ORG: none

TITLE: Corrosion resistance, electrochemical and mechanical properties, and micro-
structure of niobium-tantalum alloys

SOURCE: AN SSSR. Institut fizicheskoy khimii. Korroziya i zashchita konstruktsi-
onnykh splavov (Corrosion and protection of structural alloys) Moscow, Izd-vo Nauka,
1966, 178-190

TOPIC TAGS: niobium ~~base~~ alloy, ~~niobium~~ tantalum ^{containing} alloy, ^{mechanical} property, ~~alloy~~ corrosion
resistant ~~alloy~~, ^{recrystallization temperature}

ABSTRACT: A series of niobium-tantalum alloys containing 0.24--30.1% of tantalum
were cast into ingots and some were forged into bars (7 x 7 mm). To
determine the temperature of recrystallization, some of the specimens
were annealed for 2 hr at various temperatures. It was found that an
increase in tantalum content increases the recrystallization temperature.
In specimens containing about 1% tantalum, recrystallization started at
1100C and ended at 1200C, while in those containing 30% tantalum it
started at 1200C and ended at 1300C. An increase in tantalum content
also increases the strength and ductility of the alloys. For instance.
UDC: none

Card 1/2

ACC NR: AT7004170

an increase of tantalum content from 0.24% to 19.8% in forged specimens resulted in an increase in tensile strength from 607 to 764 Mn/m² and elongation from 18 to 25%. It was also found that the tensile and yield strengths of hot-forged specimens were considerably higher than those of specimens annealed at 1250C for 2 hr. This indicates that there was not sufficient time for recrystallization during forging at 800—1200C. Corrosion tests of niobium, tantalum and niobium-tantalum alloys were carried out in various solutions of sulfuric, hydrochloric and nitric acids. It was found that the corrosion rate of the alloys decreases with increased tantalum content. For instance, the corrosion rate of an alloy containing 5% tantalum in a 40% solution of sulfuric acid was 0.09 g/m²·hr, while that of an alloy containing 30% tantalum was 0.01 g/m²·hr. Alloys containing not less than 5% tantalum were found to be completely corrosion-resistant in a 20% solution of hydrochloric acid. This high corrosion-resistance of niobium-tantalum alloys is due to the presence of a protective film of mixed tantalum and niobium oxides, such as Ta₂O₅ and Nb₂O₅. Orig. art. has: 7 figures and 1 table. [TD]

SUB CODE: 1120/ SUBM DATE: 27Sep66/ ORIG REF: 006/ OTH REF: 003/ ATD PRESS: 5115

Card 2/2

DONTSOV, V. A.

USSR Nuclear physics - Isotopic effect

Card 1/2 Pub. 118 - 3/8

Authors : Striganov, A. P., and Dontsov, V. A.

Title : Isotopic effect on atomic spectra

Periodical : Usp. fiz. nauk 55/3, 315-390, Mar 1955

Abstract : The isotopic effect on the atomic spectra (optical) is discussed. The discussion is conducted separately for the light, medium and heavy elements. The isotopic effect was studied completely for 33 out of 57 stable elements, with the number of isotopes larger than 2, and 4 out of 17 radioactive elements. Seven elements of the first group and thirteen elements of the second group were not studied at all. Seventeen elements of the first

Institution :

Submitted :

Card 2/2 Pub. 118 - 3/8

Periodical : Usp. fiz. nauk 55/3, 315-390, Mar 1955

Abstract : group were studied only partially. In the case of heavy elements, the so-called volume effect, a new concept, was introduced for the better interpretation of the isotopic effect on spectra of elements. The volume effect is based on the quantum mechanical theory. The importance of the isotopic effect is the fact that it helps in understanding the structure of atomic nuclei. However, the knowledge of an isotopic effect alone, is sometimes not enough for the complete understanding of atomic nuclei and an appreciation of quantum mechanical analysis is necessary. Mechanical, magnetic and quadrupole moments together with spins of nuclear particles should also be considered. Two-hundred and fourteen references (1918-1954). Tables; diagrams; graphs.

DOUBSOV, V.L.

~~www.iaea.org~~

Teaching of physics in rural schools. *Fiz.v shkole 14 no.1:34-37 Ja-F*
'54. (MLRA 7:1)

1. 15-ya shkola Plastunovskogo rayona Kraenodarskogo kraja.
(Physics--Study and teaching)

DONTSOV, V.L.

Teaching physics in rural schools with emphasis on polytechnical
education. Fiz.v shkole 17 no.2:69-72 Mr-Ap '57. (MIRA 10:3)

1. 15-ya Staro-Korsunskaya srednyaya shkola, Krasnodarskiy kray.
(Physics--Study and teaching)

DONTSOV, V.L.

