ARONSON, A.Ya., kand.tekhn.nauk; PETROV, V.P., inzh.

Use of high-speed electronic computers in designing the rotor wheels of hydraulic turbines. Energomashinostroenie 9 no.1: 3-6 Ja '63. (MIRA 16:3)

(Hydraulic turbines)

ARONSON, A.Ya., kand. tekhn. nauk; MISHIN, M.M., inzh.; MOSKVIN, D.S., inzh.

Approximate calculation of the frequencies of self-oscillations of the runners of Francis-type hydraulic turbines.
Energomashinostroenie 9 no.10:5-7 O '63. (MIRA 16:10)

ARONSON, A.Ya., kand. tekhn. nauk; KOVALENKO, V.A., inzh.

Study of the vibrational reliability of the runners of the hydraulic turbine of the Krasnoyarsk Hydroelectric Power Station. [Trudy] LMZ no.10:80-95 '64.

(MIRA 18:12)

APONSON, A.Ya., kand. tekhn. nauk

Approximate consideration of the effect of water on the oscillations of Francis turbine runners. [Trudy] LMZ no.10:111-119 '64. (MIRA 18:12)

ARONSON, A.Ya., kand. tekhn. nauk; KOVALENKO, V.A., [illegible]; KOVALEVSKAYA, M.A., inzh.

Study of the vibration of the runner of a turbine of the Pratak Hydroelectric Power Station. [Trudy] LMZ no.10 161-168 '64. (MIRA 18:12)

ARONSON, A.Ya., kand. tekhn. nauk; BUGOV, A.U., kand. tekhn. nauk; MALYSHEV, V.M., kand. tekhn. nauk; SKRYLEV, I.A., inzh.; FRANK-KAMENETSKIY, G.Kh., kand. tekhn. nauk; POSTOYEV, V.S., kand. tekhn. nauk, retsenzent; ORGO, V.M., kand. tekhn. nauk, red.

[Strength calculation of the parts of hydraulic turbines] Raschet na prochnost' detalei gidroturbin. Moskva, Mashinostroenie, 1965. 391 p. (MIRA 18:10)

ACC NR: AP6029616 (N) SOURCE CODE: UR/0114/66/000/008/0001/0005

AUTHOR: Aronson, A. Ya. (Candidate of technical sciences)

ORG: none

TITLE: Evaluation of the effect of errors in blade manufacture on the value of the cavitation coefficient

SOURCE: Energomashinostroyeniye, no. 8, 1966, 1-5

TOPIC TAGS: turbine blade, ~~turbine blade manufacture, blade manufacture tolerance,~~ cavitation coefficient, cavitational ~~, cavitation~~ flow

ABSTRACT: The effect on the cavitation coefficient of the variation in blade shape caused by a deviation from the allowable manufacturing tolerances was investigated. The investigation showed that: a) Small variations in the shape of the surface exposed to a flow can cause substantial changes in local velocities and pressures. b) Disturbances introduced into the flow by a small variation in the shape of the streamlined body are only slightly dependent on the general velocity distribution on the surface of the body. c) In order to determine the character of the deviation in the shape of actual blades from design dimensions, it is necessary to make a selective inspection of actual blades. d) The present means of checking the geometry of finished blades and the system of tolerances for manufacturing blades cannot guarantee the conformity of cavitation coefficients of model and actual turbine rotors.

