ZIL'BERSHTEYN, Kh. I.

FD-3188

USSR/Physics - Spectral Analysis

Card 1/1 Pub. 153-18/21

Author : Zil'bershteyn, Kh. I.

Title : On some methods of spectral analysis of solutions

Periodical: Zhur. tekh. fiz., 25, No 8 (August), 1955, 1491-1507

Abstract : The author reviews the customary methods of spectral analysis of solutions. He discusses the effectiveness of various methods of fixing the dry residue of a solution in a carbon electrode and presents a tabular comparison of these methods. He discusses means for increasing the sensitivity of an analysis by lowering arc temperature. He comments on the influence of extraneous elements on the results of quantitative analysis. He investigates the process of the burning out of the dry residue of a solution in an activized variable current carbon arc.

Submitted : December 23, 1954

ZILBERSHTEYN, Kh. I., PIRYUTKO, M. M., NIKITINA, O. N., and SOMOV, M. P.

"Spectroscopic analysis of highly pure silicon after preconcentration"

report to be submitted for the Intl. Symposium on Pure Substances in Science and Technology, East German Chemical Soc., Dresden, East Germany
30 November - 2 December 1961

S/054/62/000/004/013/017
B101/B186

AUTHORS: Morachevskiy, Yu. V. (Deceased), Zil'bershteyn, Kh. I., Piryutko, M. M., Nikitina, O. N.

TITLE: The process of chemical concentration used for the spectroscopic analysis of impurities in high-purity silicon

PERIODICAL: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 4, 1962, 140-145

TEXT: The authors developed a method of analyzing high-purity silicon, based on a treatment of Si with HF and HNO_3 vapor and spectroscopic analysis of the concentrate (ZhAKh, 17, no. 5, 614, 1962). In the present work it was checked whether (a) the silicon sample is contaminated by impurities contained in the acids; (b) the impurities contained in the silicon pass completely into the concentrate; (c) the quantitative spectroscopic analysis of the impurities is affected by what type of compound is present as impurities in the concentrate. Results: (1) HF and HNO_3 were contaminated by Tl^{204}, Zn^{65}, As^{76}, Ni^{63}, Sb^{124}, P^{32}, In^{114}, Ag^{110}, Ga^{72}, Fe^{59}, Ca^{40}, Cu^{64}, Sn^{122}, and evaporated at 105-110°C. The residue was dissolved in

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The process of chemical concentration...

in HNO_3 and the activity of the solution measured. It was found that the impurities contained in HF and HNO_3 did not pass into the vapor and did not contaminate the silicon. (2) When Si is dissolved in liquid acids, all impurities contained in the acid pass into the concentrate and the determination becomes much less sensitive. (3) Using radioisotopes for chemical and spectrum analyses it was found that the impurities contained in Si passed completely into the concentrate (except for the volatilizing As, Sb, and P) if Si was dissolved by acid vapor, regardless of the form taken by the impurities in Si (as metal, silicide, etc.). (4) After dissolution of Si most of the impurities form fluorides, but some of them (Cu, Ni) form nitrates or mixtures of nitrates and fluorides. (5) A precise quantitative spectroscopic analysis of the end concentrate of impurities is possible with the aid of aqueous standard solutions of nitrates of the elements to be determined. There are 3 tables.

SUBMITTED: June 10, 1961

MORACHEVSKIY, Yu.V. [deceased]; ZIL'BERSHTEYN, Kh.I.; PIRYUTKO, M.M.; NIKITINA, O.N.

Spectral determination of impurities in semiconductor silicon after a preliminary chemical concentration. Zhur.anal.khim. 17 no.5: 614-620 Ag '62. (MIRA 16:3)

1. Institute of Silicate Chemistry, Academy of Sciences, U.S.S.R., Leningrad.
(Silicon) (Semiconductors—Spectra)

MORACHEVSKIY, Yu.V. [deceased]; ZIL'BERSHTEYN, Kh.I.; PIRYUTKO, M.M.; NIKITINA, O.N.

Processes of chemical concentration used for the spectral determination of impurities in an extrapure silicon. Vest. LGU 17 no.22:140-145 '62. (MIRA 15:12)
(Silicon—Analysis) (Spectrochemistry)

S/032/62/028/001/002/017
B125/B138

AUTHORS: Zil'bershteyn, Kh. I., Kaliteyevskiy, N. I., Razumovskiy, A. N., Fedorov, Yu. F.

TITLE: Hollow-cathode discharge for analysis of impurities in silicon

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 1, 1962, 43-45

TEXT: The authors studied the spectrum analysis of impurities in silicon with the aid of a hollow thermionic cathode. These impurities were concentrated by treating Si powder with fluoric and nitric acid vapors on a teflon film. Teflon films with a standard and with the test specimen were put at the bottom of a hollow carbon cathode which was heated to 550°C. On complete volatilization of the teflon specimen and standard became attached to the bottom of the cathode. The spectra were taken by a hollow-cathode discharge in a helium current (10 - 15 mm Hg, discharge amperage 900 ma), using an ИСП-22 (ISP-22)-spectrograph and type СП-2(SP-2) photographic plates. The spectral lines of both the volatile and non-volatile impurities had maximum intensity at 800 - 1000ma.

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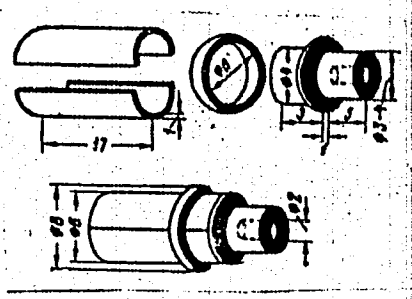
Since the impurity elements in the teflon could not be determined accurately enough by the present method the silicon powder contained in the two half cylinders of a hollow cathode (Fig. 1) was pretreated by acid vapors. The impurity concentrate was attached to the interior of the cathode by two drops of a solution of polystyrene in benzene. Discharge in a composite hollow cathode takes place in the same way as in an ordinary one. The spectral lines of the volatile impurities Zn, Pb, In have maximum intensity at 400 - 600 ma, but remain almost constant when the amperage is further increased. Those of the less volatile impurities Fe, Ni, Mn, Mg and others have maximum intensity at 800 - 1000 ma. The totality of the elements was therefore determined at 800 - 900 ma with a 2 min discharge. Screens between the cathodes prevented undesirable side effects. Under the conditions described, the absolute accuracy of quantitative analysis is $3\text{-}5\cdot10^{-10}$ g Ag, Mn, Cu; $6\cdot10^{-10}$ g Ga, In; $(3\text{-}5)\cdot10^{-9}$ Gg Al, Ni; $(6\text{-}7)\cdot10^{-9}$ g Mg, Fe. The accuracy of the Mg, Al, Fe, Cu determination depends on the traces of these elements in the cathode material. Reproducibility is poor. The measuring arrangement is similar to that of Yu. I. Korovin, L. V. Lipis (Optika i spektroskopiya, 5, 3, 334

(1958)). The present paper was the subject of a lecture delivered at the soveshchaniye po spektroskopii (Conference on Spectroscopy) in July 1961 in Gor'kiy. Kh. I. Zil'bershteyn, Priryutko et al. (Zavodskaya laboratoriya, XXV, 12, 1474 (1959)) are referred to. There are 2 figures and 2 Soviet references.

ASSOCIATION: Institut khimii silikatov (Institute of Silicate Chemistry)

Fig. 1: hollow cathode used for analysis (dimensions in mm).

FIG. 1



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S/032/62/028/006/011/025
B101/B138

AUTHORS: Zil'bershteyn, Kh. I., Piryutko, M. M., Nikitina, O. N., and Fedorov, Yu. F.

TITLE: Techniques of the spectrochemical analysis of semiconductor silicon

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 6, 1962, 680 - 682

TEXT: The spectrochemical analysis of semiconductor silicon already described (Zavodskaya laboratoriya, v. 25, no. 12, 1474 (1959)) is supplemented by some data. (1) The prevention of contamination of the samples during pulverization was investigated. Comparison of silicon monocrystal plates, agate, piezoquartz and leucosapphire as pulverizers showed that contamination by Cu, Ca, Al, Mg, Fe and Ni is prevented only with silicon monocrystals. (2) Initial crushing of the sample occurred by crushing the crystal wrapped in a ftoroplast-4 (fluoroethylene) film between ftoroplast plates in a hydraulic press. (3) The solutions of the nitrates of the elements to be investigated, used as standards, were found to remain unchanged after storage for seven months in polyethylene bottles.

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Techniques of the...

S/032/62/028/006/011/025
B101/B138

(4) Spectral analysis of ftoroplast-4 and polyethylene showed that the first-named polymer contains fewer impurities (Al, Ca, Mg, Fe, Cu, Si). (5) The preparation of thin-walled electrodes by means of a hollow-cylindrical cutter with central drill is described. The cutter grinds the electrode to 4 mm diameter and the drill makes a hole of 3.5 mm diameter. Output of the device: 40 - 60 electrodes per hr. There are 1 figure and 3 tables.