Electric equipment of the physical laboratory in a school not provided with electric current. Fiz. v shkole 22 no.2:78-80 Nr-Ap '62. (MIRA 15:11)

1. 15-ya srednyaya shkola, st.Staro-Korsunskaya Krasnodarskogo kraja. (Physical laboratories--Equipment and supplies)

DONTSOV, Ya. (Krivetskiy rey)

An innovator at the Krivetskiy rafting grounds. Mast. less 2 no.7:12-14
Л 1 '58. (MIRA 11:9)

(Lumber--Transportation)

STRIGANOV, A.B.; KOROSTYLEVA, L.A.; DONTSOV, Yu.P.

Isotope shift in plutonium spectra. Izv. AN SSSR. Ser. 19 no.1:
34-35 Ja-F '55. (MIRA 8:9)

(Spectrum analysis) (Spectrometer)

DNV 150-4, 90

USSR

515.338.333 62

4900. Isotope shift in the spectrum of plutonium.
 A. R. STARIANOV, L. L. KONCHIKOVA AND YU. P. DONTSOV. *Zh. eksper. teor. Fiz.*, 28, No. 4, 480-4 (1955) in Russian.
 A mixture of Pu^{239} and Pu^{240} is investigated with high resolving power between 4100-6500 Å. Nitrogen lines exhibit an isotope shift; some of these, hyperfine structure. Schemes of transitions are proposed.
 O. E. BROWN

DONTSOV, Ye.P.

Three-phase, single pass automatic submerged arc welding.
Proizv. opyt v obl. svar. no.1:49-56 '56. (MLRA 5:10)

(Electric welding)

DONTSOV, I. P.; SHEVELEV, A.S.

Automatic submerged arc built-up welding of 52x150mm. orifices in
damper plates. Proisv. opyt v obl. svar. no.1:77-78 '56.

(MIRA 9:10)

(Machinery--Welding) (Electric welding)

PIVOVAROVA, Z.K., inzh.; DONTSOV, Ye.P., inzh.; ROSTENKO, V.R., inzh.;
KOTOV, B.I., inzh.

Mechanization of the production of water glass for electrodes.
Svar. proizv. no.5:34 My '64. (MIRA 18:11)

1. Taganrogskiy zavod "Krasnyy kotel'shchik".

DONT SOV, YU P.

535.338.331
206 THE HYPERFINE EFFECT IN ATOMIC SPECTRA

A.R. LIFSHITZ and Yu. P. PIONTSKY
Uspekhi Fiz. Nauk, Vol. 83, No. 3, 311-80 (1968). In Russian

For convenience 55 elements, ranging from H to Am, are considered in three groups, light, medium and heavy. Each section gives an account of theory and experimental results are given in numerous tables and a considerable number of sketches of line structures. The "heavy" section includes well-balanced discussions of the theory of the volume effect, the effect of deformation of the nucleus, perturbations of configuration. 329 refs.

C.R.S. Manders

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Haber
-PMC

①

How
27/1/68

Dontsov, Yu. P.

USSR / Physical Chemistry - Atom.

B-3

Abs Jour : Referat Zhur - Khimiya, No 6, 25 March 1957, 18119

Author : Dontsov, Yu. P.Title : Isotopical Displacement in the Spectrum of Dysprosium

Orig Pub : Optika i spektroskopiya, 1956, 1, No 5, 612-616

Abstract : Isotopical displacement in the spectrum of Dy was investigated in the region 3900-6850 Å. The spectrum was excited in a tube with hollow cathode cooled with liquid nitrogen. Isotopical displacement was measured between isotopes 164-162 upon 52 lines of a neutral and 3 lines of an ionized atoms. The position of a component of isotope 160 was measured upon 4 lines. The majority of lines show a negative displacement. The value of displacement changes from 0.024 to 0.074 cm^{-1} . A table of lines is given the displacement of which was measured. On the basis of the value and direction of displacement certain suppositions are made concerning possible electron configurations of levels participating in transitions.

Card 1/1

Don't see you

R.M.C.