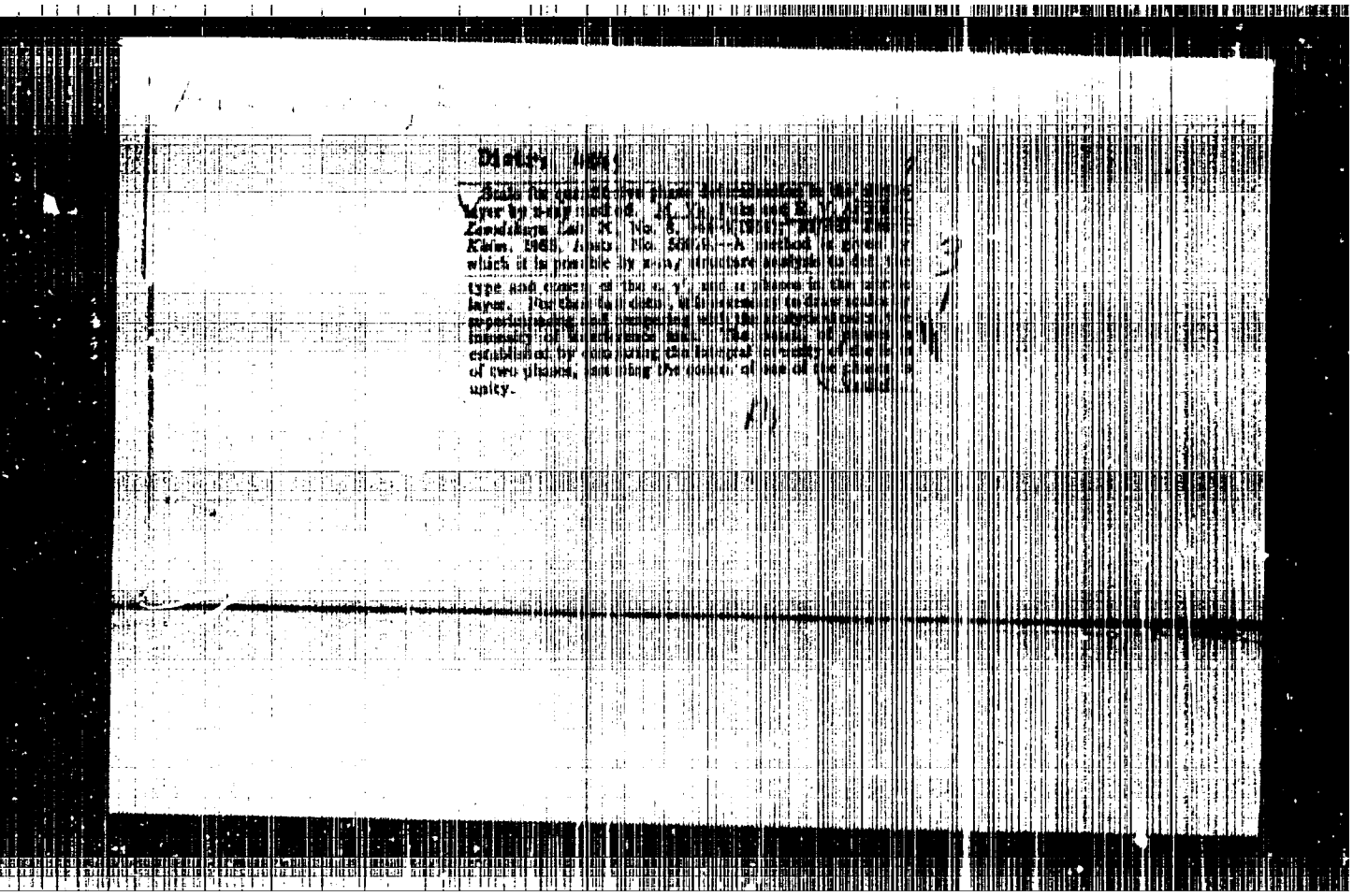
Card 1/2 UDC: 532.528.621.224-253.5

ACC NR: AP6029616

Deviations in blade dimensions within the limits of allowable tolerances can lead to significant growth of the cavitation coefficient and an increase in cavitational erosion. Orig. art. has: 3 figures, 3 tables, and 48 formulas.

SUB CODE: 21, 20/ SUBM DATE: none/ ORIG REF: 005/

Card 2/2



USSR/ Metallurgy - Steel alloys FD-1040

Card 1/1 : Pub. 153 - 11/23

Author : Fuks, M. Ya., and Aronson, E. V.

Title : X-ray investigation of the nitrided layer of carbon and alloyed steels

Periodical : Zhur. tekh. fiz., 24, 1448-1454, Aug 1954

Abstract : Concludes that, in the low-temperature nitriding of carbon steel, very intense saturation by nitrogen occurs up to the formation of the epsilon-phase. In the thin surface zone, x-rays reveal the homogeneous structure of the epsilon or zeta phase. Notes that silicon in steel influences the hardness and depth of distribution of the nitride phases analogously to aluminium but weaker than it. Ten references, all USSR.