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR (Institute of Silicate Chemistry of the Academy of Sciences USSR)

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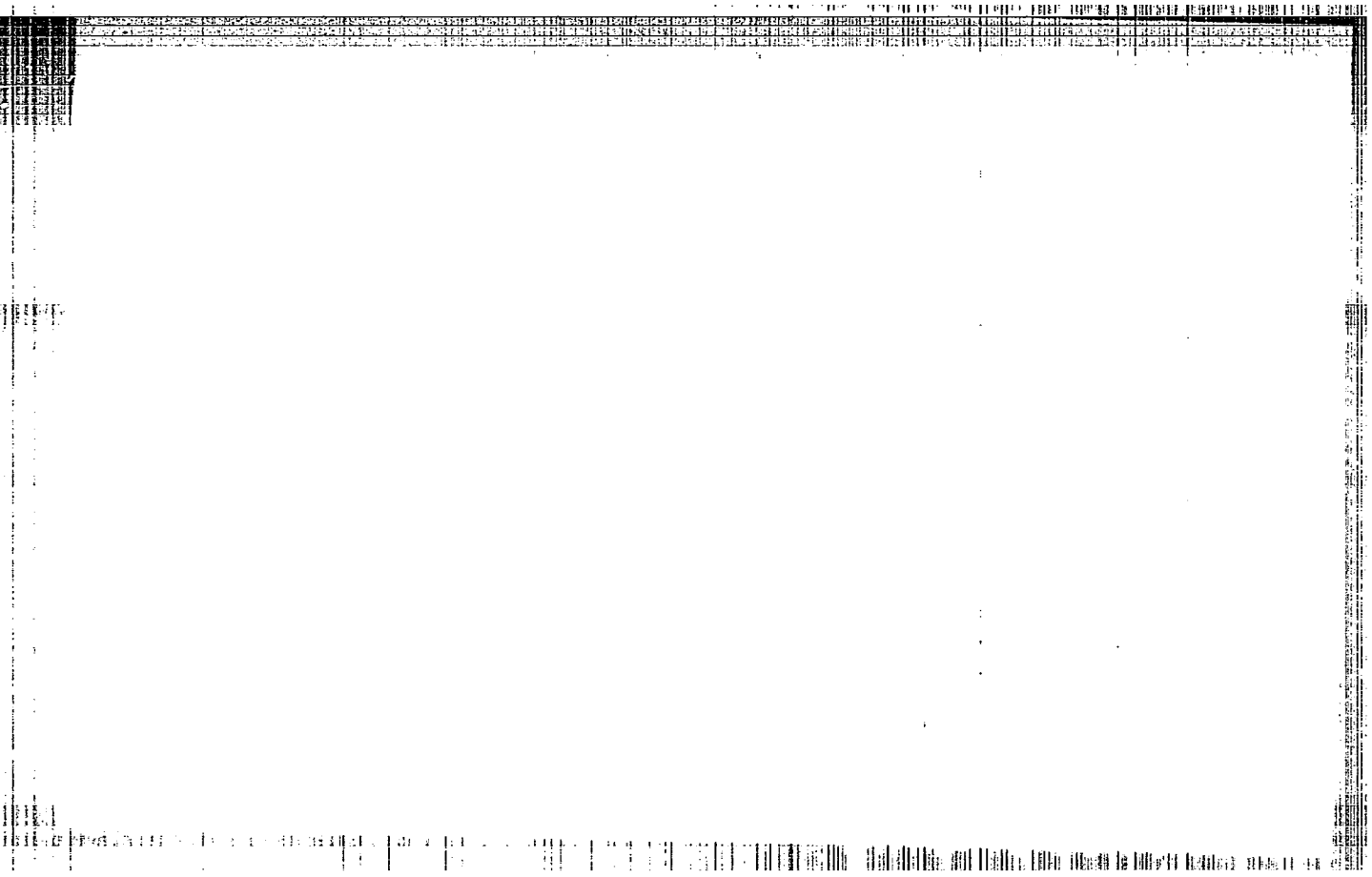
ZIL'BERSHTEYN, Kh.I., kand.fiziko-matematicheskikh nauk

"Emission spectral analysis of atomic source materials" by A. N. Zaidel' and others. Reviewed by Kh.I.Zil'bershtein. Zav.lab. 28 no.8:1022-1023 '62. (MIRA 15:11)

(Spectrum analysis) (Zaidel', A.N.)



APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R002065120020-3"

L 2122-66 EWT(l)/EWP(e)/EWT(m)/EPF(c)/EWP(i)/EPR(n)-2/EWP(t)/EWP(b) IJP(c)
JD/WW/GG/WH
ACCESSION NR: AP5024556 UR/0070/65/010/005/0727/0731
548.0

AUTHOR: Zil'bershteyn, Kh. I.; Ioffe, V. A.; Fedorov, Yu. F.

TITLE: Electron paramagnetic resonance in irradiated monocrystals of quartz with aluminum impurities

SOURCE: Kristallografiya, v. 10, no. 5, 1965, 727-731

TOPIC TAGS: irradiation, radiation damage, quartz, EPR, electron paramagnetic resonance, x ray

ABSTRACT: The EPR was investigated in natural and synthetic single crystals of quartz containing different amounts of aluminum impurities. Samples 6 x 4 x 2 mm were irradiated at room temperature with a dose of 10^4r, which was sufficient to cause saturation in all samples. The EPR spectrum (first derivative of the absorption curve) was recorded at both 77K and at room temperature (see Figs. 1 and 2 of the Enclosure). At room temperature when H||C the width of the main peak was 15.9 oe and g was 2.00; the width of the satellites was 3 oe and g was 1.97 and 2.02 oe. When the crystal was oriented in a different direction the satellites disappeared. The structure and the shape of the central peak changed, but the g-factor remained practically constant. The EPR spectrum at 77K (Fig. 2) was almost

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ACCESSION NR: AP5024556

identical to that observed by J. H. E. Griffiths et al (Report of the Bristole Conference on Defects in Crystalline Solids, Physical Society, London, 1955, p. 51) at 20K. The group of equidistant lines was attributed to a hole center associated with aluminum and was described by the spin-Hamiltonian and the values of constants determined in the above-quoted paper by Griffiths. The maximum value of the g-factor of the second group of lines observed at 77K during rotation about the vertical axis was 2.021; the minimum value was 2.004. The nature of this signal is unknown. It was found that the intensity of the EPR signal observed at 77K decreased linearly with increasing annealing temperature, becoming zero at 350C. The color of the crystal changed in the same manner. Orig. art. has: 6 figures.

[CS]

ASSOCIATION: Institut khimii silikatov AN SSSR (Institute of the Chemistry of Silicates, AN SSSR)

SUBMITTED: 01Jul64 ENCL: 02 SUB CODE: SS,MP

NO REF SOV: 003 OTHER: 004 ATD PRESS: 4113

Card 2/4

L 2122-66

ACCESSION NR: AP5024556

ENCLOSURE: 01

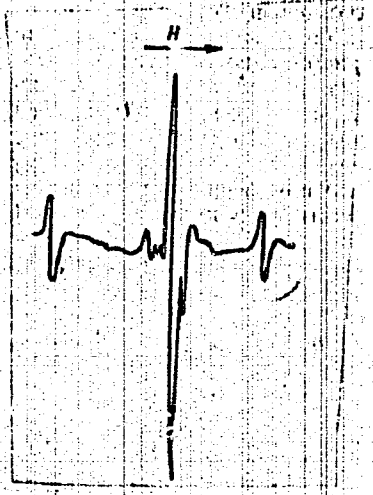

Fig. 1. EPR spectrum of irradiated quartz at T = 300K, H || C

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L 2122-66

ACCESSION NR: AP5024556

ENCLOSURE: 02

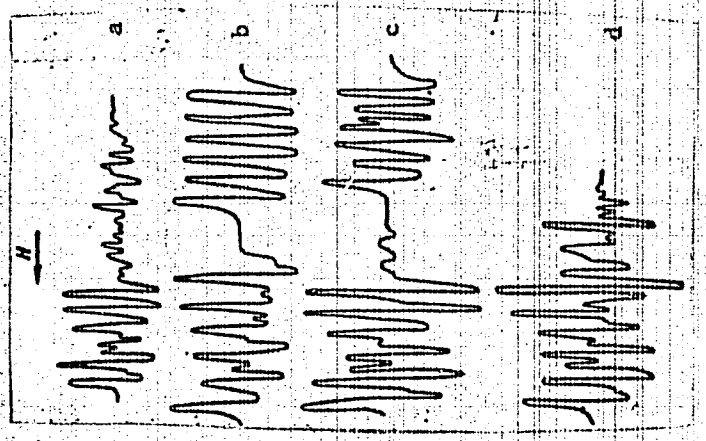

Fig. 2. EPR spectrum of irradiated quartz at T = 77K

a - H||C; the angle between H and C is: b - 45°; c - 58°; g - 150°.

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ZIL'BERSHTEYN, Kh. I.

The Second All-Union Conference on the Preparation and Analysis of High-Purity Elements, held on 24-28 December 1963 at Gorky State University im. N. I. Lobachevskiy, was sponsored by the Institute of Chemistry of the Gorky State University, the Physicochemical and Technological Department for Inorganic Materials of the Academy of Sciences USSR, and the Gorky Section of the All-Union Chemical Society im. D. I. Mendeleyev. The opening address was made by Academician N. M. Zhavoronkov. Some 90 papers were presented, among them the following:

Kh. I. Zil'bershteyn, O. N. Nikitina, and M. P. Semov. Spectrochemical determination of some impurities in silicon dioxide, with a sensitivity of 3×10^{-7} to 3×10^{-6}% for most of them.

(Zhur. Anal. Khim, 19 No.6, 1964 p.777-79)

ZIL'BERSHTEYN, Kh.I.; PIRYUTKO, M.M.; NIKITINA, O.N.; FEDOROV, Yu.F.; NENAROKOV, A.V.

Rapid chemical concentration of silicon in the preparation of samples for spectral analysis. Zav. lab. 29 no.10:1266-1267 '63. (MIRA 16:12)

1. Institut khimii silikatov AN SSSR.

ZIL'BERSHTEYN, Kh.I.; NIKITINA, O.N.

Effect of nitric acid on the results of the spectral analysis of solutions. Zav.lab. 29 no.11:1323 '63. (MIRA 16:12)

1. Institut khimii silikatov AN SSSR.

ZIL'BERSHTEYN, Kh.N.