✓ **Mercury the isotopic source of light and determination of cross section of thermal neutrons** *2*
 C. L. Bousar and A. P. Rothly, *Optics & Spectroscopy*, 1957, 1, 11-17 (1957). Hg²⁰⁰ was obtained from decay of Au¹⁹⁸ by the reaction Au¹⁹⁸ + n → Au¹⁹⁹ → Hg²⁰⁰ + β⁻. A purified Au foil 0.2 mm. thick was heated for 2 hrs at 900°C under vacuum. Then the foil was irradiated for 10 hrs. in a U reactor with a flux of 5 × 10¹³ thermal neutrons/cm² sec. Under these conditions the amount of Hg²⁰⁰ produced by Au¹⁹⁸ + n → Au¹⁹⁹ → Hg²⁰⁰ + β⁻ was <1%. One drawback of the Hg²⁰⁰ light source is the adsorption of Hg on the walls during the discharge resulting in a decrease in the intensity of the spectrum. This defect can be partially overcome by increasing the pressure of A in the discharge tube and increase in the excitation frequency. An analysis of the tube was made in cleaning the walls of the deposit. The spectrum of Hg²⁰⁰ revealed an inversion of 4400.74 Å and 4340.69 Å lines and a partial self-absorption in the vicinity of the 4358.33 Å line. The 5796.66, 5791.59, and 4077.91 Å bands showed very little self-absorption, if at all. Based on the analysis of the spectrum, the lines 4358.33 Å and 4077.91 Å were chosen as the best analytical lines. From the ratio of the intensities of Hg²⁰⁰ and Hg¹⁹⁹ and from the abn. neutron flux, the cross section for capture of thermal neutrons by Au¹⁹⁸ was (2.3 ± 0.7) × 10³ b. 12 references.

Handwritten initials

Handwritten mark

A. P. Rothly

R.M.C.

DON'TS (W), Yea P.

*4
1/2*

6265

A METHOD FOR THE SPECTRAL QUANTITATIVE ANALYSIS OF THE ISOTOPIC COMPOSITION OF HEAVY WATER

Yu. P. Dolinsky and A. R. Kholodov. Zhur. Anal. Khim. 12, 5-8 (1967) Jan.-Feb. (In Russian)

Sci

A spectral method and apparatus for quantitative analysis of small amounts of heavy water are described. The calibration graph has been drawn up for the interval of concentration 2 to 80% D₂O in H₂O. The relative error changes in dependence to the concentration from 1.4 to 0.6% (at 80%).

Rmf yf

DONTSOV, Yu.P.; STRIGANOV, A.P.

Monoisotopic mercury source of light and determination of the cross section for the capture of thermal neutrons by Au¹⁹⁸.
Fig.sbor. no.4:11-12 '58. (MIRA 12:5)

1. Laboratoriya izmeritel'nykh priborov AN SSSR.
(Gold--Isotopes) (Mercury--Isotopes) (Neutrons--Capture)

DONTSOV, Yu.P.

Isotope shift in the spectrum of dysprosium. Fiz.sbor.
no.4:17-18 '58. (MIRA 12:5)

1. Laboratoriya izmeritel'nykh priborov AN SSSR.
(Dysprosium--Spectra)

AUTHORS: Dontsov, Yu. P., Korostyleva, L. A. SOV/48-22-6-12/28

TITLE: The Isotopic Displacement in Spectra of Cerium and Zirconium
(Izotopicheskoye smesheniye v spektrakh tseriya i tsirkoniya)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1958, Vol. 22,
Nr 6, pp. 683-685 (USSR)

ABSTRACT: In the introduction it is pointed out that this displacement occurs with the magic numbers 50 and 82; in transition of $N = 82$ to $N = 84$ points of discontinuity were found by Murakawa (Ref 1) as well as by Arroe (Ref 2), but the data supplied by these authors do not agree. It has hitherto not yet been proved that "displacement discontinuities" occur within the range of the magic neutron number of 50. For the investigation of the isotopic displacement for cerium and zirconium the usual method (Ref 3) of exciting and photographing spectra was employed. With the isotopes Ce^{136} , Ce^{138} and Ce^{140} this displacement was less than half the width of the spectral line. It was further found that displacement between the isotopes 140 and 142 is nearly four times as great as between the isotopes 138 and 140. It was further found that the volume effect in the zirconium spectrum contributes

Card 1/3

The Isotopic Displacement in Spectra of
Cerium and Zirconium

SOV/48-22-6-12/28

towards bringing about full displacement. In this paper a schematical representation of the relative position of the components of isotopic lines within the range of the magic numbers 50 and 82 is given. The recently published work by R. Hughes (Ref 5) concerning the displacement with respect to volume of the components of the isotopic lines of strontium is mentioned, which indirectly confirms the here discussed theory of "displacement discontinuities". Moreover, the theory developed by L. Willets (Ref 6) et al. is mentioned, in which all anomalies in isotopic displacements were explained by the variable deformation of nuclei. In this connection it is pointed out that the lack or the abundance of neutrons cannot cause nuclear deformation if the filled shell is taken into account, for the conveyance of a neutron pair to the closed shell alone causes a distinct enlargement of the nuclear radius, which is manifested by the "discontinuities" in isotopic displacements when passing through the magic numbers. The filling of different sub-shells with an increase of the

Card 2/3

The Isotopic Displacement in Spectra of
Cerium and Zirconium

SOV/48-22-6-12/28

number of neutrons in the nucleus may cause a deviation from the law $r=R_0.A^{1/3}$, which is here described as the probable cause of the variable amount of isotopic displacement found to occur. There are 1 figure and 6 references, 1 of which is Soviet.