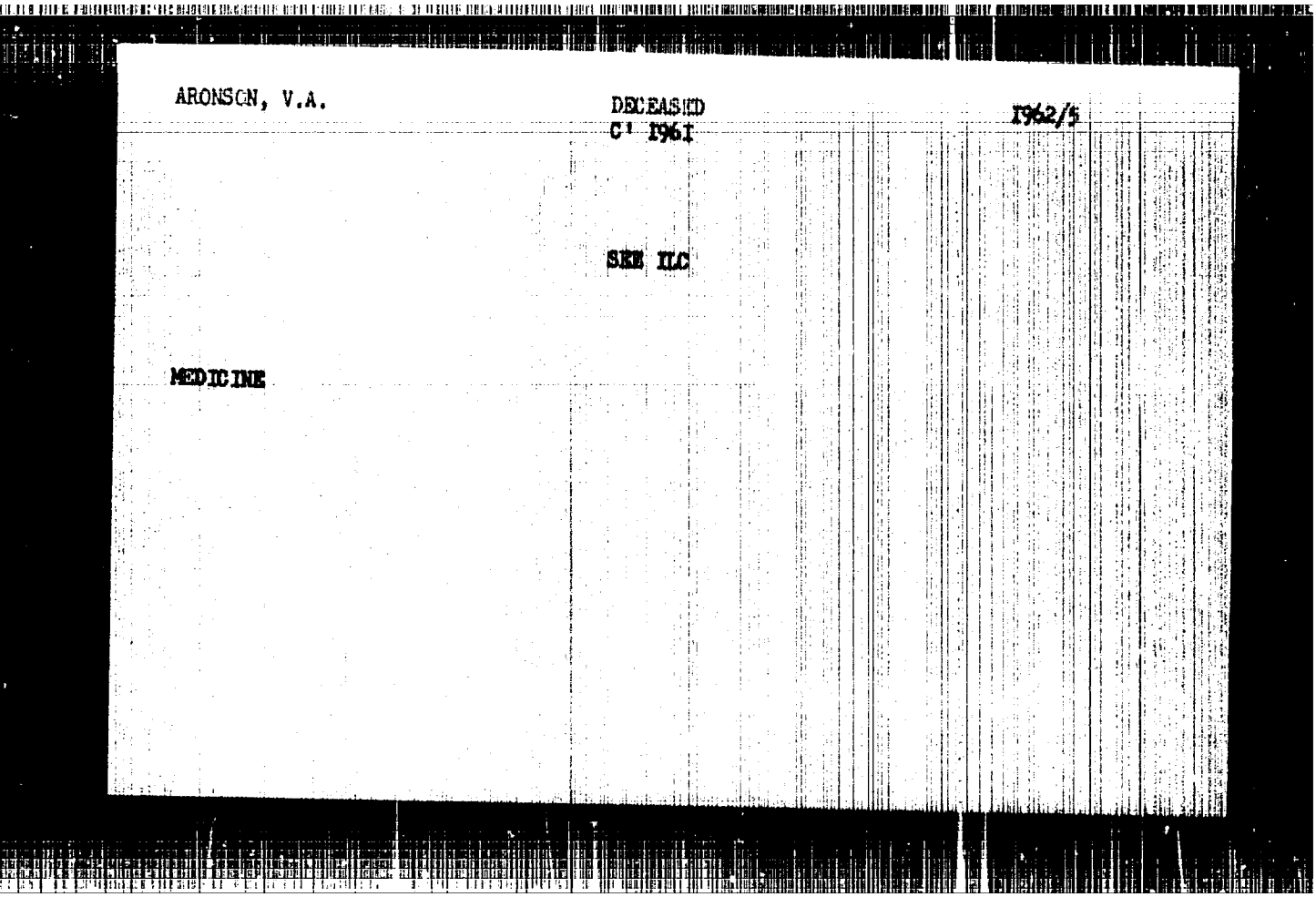
Institution : - -

Submitted : 1 September 1953

PERSHIN, G.N., prof.; KRAFT, M.Ya., prof.; ROZENTUL, M.A., prof.; POZHARSKAYA, A.M., starshiy nauchnyy sotrudnik; MILOVANOVA, S.N., starshiy nauchnyy sotrudnik; BORODINA, G.M., starshiy nauchnyy sotrudnik; MASLOV, P.Ye., starshiy nauchnyy sotrudnik; IVANOVSKAYA, Ye.A., mladshiy nauchnyy sotrudnik; ARONSON, P.Yu., mladshiy nauchnyy sotrudnik; KANCHUKH, Sh.F.; SHEYER, A.A.; ZALIOPO, M.P., spetsialist po macyushchim sredstvam

Treatment of your hair with selenium sulfide soap. Izobr. i rats. no.12:32-33 '63. (MIRA 17:2)