Nerves in benign arachnoidendotheliomas of the cerebral hemispheres. Vopr. neirokhir. 20 no.1:40-45 Ja-F '56. (MLRA 9:6)

1. Iz Ukrainskogo nauchno-issledovatel'skogo psikhonevrologicheskogo instituta.

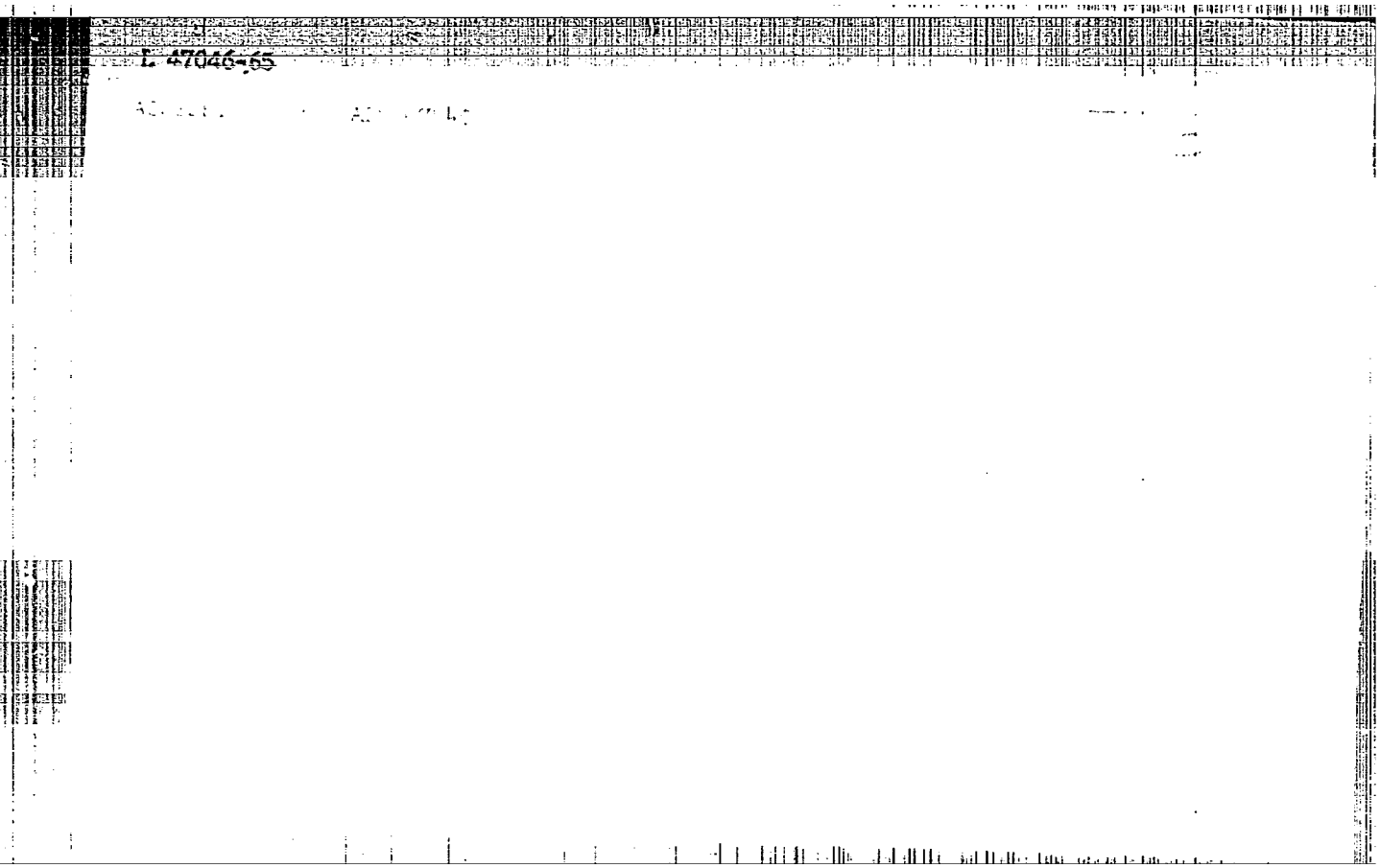
(MESOTHELIOMA
arachnoid, nerves in)
(ARACHNOID, neoplasms
mesothelioma, nerves in)

ZIL'BERSHTEYN, Kh. N., Doc of Med Sci -- (diss) "Pathological Anatomy and Pathogenesis of the Residual Period of a Cranial Trauma," Khar'kov, 1959, 31pp (Khar'kov State Medical Institute) (KL, 1-60, 124)

L 4[illegible]-65 EWT(m)/EWP(t)/EWP(b) LDP(d) JD

ACCESSION NR: AP[illegible] S/[illegible]/[illegible]/[illegible]/[illegible]/[illegible]

TITLE: Some questions in the spectral analysis of silicon by the evaporation method



S/812.61/000/005/002/005

AUTHORS: Dyatlova, V. P., Candidate of Technical Sciences, Gryzlova, P. G., Stolyar, N. M., Engineers, Akishina, R. I., Zil'bershteyn, K. Ya., Technicians.

TITLE: Application of indene-coumarone resins in adhesive compounds for polymer surface coverings.

SOURCE: Akademiya stroitel'stva i arkhitektury SSSR. Institut novykh stroitel'nykh materialov. Sbornik trudov. no.5. 1961. Novyye stroitel'nyye polimernyye materially. pp. 75-81.

TEXT: The paper describes experimental work which establishes the effectiveness of indene-coumarone-resin- (ICR)-based mastics (M) of various types. Unmodified resins yield stiff M suitable for the attachment of polystyrene (PS) facing panels; the strength of the mastic depends on the type of resin employed. ICR-based M modified with chloroprene rubber become elastic and suitable for the gluing of polyvinylchloride (PVC) articles. The ICR polymers under discussion are obtained from the heavy fraction of heavy benzol derived from hard coal. Various ICR's, having differing softening T and color, are obtained, depending on raw material, polymerization, and catalyzer. The All-Union Standard GOST 9263-59

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provides for 6 lettered (A through Ye) types graded by softening T and 5 numbered (Roman numerals) "marks" graded by color. Both characteristics are governed by the molecular weight and the composition, which affect their chemical and physico-mechanical properties also (chemical stability, water-resistance, workability, adhesive and dielectric properties). High-T light-colored ICR are less soluble, stronger in compression, harder, and more brittle. Dark ICR are soluble in white spirit and are more elastic but mechanically less strong. Antecedent uses of ICR and ICR mastics are summarized. In 1958-1960 the Institute of New Building Materials undertook a project for the development of ICR mastic in "pure" and modified form for the attachment of polymer surface coverings. Mastics for polystyrene panels: These M are based on the principle of "like sticks to like." PS and ICR are chemically similar, their monomers are homologs, both are nonpolar and have several solvents in common. The following M was developed for adhesion of PS panels to a cement-sand underflooring (in parts of weight): ICR 1, petroleum solvent 0.6, dibutylphthalate 0.4, pulverized lime 5. The ICR is dissolved in the petroleum with addition of the plastifier; the liquid M components are then mixed with the lime filler. Tests show that M which maintain adhesion strength (0.5 kg/cm^2 in spalling tension) without loss due to humidity and high T can be made from ICR having an elevated softening T. The hardness of the adhesive layer when dry does not affect its adhesiveness unfavorably.

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Mastics for PVC linoleum and tiles without backing: The Institute experimented with ICR's modified by a relatively small quantity of chloroprene rubber (neoprene) and special rolling procedures for the mixture of ICR, rubber, and kaolin. The essence of the mechanical treatment appears to be the destruction of the polymer chains and the formation of free radicals which afford new, previously nonexisting, properties, such as adhesiveness relative to polar materials and elasticity, both of which are essential in the gluing of PVC materials. The proposed M contains (in weight percent): ICR 20, neoprene 5, solvent (ethylacetate: gasoline – 2:1) 30, plastifier 5, filler 40. The ICR and the kaolin are mixed with neoprene on rolls, whereupon the mass obtained is dissolved in a mixture of the volatile organic solvents and the plastifier. The shear strength of the M obtained was found to depend strongly on the type of ICR used with a given rubber content. M with high-T ICR, for example, affords achievement of a shear strength of 5 kg/cm^2 after only 24 hrs setting time. Tricresylphosphate and dibutylphthalate were the most effective plastifiers (comparison tabulated). The indispensability of the use of volatile organic solvents (e.g., ethylacetate and gasoline) to improve the setting of the adhesive is explained. An increase in neoprene content reduces the shear strength. A test batch of coumarone-rubber M was produced by the Mytishchi Kombinat of Synthetic Building Materials and Products and was tested on building projects of Glavmosstroy (at Khoroshevo-Mnevniki, the House-building Kombinat

no.69, et al.), with favorable results. Comparative adhesion (shear) strength data are graphed for the subject M versus other M commonly employed in the building trades. There are 3 figures, 1 table, and 4 Russian-language Soviet references.

ASSOCIATION: None given.

DYATLOVA, V. P., kand. tekhn. nauk; GRYZLOVA, P. G., inzh. STOLYAR, N. M., inzh.; AKISHINA, R. I., tekhnik; ZIL'BERSHTEYN, K. Ya., tekhnik

Use of indene-coumarone resins in adhesive compositions for finishing polymer materials. Sbor. trud. VNIINSM no.5:75-81 '61. (MIRA 15:10)

(Resins, Synthetic) (Adhesives)

SOV/137-59-2-4322

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 2, p 284 (USSR)

AUTHORS: Zhukovskiy, B. D., Zil'bershteyn, L. I., Manevich, F. D.