1. Cerium isotopes (Radioactive)---Spectra
2. Zirconium isotopes (Radioactive)---Spectra

Card 3/3

AUTHOR: Dontsov, Yu.P.

SOV/51-6-1-1/30

TITLE: Isotopic Shift in the Spectrum of Zr I (Izotopicheskoye smeshcheniye v spektre ZrI)

PERIODICAL: Optika i Spektroskopiya, 1959, Vol 6, Nr 1, pp 3-8 (USSR)

ABSTRACT: The isotopic shift of spectral lines is due to two causes: change in the nuclear mass (the mass effect) and change in the nuclear field (the volume effect). If the magnitude and behaviour of the volume part of the isotopic shift are known it is possible to deduce some information on the change of the nuclear radius from one isotope to another. If a pair of neutrons is added to a nucleus with a closed outer shell there may be a discontinuous change in the nuclear radius which would appear as a "jump" in the isotopic shift. Such a "jump" should occur at $N = 50$ ($N =$ the number of neutrons in a nucleus) and for this reason the isotopic shift in Zr is of great interest since one of its isotopes (Zr^{90}) has $N = 50$. Zr spectrum was excited in an aluminium discharge tube with a hollow cathode cooled with liquid nitrogen. Argon was used as the working gas at a pressure of 0.5 mm Hg. The spectrum was resolved by means of a Fabry-Perot interferometer crossed with a triple prism spectrograph ISP-51. The interferometer was placed in a thermostat whose temperature was controlled to

Card 1/3

Isotopic Shift in the Spectrum of Zr I

SOV/51-6-1-1/30

within $\pm 0.05\%$. The isotopic structure in the Zr spectrum was found to be less than the half-width of spectral lines and, therefore, to measure the isotopic shift the author photographed on one plate spectra of five samples enriched in Zr^{90} , Zr^{92} , Zr^{94} , Zr^{96} and Zr^{98} respectively. Since each of these samples contains, in addition to the main component, some admixtures of the other isotopes (see Table 1), it was necessary to allow for the overlapping of the spectral lines. Table 2 shows the results of measurements: the first column gives the wavelength, the second gives the transition responsible for this wavelength and the next four columns give the shifts between the five isotopic species of Zr. In all the lines studied, with the exception of three, a negative shift was observed, i.e. the component due to the heavier isotope was displaced towards longer wavelengths. The value of the isotopic shift for one electron transition varies slightly with multiplicity of this transition. Table 3 gives the mean values of the shift for various types of transitions. The data of Table 3 can be used to find approximately the volume part in the isotopic shift for Zr^{90} - Zr^{92} , Zr^{92} - Zr^{94} and Zr^{94} - Zr^{96} . The volume isotopic shifts were found to be -5×10^{-3} , -2×10^{-3} and $-3 \times 10^{-3} \text{ cm}^{-1}$ respectively. To find the isotopic shift "sum" at $N = 50$ it is necessary to study the shifts between isotopes with smaller and larger numbers of neutrons than

Card 2/3

Isotopic Shift in the Spectrum of Zr I

007/01-0-1-1/30

the magic number $N = 50$. Natural Zr has no isotopes with less than 50 neutrons, but Hughes (Ref 6) found that the volume part of the isotopic shift between Sr isotopes with less than 50 neutrons was equal to zero within the limits of experimental error. Consequently the estimate of the volume part of the isotopic shift between Zr^{90} and Zr^{92} given in the present paper is an indirect confirmation of the "jump" at $N = 50$. The author also notes that the values of the isotopic shifts between Zr^{90} , Zr^{92} and Zr^{94} are different and he deduces that the nuclear radius does not follow the $A^{1/3}$ law but changes discontinuously on filling of the neutron shells. The author thanks A.R. Striganev for suggesting the work and advice on it. There are 3 tables and 8 references, 1 of which is Soviet, 4 English, 1 German, 1 Danish and 1 mixed (Soviet and English).