1. Zaveduyushchiy laboratoriyey khimioterapii infektsionnykh zabolevaniy Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta im. Ordzhonikidze (for Pershin). 2. Zaveduyushchiy laboratoriyey metallorganicheskikh soyedineniy Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta im. Ordzhonikidze (for Kraft). 3. Zaveduyushchiy otdelom TSentral'nogo kozhno-venerologicheskogo instituta (for Rozentul). 4. Zaveduyushchiy laboratoriyey lekarstvennykh form Vsesoyuznogo nauchno-issledovatel'skogo khimiko-farmatsevticheskogo instituta im. Ordzhonikidze (for Pozharskaya). 5. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut im. Ordzhonikidze (for Milovanova, Borodina, Ivanovskaya, Aronson). 6. Tsentral'nyy kozhno-venerologicheskiy institut (for Maslov).



ARONSON, V.A.

DECEASED
C' 1961

1962/5

SEE ILC

MEDICINE

ARONSON, V.M., sanitarnyy vrach

Work regimen in the radiological department of a hospital [with summary in English]. Gig. i san. 22 no.9:15-20 S '57. (MIRA 10:12)

1. Iz Moskovskoy gorodskoy sanitarno-epidemiologicheskoy stantsii
(RADIATION PROTECTION
eff. personnel in hosp. radiol. department)
(INDUSTRIAL HYGIENE
radiation protection of personnel in hosp. radiol. department)

ZALMANZON, S.N., zasluzhennyy vrach RSFSR; ARONSON, V.M., sanitarnyy vrach

Work of the Moscow Municipal Sanitary and Epidemiological Station in the field of preventive sanitary supervision of housing construction. Gig. i san 24 no.10:45-52 '59. (MIRA 13:1)

1. Iz Moskovskoy gorodskoy sanitarno-epidemiologicheskoy stantsii.
(HOUSING)

ROZHANSKIY, Z.Ye., inzh.; SHRAMKO, Yu.S., tekhnik; ZAIKA, N.V., tekhnik; YAROSH, Yu.V., tekhnik; ARONSON, V.R., tekhnik

An impulse signaling device using transistors. Energetik 10 no.12:17-19 D '62. (MIRA 16:1)
(Electric relays) (Electric networks)

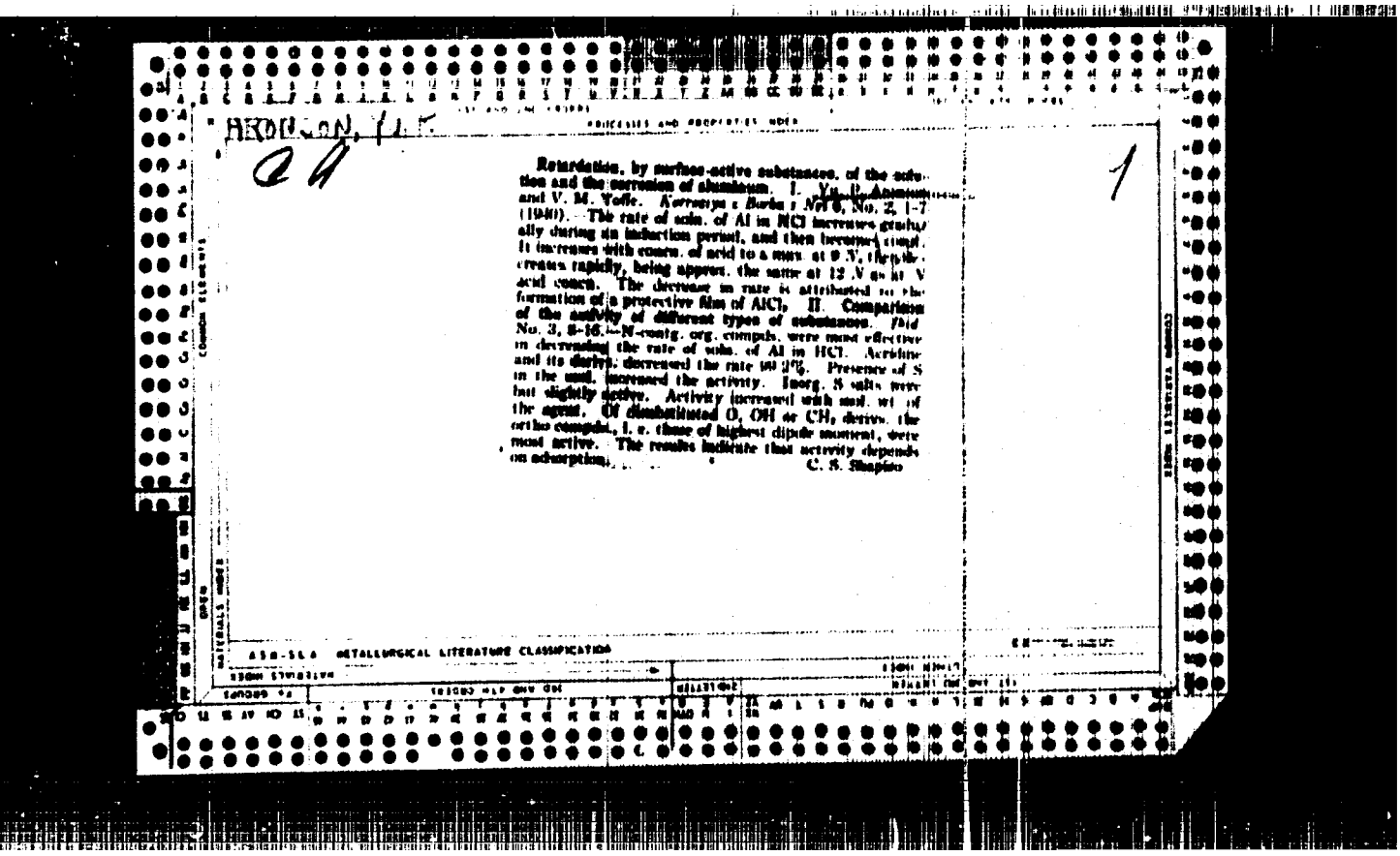
ARONSON, V.Ye.; BALASHOV, Ye.T.; BERMAN, S.A.; BYZER, B.I.; KALININ, N.A.; MAKHONIN, A.K.; IMASHEV, N.U.; TOKAREV, V.P.