TITLE: Technological Properties of Resistance-welded Pipes (Tekhnologicheskiye svoystva elektrosvarnykh trub, izgotovlyayemykh metodom soprotivleniya)

PERIODICAL: Byul. nauchno-tekhn. inform. Vses. n.-i. trubnyy in-t, 1958, Nr 4-5, pp 101-106

ABSTRACT: In accordance with the specifications of the GOST 1753-53 standard, electrically-welded pipes (P) are supplied in annealed as well as in the untreated state. Flattening tests were carried out on specimens of untreated and annealed pipes (63 mm in diameter and a wall thickness up to 2.5 mm) made of Steel 10 and on untreated pipes 70-152 mm in diameter with a wall thickness of 5 mm; tests involving a 6% expansion accomplished with a cone-shaped mandrel were performed on annealed and untreated pipes with diameters up to 51 mm as well as on untreated pipes with diameters ranging from 89 to 114 mm. Both types of tests demonstrated that the ability of the pipe to withstand flattening and expansion tests without weld failure is significantly enhanced by

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annealing. Experimental flanging indicated that annealed electric-welded pipes may be employed in installations requiring flanged coupling of pipes. In many instances, the results of flattening tests, expansion with a cone-shaped mandrel, and flanging of electrically-welded pipes satisfy the requirements imposed upon the technological properties of seamless pipes; the author is, therefore, of the opinion that seamless pipes may be expediently replaced by electrically-welded pipes in manifold industrial applications.

Ye. T.

ZIL'BERSHTEYN, L.I., kand. tekhn. nauk; BONGART, A.G., kand. ekonom. nauk; SHKABATUR, K.I., inzh.; MIZERA, V.I., inzh.; VOL'PER, Yu.D., inzh.

Metal consumption coeffficients in the production of small and medium diameter, electrically welded pipe. Proizv. trub no.10:62-66 '63. (MIRA 17:10)

ZHUKOVSKIY, B.D., kand. tekhn. nauk; ZIL'BERSHTEYN, L.I., kand. tekhn. nauk; MIZERA, V.I., inzh.; PETRUNIN, Ye.P., inzh.; TAT'YUK, G.Z., inzh.; Prinimali uchastiye: MATLAKHOV, L.I.; NECHIPORENKO, M.I.; DUPLIY, G.D.; GAPICH, V.I.; FATEYEVA, A.F.; DYN'KO, N.M.; LUGOVENKO, I.P.; DEM'YANOV, B.M.; POSTIL, I.S.; BEZRODNYKH, I.Ya.

Investigating the possibility of manufacturing welded tube blanks for cold forming. Proizv. trub no.11:67-72 '63. (MIRA 17:11)

ZIL'BERSHTEYN, L.I., kand. tekhn. nauk; VDOVIN, F.V., kand. tekhn. nauk; PETRUNIN, Yu.P., inzh., KOBUS, A.A., inzh.

Development of technically founded standards for the technological testing of electrically welded pipe. Proizv. trub no.10:66-70 '63. (MIRA 17:10)

ACC NR: AR6035421 SOURCE CODE: UR/0137/66/000/009/D043/D043

AUTHOR: Zhukovskiy, B. D.; Zil'bershteyn, L. I.; Yankovskiy, V. M.; Petrunin, Ye. P.; Guzevataya, L. I.

TITLE: Preparation of welded titanium tubing stock for cold working

SOURCE: Ref. zh. Metallurgiya, Abs. 9D281

REF SOURCE: Sb. Proiz-vo trub. Vyp. 16. M., Metallurgiya, 1965, 53-58

TOPIC TAGS: titanium, seam welding, weld defect, heat treatment, temperature dependence, cold working, flaw detection

ABSTRACT: To determine the continuity of the welded seam, the samples were subjected to x ray flaw detection, which showed that there were no flaws in the welded seam. The samples of the obtained tubes withstood tests for flattening until the tube walls came in contact. To eliminate residual stresses occurring during the manufacture of the welded tubes, heat treatment must be employed. The influence of the tube heat-treatment temperature on the residual stresses was investigated in the temperature interval 550 - 750° in steps of 50°. After determining by the method of N. N. Davidenkov the residual stresses in tube samples annealed at different temperatures, the authors established that heat treatment at 700 - 750° eliminates the stresses almost completely. Cold reworking of the obtained tube to dimensions 60 x 0.16, 48 x 0.4, and 48 x 0.2 mm has shown that the metal consumption is appreciably reduced and the number of passages is less than in cold working of seamless tubes, thus providing the

Card 1/2 UDC: 621.774.21: 621.791.7

ACC NR: AR6035421

advantages of using welded tubes of technical titanium as stock parts. 5 illustrations, 1 table. L. Kochenova [Translation of abstract]

SUB CODE: 11, 13

Card 2/2

ZHUKOVSKIY, B.D., kand.tekhn.nauk; ZIL'BERSHTEYN, L.I., kand.tekhn.nauk; MIZERA, V.I., inzh.

Effect of electrode diameter on the process of butt-seam welding of pipes. Svar.proizv. no.7:11-13 Jl '60. (MIRA 13:7)

1. Ukrainskiy nauchno-issledovatel'skiy trubnyy institut. (Pipe—Welding) (Electrodes)

SOV/137-59-2-4321

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 2, p 284 (USSR)

AUTHORS: Zil'bershteyn, L. I., Manevich, F. D.

TITLE: The Effect of In-plane Curvature in Metal Strips on the Quality of Electrically-welded Pipes (Vliyaniye serpovidnosti lenty na kachestvo elektrosvarnykh trub)

PERIODICAL: Byul. nauchno-tekhn. inform. Vses. n.-i. trubnyy in-t, 1958, Nr 4-5, pp 106-112

ABSTRACT: In-plane curvature (C) of strips or sheets of metal intended for manufacture of pipes results in misalignment of edges of individual sections along the pipe (P) as well as in burned spots on its exterior surface. The effects of various degrees of C of the strip on the quality of finished P's were investigated during welding of P's 89 mm in diameter having a wall thickness of 2.5 mm. The P's were fabricated by welding from a strip, the C of which ranged from 7 to 30 mm and from 80 to 130 mm over a length of 10 m (or, as reduced to a length of 1 m, the C amounted to 0.07-0.3 and 0.8-1.3 mm, respectively). Even in the case of relatively small C, only 2/3 of the total length of the finished P exhibited a satisfactory exterior surface. The

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The Effect of In-plane Curvature in Metal Strips on the Quality of (cont.)

following values of the C of strips intended for manufacture of P's in continuous electric pipe-welding stands are considered permissible (the C being referred to a 10-meter length). At a strip thickness up to 1.5 mm and a width of up to 300 mm, 4 mm; at widths ranging from 300 to 500 mm, 2 mm. At a strip thickness from 1.5 to 2.5 mm, for the same width range, the C may amount to 10 and 8 mm, respectively; for a thickness ranging from 2.5 to 6.0 mm, the C may constitute 50 and 35 mm.

Ye. T.

Card 2/2

ZHUKOVSKIY, B.D.; ZIL'BERSHTEYN, L.I.; OSADA, Ya.Ye.; CHEKMAREV, A.P.

[Electric welding of pipes by the resistance method] Proizvodstvo trub elektrosvarkoi metodom soprotivleniia. Pod.red. A.P.Chekmareva. Moskva, Gos.nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1953. 461 p. (MLRA 7:6)

1. Deystvitel'nyy chlen AN Ukrainskoy SSR (for Chekmarev).
(Electric welding) (Pipe--Welding)

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S/135/60/000/007/003/014
A006/A002

18.7200

AUTHORS: Zhukovskiy, B.D., Candidate of Technical Sciences, Zil'bershteyn, L.I., Candidate of Technical Sciences, Mizera, V.I., Engineer

TITLE: The Effect of the Electrode Diameter on Roller-Butt Welding Pipes

PERIODICAL: Svarochnoye proizvodstvo, 1960, No. 7, pp. 11-13

TEXT: For the purpose of increasing the welding speed without raising the current frequency in roller-butt welding the authors investigated the possibility of increasing the length of the welding seat and consequently the actual welding time. The study of phenomena occurring in the welding seat shows that its length depends to a considerable degree on the electrode diameter. Calculations prove that the length of the welding seat increases particularly intensively if the electrode diameter is enlarged to 500-600 mm. Pipe welding tests with electrodes of 500-550 mm in diameter were carried out on a "6-30" welding machine at the Moskovskiy trubnyy zavod (Moscow Pipe Plant) Workers of the Plant, Engineers Ye.N. Khoroshev, R.V. Golovkin, and V.I. Kononova, participated in the experiments. Grade "10" steel pipes of 17 x 1 mm dimensions were welded in 23 variants at a current frequency of 50 cycles. Welding was performed at the same speed on 4-5 autotransformer steps in such a manner that the supplied power varied within the

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The Effect of the Electrode Diameter on Roller-Butt Welding Pipes

limits of these values causing non-fusion on the one hand and burns of the pipe surface on the other hand. To verify the quality of welding, unannealed pipe specimens were subjected to conic expansion, and flattening until their breakdown. The results of the tests were in agreement with GOST Standard requirements and were used to set up optimum welding conditions (Table 3). The most important conclusion drawn from the experimental investigation is the possibility of increasing the welding speed of electric pipe welding machines by using large-diameter electrodes, without increasing the current frequency. Such an increase in the speed may be developed on the "10-60" and "51-152" machines without any important modifications in their design. At the Yuzhnotrubnyy metallurgicheskiy zavod (Yuzhnotrubnyy Metallurgical Plant) at Nikopol', "10-60" welding machines were converted to a maximum welding speed of 45 m/min instead of 32 m/min without increasing the current frequency. Pipes of 15x1.25 and 20x1.5 mm were welded at a speed of 45 m/min and pipes of 22x2; 29x2, and 32x2.0 mm at a speed of 40 m/min. Hydraulic tests yielded satisfactory results. There are 2 figures, 3 tables and 3 Soviet references.