SUBMITTED: February 21, 1961

Card 3/3

DONTSOV, YU.P. Cand Phys-Math Sci -- (diss) "Anamolies of isotopic displacements in spectra of the elements (Zr, Mo and Nd)," Moscow, 1960, 7 pp, (Moscow ~~XXXX~~ State U in M. V. Lomonosov. Institute of Atomic Energy in I. V. Kurchatov, AS USSR) (KL, 44-60, 127)

80540

S/051/60/008/06/001/024
E201/E691

I.2500

AUTHORS: Dontsov, Yu.P., Morozov, V.A. and Striganov, A.R.

TITLE: Isotopic Shift in the Spectrum of Neodymium

PERIODICAL: Optika i spektroskopiya, 1960, Vol 8, Nr 6, pp 741-745 (USSR)

ABSTRACT: The isotopic shift in the atomic spectrum of neodymium was investigated by several workers (Refs 1-5); Table 1 lists the results obtained by Nöldeke and Stuedel (Refs 3, 4). As in samarium, an anomalous shift was observed between the Nd¹⁴⁸ and Nd¹⁵⁰ components (it occurs on addition of the forty-fifth pair of neutrons to the nucleus). The present paper reports a new investigation of the isotopic shift of neodymium. In contrast to previous work the samples used consisted of separated isotopes: Nd¹⁴², Nd¹⁴⁴, Nd¹⁴⁶, Nd¹⁴⁸, Nd¹⁵⁰ (Table 2). A Fabry--Perot interferometer and a hollow-cathode discharge tube were employed. The following isotopic shifts were measured for 16 lines lying between 4689 and 6486 Å: $\Delta\nu(142-144)$, $\Delta\nu(144-146)$, $\Delta\nu(146-148)$, $\Delta\nu(148-150)$ (Table 3). It was found that the relative shifts of the Nd I and Nd II lines were practically identical and that the relative anomalous

Card 1/2

80540

Isotopic Shift in the Spectrum of Neodymium

S/051/60/008/06/001/024
E201/E691

shift was practically independent of wavelength (Table 4). The mean relative shifts were: 1.00 (142-144), 0.87 (144-146), 1.04 (146-148), 1.42 (148-150) (cf. Table 4 and a figure on p 744). The inequality of the relative shifts of neodymium isotopes whose nuclei do not possess static deformation, may be due to non-uniform variations of the amplitudes of zero vibrations of the nuclear quadrupole moment. There are 1 figure, 4 tables and 9 references, of which 3 are Soviet, 2 English, 2 Dutch and 2 German.

SUBMITTED: November 5, 1959

Card 2/2

TARASOV, A.M., kand.tekhn.nauk; SEMENCHENKO, M.P., inzh.; GUR'YEVA, Z.I.,
inzh.; BONTSOVA, A.M., inzh.; MALYGINA, T.I., inzh.

Use of structural steels with small additions of boron at the
Gorkiy Automobile Plant. Metalloved. i term.obr.met. no.12:
16-21 D '61. (MIRA 14:12)

1. Gor'kovskiy avtomobil'nyy zavod.
(Gorkiy--Automobile industry)
(Boron steel)

DONTSOV, P.M.; DONTSOVA, A.Ya.

Characteristics of the volume state of iron-carbon alloy phases.
Izv. vys. ucheb. zav.; Chern. met. 6 no.5:168-174 '63.

(MIRA 16:7)

(Iron alloys—Metallography)
(Phase rule and equilibrium)

DEPOSITION NR: AP4014252

S/0133/64/000/002/0145/01

AUTHORS: Dontsov, P. M. (Candidate of technical sciences); Papusi, A. G. (Candidate of technical sciences); Aristov, V. S. (Candidate of technical sciences); Melnikhovsky, L. G. (Engineer); Shcherbak, M. A. (Engineer); Dontsova, A. Ya. (Engineer); Gorbachev, A. F. (Engineer)

TITLE: Production of plated formed iron by electric-arc fusing and rolling

SOURCE: Stal', no. 2, 1964, 149-152

TOPIC TAGS: plated iron, steel, electric arc fusing, profile iron, SVKKh16N9T electrode, MS 1 steel, ADS 1000 2 welder, AN 26 flux, stainless steel, SVKKh16N9T solder, rolling mill, 620 rolling mill, 450 rolling mill, 400 rolling mill

ABSTRACT: The authors describe a new technique for plating formed iron of different shapes. Several layers of stainless steel were fused onto the samples by the automatic multi-electrode welding method. The chemical composition of the metal plate proved satisfactory ($Cr \geq 16\%$, $Ni \geq 8\%$) when the MS-1 steel and 3-SVKKh16N9T electrodes with AN-26 flux were used. The automatic welding assembly ADS-1000-2 was designed to produce simultaneous operation with three electrodes.