Plans for commercial prospecting for the Zhetybay and Usen' deposits. Trudy VNIGRI no.218:62-73 '63. (MIRA 17:3)

ARONSON, V.Ye.

Comparison of the segments of the Terrigenous Jurassic sediments of the Zhetybay and Uzen' oil fields of southern Mangyshlak. Neftegaz.geol. i geofiz. no.8:10-13 '64. (MIRA 17:9)

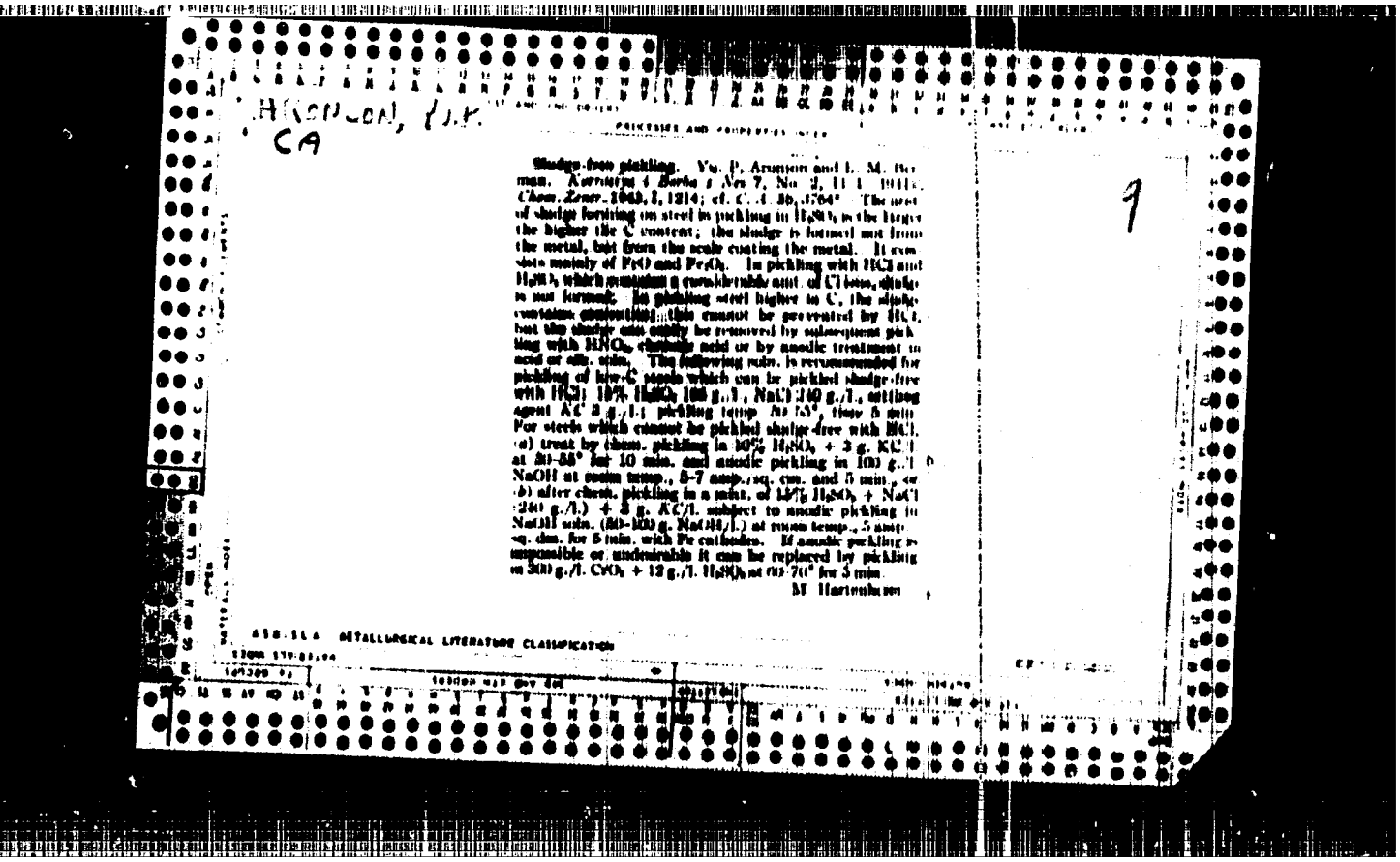
1. Vsesoyuznyy neftyanoy nauchno-issledovatel'skiy geologorazvedochnyy institut.