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

ZIL'BERSHTEYN, L.I.

137-58-3-5345

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 125 (USSR)

AUTHORS: Yankovskiy, V.M., Zil'bershteyn, L.I., Kurdyumova, G.G.

TITLE: The Effect of the Microstructure of a Strip on the Quality of Pipes Manufactured by Resistance Welding (Vliyaniye mikrostruktury lenty na kachestvo trub izgotovlennykh elektrosvarkoy soprotivleniyem)

PERIODICAL: Byul. nauchno-tekhn. inform. Vses. n.-i. trubnyy in-t, 1957, Nr 3, pp 39-47

ABSTRACT: Studies were performed in order to establish how the quality of welded pipe seams is affected by the microstructure of the original strip. It is noted that microstructural nonuniformity in the welded seam is attributable to the kinetics of phase transformations, caused by the great heating rates in the process of welding. The transformation proceeds in the manner of a non-diffusive transition from an α to a γ iron lattice with subsequent dissolution of carbides therein. Thus the structure of the welded seam will be determined by the size, shape, and distribution of the carbide particles in the initial structure of the strip. Both laboratory and shop experiments with the weld-

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The Effect of the Microstructure (cont.)

ing of flat specimens and pipes made of steel 10 with different initial microstructure have shown that mechanical and technological properties of the welded seam are adversely affected by the structure of strip edges that contain unequal and unevenly distributed areas of structurally free cementite.

A.P.

MATLAKHOV, L.I.; TATSYUK, G.Z.; CHUKOVSKIY, B.D.; GIL'BERSHTEYN, L.I.

Manufacture of electrically welded pipe without formation of internal burrs. Biul. TSIICHM no.5:48 '61. (MIRA 14:10)
(Pipe, Steel--Welding)

ZHUKOVSKIY, B.D., kandidat tekhnicheskikh nauk; ZIL'BERSHTEYN, L.I., kandidat tekhnicheskikh nauk.

Effect of surface smoothness of tubings upon the quality of tube welding. Vest.mash. 34 no.5:82-84 My '54. (MLRA 7:6)
(Electric welding) (Tubes)

ZIL'BERSHTEYN, I. I.

ZHUKOVSKIY, B.D., kandidat tekhnicheskikh nauk; ZIL'BERSHTEYN, L.I., kandidat tekhnicheskikh nauk; MANEVICH, F.D., kandidat tekhnicheskikh nauk.

Weld quality in tubes made by resistance welding. Stal' 15 no.11: 1011-1015 N '55. (MLRA 9:1)

1.Vsesoyuznyy nauchno-issledovatel'skiy trubnyy institut.
(Pipe, Steel--Welding)

ZIL'BERSHTEYN, L. I.

ZIL'BERSHTEYN, L. I. -- "The Location of Wine-Growing and Specialization of Wine-Growing Regions in the Ukrainian SSR." Min Higher Education USSR. Georgian Order of Labor Red Banner Agricultural Inst. (Dissertation for the Degree of Doctor in Agricultural Sciences).

So.: Knizhnaya Letopis', No. 2, 1956.

ZHUKOVSKIY, B.D., kand.tekhn.nauk; ZIL'BERSHTEYN, L.I., kand.tekhn.nauk; MANEVICH, F.D., kand.tekhn.nauk

Engineering properties of electrically welded pipes hardened by the resistance method. Biul.nauch.-tekh.inform.VNITI no.4/5:101-106 '58. (MIRA 15:1)

(Pipe, Steel--Testing)

ZIL'BERSHTEYN, L.I., kand.tekhn.nauk; MANEVICH, F.D., kand.tekhn.nauk

Effect of the crescent shape of strips on the properties of electrically welded pipes. Biul.nauch.-tekh.inform.VNITI no.4/5: 106-112 '58. (MIRA 15:1)

(Pipe, Steel--Testing)

18(5), 25(1)

SOV/133-59-7-13/15

AUTHOR: Znukovskiy, B.D., Candidate of Technical Sciences, Zil'bershteyn, L.M., Candidate of Technical Sciences Golovkin, R.V., Engineer

TITLE: Resistance Seam-Butt Welding of Pipes by Higher Frequency Currents

PERIODICAL: Svarochnoye proizvodstvo, 1959, Nr 7, pp 42-45 (USSR)

ABSTRACT: The authors present the results of an experimental investigation of the influence of the welding current frequency on the quality of pipe welding seams at different welding speeds. The experiments were conducted on a pipe welding machine of type 20-102 of the Moskovskiy trubnyy zavod (Moscow Pipe Plant) designed for welding tubes with a diameter of up to 102 mm at a maximum welding speed of 60 m/min at a nominal capacity of the rotary transformer of 500 kva. The machine received power from a converter unit consisting of two basic generators, and an auxiliary exciter. The electrical circuit diagram is shown in

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Resistance Seam-Butt Welding of Pipes by Higher Frequency Currents

Fig. 2. The authors remarked that the experimental installation had a number of deficiencies, the analysis of which is beyond the scope of this paper. These deficiencies must be eliminated when developing new converters. The test results depend to a considerable degree on the conditions of the tubes to be welded. Thermal treatment improves considerably the quality of the electrically welded tubes. When welding tubes of 33 x 1.5 mm at a speed of 40 - 50 m/min, a frequency increase to 150 cycles improved considerably the strength of the welding seam. At a speed of 30 m/min a change of the current frequency did not show any essential influences. Increasing the frequency to 300 cycles at welding speeds of 40 - 60 m/min did not produce a noticeable improvement of welding seam strength. When welding tubes of 33 x 2.5 mm at a speed of 30 - 50 m/min, an increase of the welding seam strength is observed when increasing the frequency to 100 cycles. A further frequency increase reduced the

Resistance Seam-Butt Welding of Pipes by Higher Frequency Currents

strength of the seam. A considerable strength reduction of the seam was observed when welding tubes of 45 x 3 mm at a speed of 40 m/min at a frequency increased to more than 100 cycles. At welding speeds of 20 - 30 m/min, a frequency change within the range of 50 - 200 cycles did not have an essential influence on the strength of the seam. Welding tubes of 102 x 2.0 mm showed that, at a speed of 20 - 30 m/min, an increase of the current frequency to 150 cycles does not produce a considerable change of the welding seam strength. But already at a speed of 30 m/min, some reduction of the strength was noticed, at a frequency higher than 100 cycles. Consequently, when welding tubes on the machine type 20 - 102 with a speed of 30 - 60 m/min, the best results, according to technological tests, were obtained at frequencies ranging from 100 - 150 cycles. This conclusion does not mean in any way that a further increase of the frequency is not to be made in principle. There are no founda-

Resistance Seam-Butt Welding of Pipes by Higher Frequency Currents

tions for assuming that a frequency increase to 300 - 350 cycles will lead to a reduction of the welding seam strength as this was observed in the authors' experiments. The authors present the test results in 9 graphs and 1 table. The experiments further showed that a continuous frequency control is not necessary. It is sufficient to increase frequency range at intervals of 50 cycles. It may be assumed that the application of welding transformers with small electrical losses will facilitate the application of converters with an uncontrolled frequency of 150 cycles. There are 1 photograph, 1 circuit diagram, 9 graphs, 1 table and 3 references, 2 of which are Soviet and 1 English.

ASSOCIATION: UkrNITI Moskovskiy trubnyy zavod (Moscow Pipe Plant)

POZDNYAKOV, N.; DEGTYAREV, A.; KOPYLOV, I.; KHOKHLOV, L.; ZIL'BERSHTEYN, M.

Our proposals. Den. i kred. 15 no.5:2-18 My '57. (MLRA 10:6)

1. Upravlyayushchiy Leningradskoy gorodskoy kontoroy Gosudarstvennogo banka (for Pozdnyakov). 2. Upravlyayushchiy Moskovskoy oblastnoy kontoroy Gosudarstvennogo banka (for Degtyarev). 3. Upravlyayushchiy Sverdlovskoy oblastnoy kontoroy Gosudarstvennogo banka (for Kopylov). 4. Latviyskaya respublikanskaya kontora Gosudarstvennogo banka (for Khokhlov and Zil'bershteyn).
(Banks and banking)

ZIL'BERSHTEYN, M.B., inzh.; MOROKOV, P.K., inzh.; KAZANTSEV, V.N., inzh.

Utilizing the potentialities of operating open-hearth furnaces.
Stal' 20 no.11:984-988 N '60. (MIRA 13:10)
(Open-hearth furnaces)

SOV/137-58-8-16482

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 36 (USSR)

AUTHORS: Zarvin, Ye.Ya., Zil'bershteyn, M.B.

TITLE: On the Rate of Absorption of Hydrogen From Furnace Gases (O skorosti pogloshcheniya vodoroda iz pechnykh gazov)

PERIODICAL: Tr. Sibirsk. metallurg. in-ta, 1957, Nr 4, pp 58-68

ABSTRACT: Gases evolving from molten metal in furnaces of 185- and 370-t capacity were withdrawn by means of a steel bell with no internal lining and with the following dimensions: diameter 220 mm; height 250 mm; wall thickness 6 mm. The gases were stored in a gas-collector unit. The operation of withdrawal of gases required 1-1.5 minutes. The composition of gases collected varied within the following limits: 83.0-97.0% CO, 1.4-8.0% CO_2, 0.6-6.0% H_2, 0-0.6% CH_4, and 0.3-4.0% N_2. The presence of CH_4 indicated that secondary reactions were taking place in the bell and in the flue pipe. According to computations, the intensity of the absorption of H_2 from the flue gases amounted to 0.34 and 0.20 $cm^3/100$ g·min in the 185-t and the 370-t furnace, respectively, at the beginning of the pure-boiling stage and, analogously, 0.51 and 0.40 $cm^3/100$ g·min at the end of that period. A.S.