ACCESSION NR: AP4014252

Samples were rolled in mills 620, 450, and 400. Tests showed a strong union of plate with the base metals. In structure, the first layer of the fused-on metal proved to be martensitic and the following layers austenitic. It was determined that the optimal thickness of the metal plate was 1-2 mm. The samples withstood tests for intergranular corrosion even when the angle of bending was 180 degrees. Orig. art. has: 2 tables, 4 figures, and 4 formulas.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 03Mar64

ENCL: 00

SUB CODE: ML

NO REF SOV: 001

OTHER: 000

Card 2/2

DONTSOV, P.M., kand.tekhn.nauk; PAFUSH, A.G., kand.tekhn.nauk; ARISTOV, V.S.;
kand.tekhn.nauk; MALAKHOVSKIY, L.G., inzh.; SHEIKHBAK, M.A., inzh.;
DONTSOVA, A.Ya., inzh.; GORBACHEV, A.F., inzh.

Manufacture of clad rolled shapes by the method of electric arc
hard facing with subsequent rolling of the blank. Stal' 24 no.2;
149-152 F '64. (MIRA 17:9)

L 00023-66 EWT(a)/SWA(d)/T/E-P(t)/E-P(z)/E-P(b)/E-WA(c) IJP(c) JB/HW

ACCESSION NR: AP5022574

UR/0129/65/000/009/0014/0017
669.14.018:620.18

40
39

AUTHOR: Dontsova, A. Ya. 44,55

TITLE: Alloying of machine steels 18, 44, 55

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 9, 1965, 14-17

TOPIC TAGS: Proceeding from the assumption that in the presence of an identical degree of strength all steels display the same mechanical properties regardless of their content of carbon and alloy elements, the author elucidates the relationship between the position of the point M_1 (beginning of martensite transformation), which is determined by the degree and method of the alloying of steels, and the impact strength of steels. The impact toughness of steels containing one or several of the following alloy elements: Si , Mn , Cr , Mo , Cu , Ni , and 0.23-0.67% C , is compared. It is shown that the amount of residual austenite in a steel is associated with the position of M_1 , which, in its turn, depends on the alloying method. It is concluded that a low position of M_1 conditions a higher hardening of steel and hence also some decrease in impact strength. In steels with the same strength impact strength increases with rising M_1 . Thus,

Card 1/2

L 00023-66
ACCESSION:NR: AP5022574

the position of M_1 is reflected in the proneness of steels to form cracks during $\gamma\text{-}\alpha$ -transformation (quenching, welding, flame cutting) as well as in their impact strength and proneness to brittle fracture. Apparently excess alloying (addition of alloy elements in excess of the amount required to assure complete hardenability) is harmful, since it unnecessarily depresses the position of M_1 .
Orig. art. has: 5 figures, 2 tables.

ASSOCIATION: none

SUBMITTED: 00

NO REF SOV: 022

ENCL: 00

SUB CODE: MM, MT

OTHER: 008

dg
2/2
Card

15.8350

S/190/63/005/002/020/024
B101/B102

AUTHORS: Gul', V. Ye., Chernin, I. M., Zaborovskaya, Ye. E.,
Dontsova, E. P., Gvil'dis, V. Yu.

TITLE: Investigation of the rupture process of glass fabric-
reinforced resins

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 5, no. 2, 1963,
274-278

TEXT: The effect of the nature of the binder on the tensile strength of glass-reinforced resins (GRR) was studied. $\sigma = f(\epsilon)$ was determined and the breaking process was recorded with a high-speed camera. Results: GRR with epoxy phenol or epoxy phenol-rubber binder (I) break in the same way as a homogeneous brittle material, $\sigma = 1600 \pm 50 \text{ kg/cm}^2$. In GRR with epoxy organosilicon binder, the individual glass fabric layers behave nonuniformly, $\sigma = 1250 \pm 100 \text{ kg/cm}^2$. GRR with epoxy resin binder differed but slightly from I, but a slight separation into layers set in; $\sigma = 1550 \pm 50 \text{ kg/cm}^2$. The most irregular behavior was observed in glass fabric layers with polyester maleinate or epoxy polyester acrylate binder; $\sigma = 650 \pm 100 \text{ kg/cm}^2$.

Card 1/2

Investigation of the rupture ...