Retardation, by surface-active substances, of the solution and the corrosion of aluminum. I. Yu. B. Ammon and V. M. Yoffe. *Korroziya i Borba*, 1938, No. 2, 1-7 (1940). The rate of soln. of Al in HCl increases gradually during an induction period, and then increases rapidly. It increases with concn. of acid to a max. at 9 N, then decreases rapidly, being approx. the same at 12 N as at 1 N acid concn. The decrease in rate is attributed to the formation of a protective film of AlCl$_3$. II. Comparison of the activity of different types of substances. *Ibid* No. 3, 8-16.—N-contg. org. compds. were most effective in decreasing the rate of soln. of Al in HCl. Acridine and its derivs. decreased the rate 80-90%. Presence of S in the mol. increased the activity. Inorg. S salts were but slightly active. Activity increased with mol. wt. of the agent. Of disubstituted O, OH or CH$_3$ derivs. the ortho compds., i. e. those of highest dipole moment, were most active. The results indicate that activity depends on adsorption.

C. S. Shapiro

A58-5L6 METALLURGICAL LITERATURE CLASSIFICATION



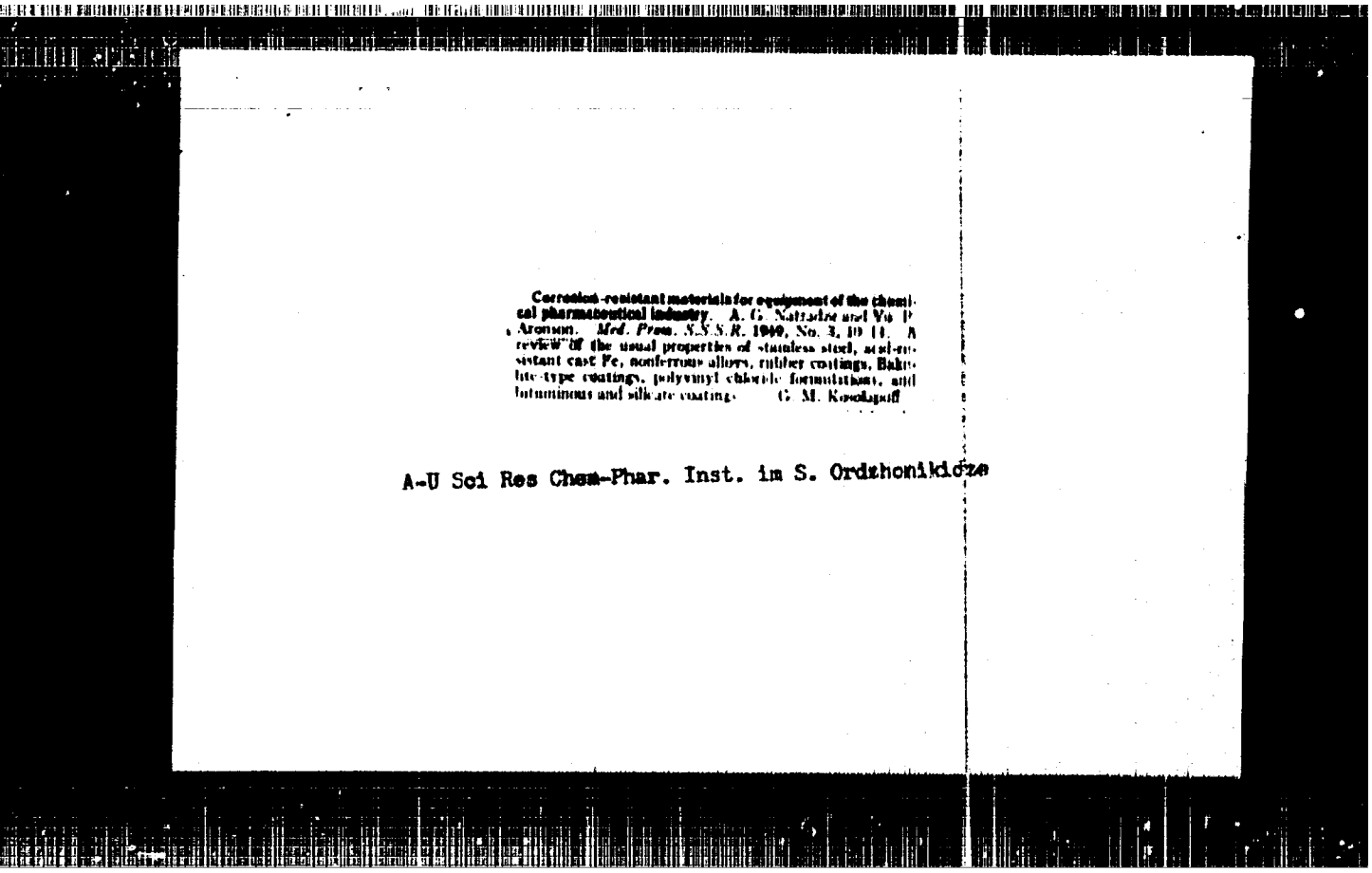
CA

9