Card 1/1

1. Furnaces--Properties 2. Hydrogen--Absorption 3. Waste gases --Chemical analysis

ZIL BERSHTEYN, M. B.

137-1958-1-335

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 51 (USSR)

AUTHORS: Zarvin, Ye. Ya., Zil'bershteyn, M.B.

TITLE: Rate of Absorption by Metal of Hydrogen From Furnace Gases (K voprosu o skorosti pogloshcheniya metallom vodoroda iz pechnykh gazov)

PERIODICAL: V sb.: Fiz.-khim. osnovy proiz-va stali. Moscow, AN SSSR, 1957, pp 553-559. Diskus. pp 650-655

ABSTRACT: A study of the rate of absorption by metal of H from furnace gases during melts in basic open hearth furnaces of 185 and 370 ton capacity was made on the basis of data on the H content of the metal and slag, and the results of determinations of the composition and quantity of the gases liberated from the bath. A general view of an installation for removing gas from the metal bath during a heat is adduced. Metal specimens were sampled during the period of boil by immersing steel beakers into the molten bath. Slag samples were taken in a flow viscosimeter. The composition of the gases varied within the following percentual limits in the entire group of heats: CO 83-97, CO_2 1.4-8, H_2 0.6-6, CH_4 0.0-0.6, N_2 0.3-4.0. During the period of

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Rate of Absorption by Metal of Hydrogen From Furnace Gases

pure boil, [H] fluctuated in the 1.8 - 6.2 ml/100g range. The rate of absorption of H_2 from the furnace gases was established on the basis of the equation : $\Delta H + \Delta H' = \Delta H''$, where ΔH is the amount of H liberated from the bath with CO bubbles per minute; $\Delta H'$ is the amount of H_2 going to increase the amount thereof in the bath during the same period, or the amount of H liberated on reduction of the content thereof in the bath (in the latter case this quantity will be negative in sign); $\Delta H''$ is the amount of H_2 absorbed from the furnace gases per minute. This equation holds only for the period of pure boil. Depending on the absolute H content in the liquid bath and the composition and the viscosity of the slag, an increase in the rate at which the C burns off may either have no effect at all or a positive effect on [H]. At the end of the period of pure boil the rate of absorption by the metal of H from the furnace gases is greater than at the start of that period. The hypothesis is advanced that the greater rate of absorption of H at the end of pure boil is explainable by the considerable rise in temperature and basicity of the slag. Rise in temperature is accompanied by a drop in the $(\Sigma H):[H]$ ratio, and an increase in the basicity of the slag is accompanied by an

137-1958-1-335

Rate of Absorption by Metal of Hydrogen From Furnace Gases

increase in absorption of H thereby. The rate of absorption of H in a 370-ton furnace is lower than in a 185-tonner, and this confirms the possibility of smelting high-quality metal in large capacity furnaces. The Authors have come to the conclusion that the speed at which H is transported from furnace gases into the metal attains a high order of magnitude.

I.P.

1. Liquid metals--Hydrogen absorption--Test results 2. Hydrogen --Absorption 3. Open hearth furnaces--Performance 4. Liquid metals--Sampling

Card 3/3

ZARVIN, Ye.Ya., kand. tekhn. nauk; ZIL'BERSHTEYN, M.B., inzh.

Rapidity of hydrogen absorption out of furnace gases. Trudy Sib. met. inst. no.4:58-68 '57. (MIRA 11:6)
(Steel—Hydrogen content) (Open hearth process)

AUTHOR ZILBERSHTEYN M.B. PA - 3057
Chief, Martin Furnace Installation Nr 2, Kuznetsk Metallurgical Combinate.

TITLE Towards New Success. (K novym uspekham.- Russian)

PERIODICAL Metallurg 1957, Vol 2, Nr 4, pp 16-18 (USSR)

Received: 5/1957 Reviewed: 7/1957

ABSTRACT Each year the personnel of Martin furnace installation Nr 2 improved the production characteristics. During the past fifteen years, the output of steel increased by 71.8 %. It became necessary during World War II to introduce for a short time the melting of important alloyed steels (for purposes of defense) in basic great charge Martin furnaces; this in turn necessitated a new development of the methods of work as hitherto only carbon steels had been produced. These achievments were publicly recognized by the competent central authorities, and the Combinate was awarded several prizes. The postwar years a further increase in production. The Fourth-Five-Year Plan was fulfilled in three years, the expected output for the Fifth Five-Year Plan was surpassed by almost 130,000 tons of steel, and in 1956 an overproduction of al-

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most 16,000 tons of steel was achieved. These increase were achieved without introducing new capacities. While the tonnage of the melt of the large furnaces was increased, the duration of melting and the interruptions due to repairs were cut simultaneously. This was attained by using heat-resisting materials in the upper and lower part of the furnace. Additional improvements were an improvement of the heat economics of the furnaces by perfecting the construction dimensions of the furnace ports, an increased heating of the gas and air mountings, a correct selection of the heat economics of the furnaces, better maintenance of the furnaces, mechanization, etc. Other parts of the Combinate (in addition to the furnaces), like melting-charge yard, mixer, casting house, work synchronously with the furnaces. But as the saturation with machines is not very high in the Combinate, this may interfere with the synchronization. Nevertheless, interruptions in the work of the Combinate due to a failure of the Martin furnaces have remained insignificant. Great changes were made with regard to the method of melting and casting. Here we have rather rich variety: boiling and calm carbon steels, tool steels, alloyed with chromium, nickel, molybdenum and vanadium, special steels like dynamo steel etc.

Towards New Success PA - 3057

During the course of the years, the basic direction was worked out: lowest contents of phosphorus and sulphur, freedom from material separations and blowholes. Change of slags is made unavoidable by means of charge machine, and formation of slags with chalk and bauxite. At fine steels, a new slag is formed with particular slag mixtures. Since 1954, production of Martin pig iron with low manganese contents has been attained without any decrease in quality, furthermore steel casting with two packing rods. The total amount of waste decreased from 0,81 % (1950) to 0,55 % (1956). Consumer complaints decreased from 149 tons (1954) to 48 tons (1956). Net costs were sharply reduced. All this could be achieved through an outstanding personnel. Some shortcomings still have to be eliminated: the not entirely rythmical work of some parts of the Martin furnace installation, unsatisfactory surface of the metal, etc.

ASSOCIATION: Kuznetsk Metallurgical Combinate, Stalinsk (Kuznetskij metallurgicheskiy kombinat, Stalinsk)

PRESENTED BY: - (1 reproduction, 2 charts)

SUBMITTED: -

AVAILABLE: Library of Congress.

CARD 3/3

BELELOVSKIY, M.L.; ZIL'BERSHTEYN, M.B.

Using correlation functions for multilayer vertical electric prospecting curves in solving an inverse problem in electric prospecting. Razved. i prom. geofiz. no.46:53-58 '62. (MIRA 16:3)
(Electric prospecting)

ZIL'BERSHTEYN, M.B.

Toward new achievements. Metallurg. 2 no.4:16-18 Ap '57.
(MLRA 10:5)

1. Nachal'nik martenovskogo tsekha No. 2 Kuznetskogo metallurgicheskogo kombinata.
(Stalinsk--Open hearth process)

ZIL'BERSHTEYN, M.B.