8/190/63/005/002/020/024
B101/B102

Conclusion: The strength of GRR increases with the cohesive strength of the binder and with its adhesion to glass. Under otherwise equal conditions, the highest strength is obtained if the difference between the relative elongation of the GRR and of the binder itself is small. Owing to the penetration of the binder into microcracks and the resulting compensation of the overstrain peaks the strength of the GRR can be higher than the total of the strengths of glass fabric and binder. There are 9 figures. ✓

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M. V. Lomonosova (Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov)

SUBMITTED: September 8, 1961

Card 2/2

GUL', V.Ye.; ZABOROVSKAYA, Ye.E.; DONTSOVA, E.P.; BUENOVA, B.G.

Adhesion of thermosetting polymers to glass. Vysokom.sped. 5
no.2:269-273 P 163. (MIRA 16:2)

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(Polymers) (Glass) (Adhesion)

L 13631-65 EWP(e)/EWP(m)/EPF(c)/EPR/EMP(j)/E/EM(b) Pc-1/Pq-1/Pr-1/Ps-1
ASD(n)-3/AEDC(b) RM/WH/WH
ACCESSION NR: AP4046901 S/0191/64/000/010/0053/0055

AUTHOR: Dontsova, E. P.; Gvil'dis, V. Yu.; Zaborovskaya, Ye. E.; Gul', V. Ye.

TITLE: Temperature dependence of the rupture of fiberglass fabrics during uni-
dimensional stretching ¹⁵

SOURCE: Plasticheskiye massy*, no. 10, 1964, 53-55 ^B

TOPIC TAGS: fiberglass, fiberglass fabric, plastic cloth, laminated plastic,
reinforced plastic, epoxide resin, epoxyphenol resin, binder, ply separation

ABSTRACT: The authors attempted to clarify the temperature dependence of the ten-
sile strength of fiberglass fabrics on the basis of the assumption that if the
resin and glass fibers undergo the same deformation, the plastic material behaves
as a monolith, does not separate into layers, and is destroyed only if the stress
applied to it exceeds the combined strength of all the glass fabric layers. Fiber-
glass fabrics containing epoxyphenol resin or epoxide binders¹⁵ (K-75 or K-82) were
investigated over a temperature range of -40 to +200C. It was found that fabrics
based on different binders differ very little from one another in tensile strength
at either low temperatures (-40C) or temperatures above 100-150C, regardless of
the different strength and thermal stability of the hardened binders. In the range

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L 11634-65

ACCESSION NR: AP4044901

between -40 and +100C, the strength is determined by the type of binder. In fabrics made from a more thermo stable resin, the strength decreases more slowly with increasing temperature. The character of the destruction in fiberglass fabrics can be clearly seen in photographs of the samples in two planes, in front and side views. These observations are discussed. No ply separation takes place at 20 or 60C, but on increasing the temperature to 100C and higher, or decreasing it to -40C, the layers separate. At 100C, the fabrics containing epoxyphenol resin show less separation than samples with pure epoxide binders. At 150-200C there is a marked separation of the layers. This is explained by the fact that the samples were made of two kinds of glass: silicate and polymeric, which behave differently on heating. In the brittle stage, the binders differ little from one another in deformability, but with increasing temperature the deformability of polymer glass increases much more rapidly than that of silicate glass. The rapid increase in deformation of fiberglass with heating is due to the deformation of the polymer binder. During transition of the binder into the highly elastic state, the deformability of the resin is higher than that of the fiberglass fabric. In this case, the stresses between all layers are distributed non uniformly and this causes the layers to separate. Orig. art. has: 2 figures and 1 table.

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L 13634-65
ACCESSION NR: AP4046901

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: MI, AS

NO REF SOV: 003

OTHER: 000

0

Card 3/3

L 52211-6: EPA(s)-2/EWT(r)/EPP(c)/APR/EWP(j)/T Pc-l/Pr-l/Ps-l/Pt-7 WW/RM

ACCESSION NR: AP5011991

UR/9374/65/000/001/0082/0083
678:539.315AUTHORS: Kiselev, M. R. (Moscow); Zubov, P. I. (Moscow); Sukhareva, I. A. (Moscow); Zaborovskaya, Ye. K. (Moscow); Dontsova, E. P. (Moscow) 45
ETITLE: Internal stresses in fiberglass 15