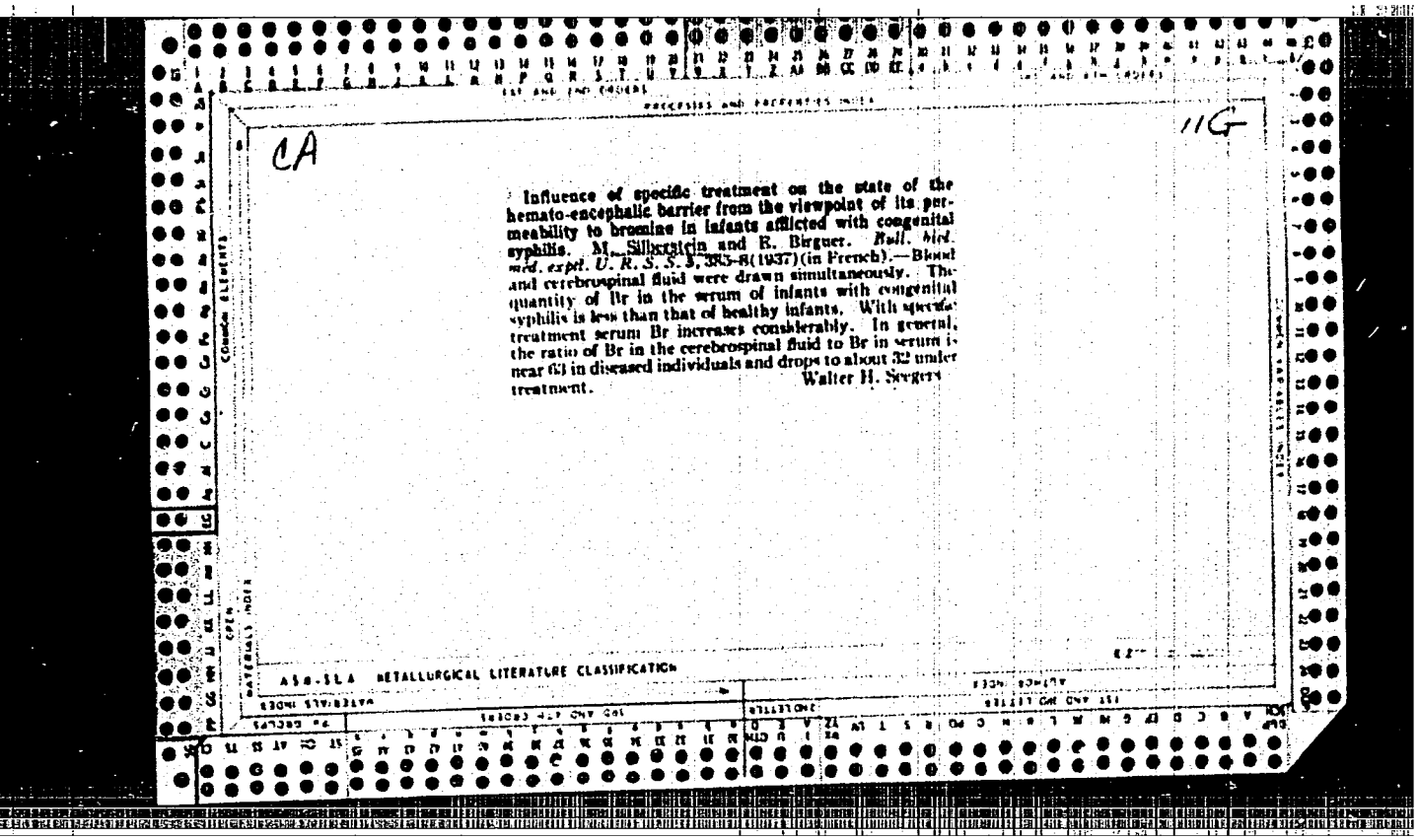
BARDIN,I.P.;BORISOV,A.F.; BELAN,R.V.; YERMOLAYEV,G.I.; VAYSBERG,L.E.; ZHEREBIN,B.N.; BORODULIN,A.I.; SHAROV,G.V.; DOMNITSKIY,I.F.; CHUSOV,F.P. SOROKO,L.N.; KLIMASENKO,L.S.; PAVLOVSKIY,S.I.; ZIL'BERSHTEYN,M.B.; LYULENKOV,I.S.; NIKULINSKIY,I.D.; BRAGINSKIY,I.A.; SALOV,Ye.M.; TROSHIN,N.F.; PETRIKEYEV,V.I.; ARGUNOV,M.I.; DUL'NEV,F.S.; BIDULYA,L.N. GAYNANOV,S.A.; FROLOV,N.P.; VINICHENKO,V.S.; KOGAN,Ye.A.

G.E.Kazarnovskii; obituary. Stal' 15 no.8:757 Ag'55. (MLRA 8:11)
(Kazarnovskii, Grigorii Efimovich, 1887-1955)

BELELOVSKIY, M.L.; ZIL'BERSHTEYN, M.B.

Using correlated depndencies to interpret vertical electric prospecting curves. Razved.i prom.geofiz. no.45:74-78 '62. (MIRA 15:11)

(Surkhandarya Valley—Electric prospecting)



CA

11G

Influence of specific treatment on the state of the hemato-encephalic barrier from the viewpoint of its permeability to bromine in infants afflicted with congenital syphilis. M. Silberstein and E. Birguer. *Bull. biol. med. exptl. U. R. S. S.* 3, 385-8(1937)(in French).—Blood and cerebrospinal fluid were drawn simultaneously. The quantity of Br in the serum of infants with congenital syphilis is less than that of healthy infants. With specific treatment serum Br increases considerably. In general, the ratio of Br in the cerebrospinal fluid to Br in serum is near 63 in diseased individuals and drops to about 32 under treatment.

Walter H. Seegers

A58-5LA METALLURGICAL LITERATURE CLASSIFICATION

SILBERSTEYN, M.S.

Reinforced method of syphilis therapy in children. Vest.vener. no.2:23-26 Mr-Ap '50. (CLML 19:3)

1. Of the Syphilological Clinic (Head -- Prof. M.M.Payts, Doctor Medical Sciences), Institute of Pediatrics of the Academy of Medical Sciences (Director -- Honored Worker in Science Prof. G.N.Speranskiy).

ZIL'BERSHTEIN, M.S.; EVERGETOVA, N.N.

Vitamin C requirements in children with congenital syphilis. Vest. vener. No.1:35-38 Jan-Feb 51. (CLML 20:6)

1. Candidate Medical Sciences M.S. Zil'bershteyn; Scientific Associate N.N.Evergetova. 2. Of the Syphilological Clinic (Head--Doctor Medical Sciences Prof. M.M. Rayts) of Order of the Red Banner of Labor Institute of Pediatrics, Academy of Medical Sciences USSR (Director--Honored Worker in Science Prof. G.N. Speranskiy).

ZIL'BERSHTEYN, M.S.; LEVIN, Ye.R.; VOZLINSKAYA, V.M.

Course of rheumatism in children in sanatoria. Pediatriia 39 no.4: 68-74 Jl-Ag '56. (MLRA 9:12)

1. Iz sanatoriya No.37 Mossdravotdela dlya detey, bol'nykh revmatizmom (glavnyy vrach T.A.Kosolapova)
(RHEUMATISM, in inf. and child
clin. aspects & ther.)

CHIKALOV, I.; KUPTSOV, A.; ZIL'BERSHTEYN, S., bukhgalter

Why is there no literature on social insurance? Okh. truda i sots. strakh. no.6:89-90 Je '59. (MIRA 12:10)

1.Predsedatel' zavodskogo komiteta zavoda "Serp i molot," Moskva (for Chikalov). 2.Chlen komissii po sotsial'nomu strakhovaniyu zavoda "Serp i molot," Moskva (for Kuptsov). 3.Zavodskiy komitet zavoda "Serp i molot," (for Zil'bershteyn).
(Insurance, Social)

ZIL'BERSHTEYN, S.I., inzh.

Large foreign turbogenerators with ratings exceeding 500 Mw. and trends in the development of the steam turbine industry abroad. Energomashinostroenie 10 no.8:46-48 Ag '64. (MIRA 17:11)

ZIL'BERSHTEYN, M.Sh.

ZIL'BERSHTEYN, M.Sh.

Efficient machining on semiautomatic lathes. Stan.i instr. 28 no.8:23-25 Ag '57. (MLRA 10:9)

(Lathes)

ZILBERSHTEYN, M.Sh.

121-8-7/22

AUTHOR ZILBERSHTEYN, M.Sh.

TITLE Rational Machining Methods on Semi-Automatic Turning Lathes. (Ratsionalnyye metody obrabotki na tokarnykh poluavtomatakh.- Russian)

PERIODICAL Stanki i Instrument 1957, Vol 28, Nr 8, pp 23-25 (USSR)

ABSTRACT Single-spindle multi-steel semi-automatic machines are widely used with their cutting-time being reduced by dividing up the total work-length among several cutting tools. Such a working scheme is compared with one on a multi-spindle semi-automatic machine having the same number of cutting tools. This multi-spindle machine works continuously according to the rotational system and has one feed-position; the complete working of one work piece is carried out during one rotation of the spindle-block. From a formula given we see that, under the same conditions of operation, the time required for one piece is twice as long on the single-spindle multi-steel semi-automatic machine as on the multi-spindle machine. Therefore the capacity of the latter is 100% higher than that of the other type. An even higher capacity can be secured by means of the method of one-steel treatment using differentiated working arrangements; these change corresponding to the change of the work-piece parameter (tolerance, diameter, hardness, cleanness of cut, and other). In such

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Rational Machining Methods on Semi-Automatic Turning Lathes.

cases the numbers of rotation as well as the feeds must be changed correspondingly. Two illustrations show the working of a step roller according to either of the methods. A table contains the formulae for the calculation of cutting times in the case of different working methods. In the case of work pieces with more complicated profiles calculations can be carried out in sections, after which they are added. The multi-steel arrangement can also not compete with the single-steel arrangement as regards accuracy because of the increase of the pressure of the cutting tool on the work piece and the resulting pressing-off of the work piece and the supports. A diagram shows the calculation of differentiated cutting arrangements.

ASSOCIATION: not given.
PRESENTED BY: -
SUBMITTED: -
AVAILABLE: Library of Congress.

CARD 2/2

ZIL'BERSHTEYN, R.S.

Clinical aspect of diffuse tumors of the cerebral and spinal meninges. Vrach. delo no.11:63-65 N'63 (MIRA 16:12)

1. Klinika nervnykh bolezney (zav. - prof. S.N.Savenko) Chernovitskogo meditsinskogo instituta.

ZIL'BERSHTEYN, R.S.

Treatment of mesodermal neurosyphilis. Vrach.delo no.12:1293-1297 D '59. (MIRA 13:5)

1. Klinika nervnykh bolezney (zav. - prof. S.N. Savenko) Chernovitskogo meditsinskogo instituta i psikhonevrologicheskaya bol'nitsa.

(NERVOUS SYSTEM--SYPHILIS)

ZIL'BERSHTEYN, R. S., Cand Med Sci -- (diss) "Mesodermal neurosyphilis in Bukovina. (Clinical aspect and treatment)." Chernovtsy, 1960. 22 pp; (Chernovtsy State Medical Inst); 200 copies; price not given; (KL, 17-60, 169)

ZIL'BERSHTEYN, S., inzh.

Practice of using propane-butane for cutting metal. Muk.-elev. prom. 28 no.6:27-28 Je '62. (MIRA 15:7)

1. Sredneaziatskoye stroitel'no-montazhnoye upravleniye Septselevatormel'stroy.
(Gas welding and cutting)

ZIL'BERSHTEYN, S.I., inzh.