SOURCE: Mekhanika polimerov, no. 1, 1965, 82-88

TOPIC TAGS: fiberglass, internal stress, bonding material, filler/Thiokol

ABSTRACT: The authors investigated the internal stresses of fiberglass made with plasticized bonding material and of films of pure bonding material. These stresses were found to be lower than those in unplasticized material. The material studied was plasticized and unplasticized polyvinyl butyral, epoxy resin, and plasticized and unplasticized Thiokol. Stresses were determined optically. Investigations were made on films deposited on a glass prism from 50% solution in alcohol-toluene mixture. The film was dried for an hour and then subjected to heat treatment. Temperatures of treatment were 80, 100, 130, and 150°, several combinations of these being employed. Samples of filler material were obtained by cutting from previously impregnated glass cloth or tape. Internal stresses were

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ACCESSION NR: APJ11991

measured after each hour of treatment and after cooling. The strength characteristics of fiberglass decline with increase in internal stresses, and it was found that the distribution of these stresses is anisotropic. Highest internal stresses were observed in fiberglass with tape reinforcement in a direction at right angles to the fibers. Fiberglass with filler oriented in two mutually perpendicular directions was found to have lower internal stresses than films of pure bonding material. The magnitude of stresses in filled and unfilled films was found to depend on the type of heat treatment. Best results were obtained from longer heating at lower temperatures. Orig. art. has: 5 figures and 3 tables.

ASSOCIATION: none

SUBMITTED: 12Oct64

ENCL: 00

SUB CODE: ME

NO REF SOV: 005

OTHER: 002

24
col 2/2

YATSENKO, Ye.F.; BOYKO, G.Ye.; DONTSOVA, G.M.

Higher liquid hydrocarbons in Carpathian ozocerites. Izv.vys.
ucheb.zav.; neft' i gaz 5 no.2:71-75 '62. (MIRA 15:7)

1. L'vovskiy gosudarstvennyy universitet imeni I. Franko
i Ukrainskiy nauchno-issledovatel'skiy geologorazvedochnyy
institut.

(Carpathian Mountains--Ozocerite)
(Hydrocarbons)

NEYFAKH, A.A.; DONTSOVA, G.V.

Radiation study of the role of nuclei in the increase of cytochrome oxidase activity in fish embryos. Biokhimiia 27 no.2:339-348 Mr-Apr '62. (MIRA 15:8)

1. Institute of Animal Morphology, Academy of Sciences of the U.S.S.R., Moscow.

(CYTOCHROME OXIDASE) (EMBRYOLOGY--FISHES)
(RADIATION--PHYSIOLOGICAL EFFECT) (CELLNUCLEI)

L 22187-62 EWF(m)/EPF(o)/1 Pr-A WE

ACCESSION NR: AR4049261

S/0081/64/000/016/E064/E064

SOURCE: Ref. zh. Khimiya, Abs. 16E115

AUTHOR: Yatsenko, Ye. F.; Dontsova, G. M.; Gorbunova, I. Ye. B

TITLE: Physical and chemical properties of crudes from new Carpathian deposits //

CITED SOURCE: Tr. Ukr. n. -i. geologorazved. in-t. vy* p. 7. 1963, 233-241

TOPIC TAGS: petroleum prospecting, Carpathian crude, Carpathian natural gas, low sulfur crude, paraffinic crude, tarry crude

TRANSLATION: The authors studied a number of recently discovered petroleum deposits located at depths of 1000-1500 and 2000-3000 m. The specific gravity for all the crudes ranged from 0.816 to 0.870. Crudes from the Staryavy and Ulichno deposits were light ($d_{20}^{20} = 0.81$ to 0.82); those from the Voli-Blazhevskaya, Orovskaya, Spasskaya, Struten'skaya (menilitic series) and Dolina

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L 22187-55

ACCESSION NR: AR4049261

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(eocene) deposits were medium (0.83 to 0.85), while crudes from the remaining fields were heavy. Comparatively low viscosity and high solidification points (+10, +22C) were characteristic for all the crudes, a fact determined by a high content of paraffin. Crudes from Staryavy were the exception with a solidification point below -17C. Menilitic crude from Boristav contained the highest amount of light hydrocarbons, while those from Ulichno and Dolina had the highest light fraction content. Foreign elements (S, N and O) did not exceed 2% for all the crudes except the eocene crude from Dolina and menilitic crude from Ol'khovka, in which they ranged above 2%. S = 0.2 to 0.5%, N and O = 0.2 to 1.8%. Gasoline ranged from 5 to 28%, kerosene from 20 to 38%. All crudes with the exception of those from Staryava and Ol'khovka were paraffinic, and all except those from Staryava and Ulichno were tarry (5-10%). In addition to concentrations of crude, a natural gas deposit was found at eocene levels of the inner zone of a depression in the Bitkovskaya Ciluhinnaya formation. Natural gas was taken from the same deposits on the Servo-Dolinskaya fold (sp. gr.

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