Large turbine units of England and France and principal trends in the development of the turbine industry in those countries. Energomashinostroenie 11 no.8:43-48 3 of cover Ag '65. (MIRA 18:10)

L 13860-66 EWT(1) GW
ACC NR: AT6004104 SOURCE CODE: UR/3152/65/000/008/0109/0113

AUTHOR: Davydov, N. G.; Zil'bershteyn, S. I.; Kunin, N. Ya.

ORG: none

TITLE: Use of the MBNP microbarometric level indicator in precision surveying

SOURCE: Razvedochnaya geofizika, no. 8, 1965, 109-113

TOPIC TAGS: pressure measuring instrument, surveying instrument, altimeter

ABSTRACT: The author gives data from tests of the MBNP microbarometric level indicator developed by the Moscow Gidrometpribor Factory in cooperation with the All-Union Scientific Research Institute of Geophysics. Tests at the Institute and at the Ukhta Geophysics Bureau have shown that the MBNP instruments may be used for determining altitudes with an accuracy of ±(0.7-0.8 m). A comparison of various instruments in the MBNP series showed an average deviation in readings of 0.015 mm Hg with deviations of 0.03-0.04 mm Hg in individual cases. Experience has shown that the following requirements are necessary for accuracy in using these instruments: 1. Station readings should be taken every 10-15 minutes. Use of a self-recording

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microbarograph is recommended for optimum accuracy. 2. Distance from the station should be kept to a maximum of 10 km and for more accurate work to less than 5 km. 3. The instruments have a low zero drift and may be used for protracted observation on long runs. 4. Repeated control readings are necessary for checking accuracy at fixed points which make up a volume of no less than 20% of the number of coordinate points. The instruments are small, shock resistant and accurate and are recommended for use in gravimetry and precision surveying. Orig. art. has: 3 figures, 1 table.

SUB CODE: 08/ SUBM DATE: 00/ ORIG REF: 000/ OTH REF: 000

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ZIL'BERSHTEYN, S.L., insh.

First year of operation of the supercritical-pressure unit of the Philo Station (U.S.A.). Energokhoz.za rub. no.1:10-14 Ja-F '59. (MIRA 12:4)
(United States--Turbogenerators)

ZIL'BERSHTEYN, S.L., inzh.

Heavy-duty steam turbines in the U.S.A. Energetik no.1: 41-48 Ja-F '57. (MIRA 12:11)
(United States—Steam turbines)

ZIL'BERSHTEYN, Semen L'vovich; SATANOVSKIY, A.Ye., inzh., retsenzent; MIRKIN, A.A., inzh., red.; BYSTRITSKAYA, V.V., red. izd-va; SALYANSKIY, A.A., red. izd-va; EL'KIND, V.D., tekhn. red.; GORDEYEVA, L.P., tekhn. red.

[Steam-turbine construction in the United States; problems of modern designs and economics] Paroturbostroenie v SShA; voprosy sovremennykh konstruktsii i ekonomiki. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 108 p. (MIRA 14:11)
(United States--Steam turbines--Design and construction)

ZIL'BERSHTEYN, Semen L'vovich; SATANOVSKIY, A.Ye., inzh., retsenzent; MIR-[redacted], A.A., inzh., red.; BYSTRITSKAYA, V.V., red. izd-va; SALYANSKIY, A.A., red. izd-va; EL'KIND, V.D., tekhn. red.; GORDEYEVA, L.P., tekhn. red.

[Gas-turbine manufacture in the U.S.A.; features of present-day designs and economics] Paraturbostroenie v SShA; voprosy sovremennykh konstruktsii i ekonomiki. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 108 p. (MIRA 14:8)
(United States—Gas turbines)

ZIL'BERSHTEYN, S.L., inzh.

Turbine units of 550,000 kw. capacity for the Thorpe Marsh Electric Power Plant (Great Britain) made by the Parsons Works. Energokhoz. za rub. no.2:23-24 Mr-Ap '59. (MIRA 12:5)
(Great Britain--Steam turbines)

ZIL'BERSHTEYN, S.L., inzh.

Large turbine units of Great Britain and France and principal trends in the development of their turbine industries. Energomashinostroenie 11 no.7:47-3 of cover Jl '65. (MIRA 18:7)

AUTHOR: Zil'bershteyn, S.L., Engineer 96-58-2-23/23

TITLE: Letter to the Editor (Pis'mo v redaktsiyu)

PERIODICAL: Teploenergetika, 1958, No.2, p. 96 (USSR)

ABSTRACT: This letter states that an article by G.S. Samoylovich entitled "American Super-critical-pressure Steam Turbines", published in Teploenergetika, 1956, No.7, includes a number of errors. The interesting constructional devices and thoughts contained in the original report are thereby misrepresented. Four or five examples are given.

AVAILABLE: Library of Congress

Card 1/1 1. Steam turbines-Critic

USCOMM-DC-54,962

ZIL'BERSHTEYN, S.N. (Vinnitsa)

Potentials of the efficient utilization of materials in the clothing industry. Shvein. prom. no. 6:24-26 N-D '60. (MIRA 14:1)

(Garment cutting)

ZIL'BERSHTEYN, Sh.N. (Vinnitsa)

New method for cutting the lining for loose style women's coats. Shvein. prom. no.6:31 N-D '63. (MIRA 17:2)

ZIL'BERSHTEYN, S.N. (Vinnitsa)

Efficiency promoters of the factory prepare to welcome the 22d Congress of the party. Shvein.prom. no.5:7-8 Jl-Ag [i.e.S-O] '61. (MIRA 14:10)

(Vinnitsa--Clothing industry)

ZIL'BERSHTEYN Sh.N. (Vinnitsa)

Experiment in using a basic pattern for clothing design.
Shvein. prom. no.1:34-35 Ja-F '65. (MIRA 18:4)

ZIL'BERSHTEYN, Sh.N.; BOGDANOVA, Ye.O. [Bohdanova, E.O.]

Efficient method for calculating technical norms with an accuracy up to 0,5 cm. Ikh. prom. no.2:49-50 Ap-Je'64 (MIRA 17:7)

ACC NR: AP7001966 SOURCE CODE: UR/0120/66/000/006/0209/0210

AUTHOR: Stishov, S. M.; Zil'bershteyn, V. A.

ORG: Institute of Crystallography, AN SSSR, Moscow (Institut ristallografii AN SSSR)

TITLE: Sealing of multiplier piston (up to 30,000 atm.) with a rubber ring.

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1966, 209-210

TOPIC TAGS: [redacted], high pressure multiplier, multiplier piston, rubber seal, high pressure seal, sealing device

ABSTRACT: A method of sealing a multiplier piston, permitting compression of liquids up to 30,000 atm, has been developed. The sealing device consists of a rubber ring of round or square cross section and a protective ring of BrB2 refined beryllium bronze. Pressures up to 30,000 atm may be obtained depending on the correct selection of angles on the piston. Angles between the axis and the cone-forming surfaces should be 30 and 15 (see Fig. 1). Friction in this system is about 3%. Orig. art. has: 1 figure.

Card 1/2 UDC: 537.89-362

ACC NR: AP7001966

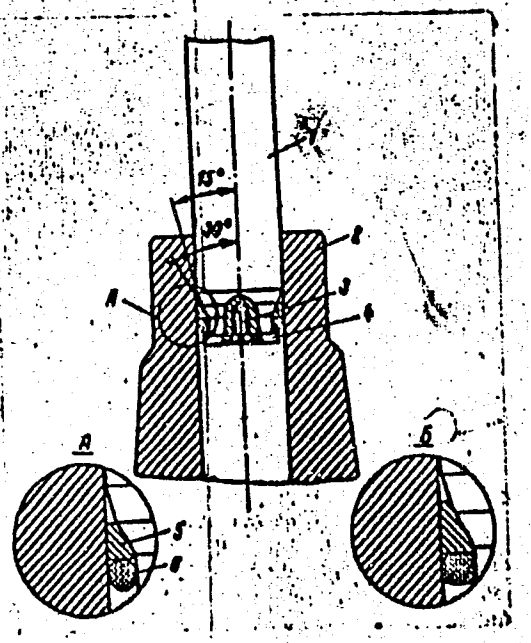

Fig. 1. Sealing with a rubber ring.

1 — Piston
2 — multiplier body
3 — screw
4 — washer
5 — protective ring
6 — rubber ring

A — without pressure
B — under pressure

SUB CODE: 13,14, 20/ SUBM DATE: 17Dec65/ ORIG REF: 001/ OTH REF: 003

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L 25205-67
ACC NR: AR6031867 SOURCE CODE: UR/0058/66/000/006/D066/D066

25
B

AUTHOR: Zil'bershteyn, Ya. A.; Zingerman, V. I.

TITLE: Nuclear meter of magnetic field intensity with automatic frequency control and miniature probes

SOURCE: Ref. zh. Fizika, Abs. 6D543

REF SOURCE: Tr. in-tov Gos. kom-ta standartov, mer i izmerit. priborov SSSR. vyp. 79(139), 1965, 56-64

TOPIC TAGS: nmr meter, automatic frequency control, miniature probe, autodyne detector, magnetic field meter/IMP-3 meter

10 24

ABSTRACT: A description is given of an IMP-3-type NMR magnetic-field meter intended for use both as an instrument for checking other NMR meters and as a high-accuracy operating instrument. Measurement limits are within 40--128 ka/m and the error is 0.002—0.004%. The autodyne detector uses a Pound-Knight circuit. The frequency band is divided into 5 subbands (1.85—3.8; 3.7—7.6; 7.4—16.3; 14.3—30.4; and 29.7—44.7 mc). Use is made of NMR signals from H^1 and Li^7. The instrument is equipped with probes 4 mm in diameter, either with or

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