Sludge from pickling. Yu. P. Arutyun and I. M. Herman. *Korroziya i Borba s Nei* 7, No. 2, 11-4 (1941); *Chem. Zentr.* 1943, I, 1214; cf. C. A. 35, 4764. The rate of sludge forming on steel in pickling in H_2SO_4 is the larger the higher the C content; the sludge is formed not from the metal, but from the scale coating the metal. It consists mainly of FeO and Fe_2O_3. In pickling with HCl and H_2SO_4, which evolves a considerable amt. of CO_2 loss, sludge is not formed; in pickling steel higher in C, the sludge contains graphite; this cannot be prevented by HCl, but the sludge can easily be removed by subsequent pickling with HNO_3, chromic acid or by anodic treatment in acid or alk. solns. The following soln. is recommended for pickling of low-C steels which can be pickled sludge-free with HCl: 10% HCl, 100 g./l., NaCl 240 g./l., settling agent AC 3 g./l.; pickling temp. 20-25°, time 5 min. For steels which cannot be pickled sludge-free with HCl, (a) treat by chem. pickling in 10% H_2SO_4 + 3 g. KCl at 50-55° for 10 min. and anodic pickling in 100 g./l. NaOH at room temp., 5-7 amp./sq. cm. and 5 min., or (b) after chem. pickling in a soln. of 15% H_2SO_4 + NaCl 240 g./l.) + 3 g. AC/l. subject to anodic pickling in NaOH soln. (80-100 g. NaOH/l.) at room temp., 5 amp./sq. dm. for 5 min. with Fe cathodes. If anodic pickling is impossible or undesirable it can be replaced by pickling in 300 g./l. CrO_3 + 12 g./l. H_2SO_4 at 60-70° for 5 min.

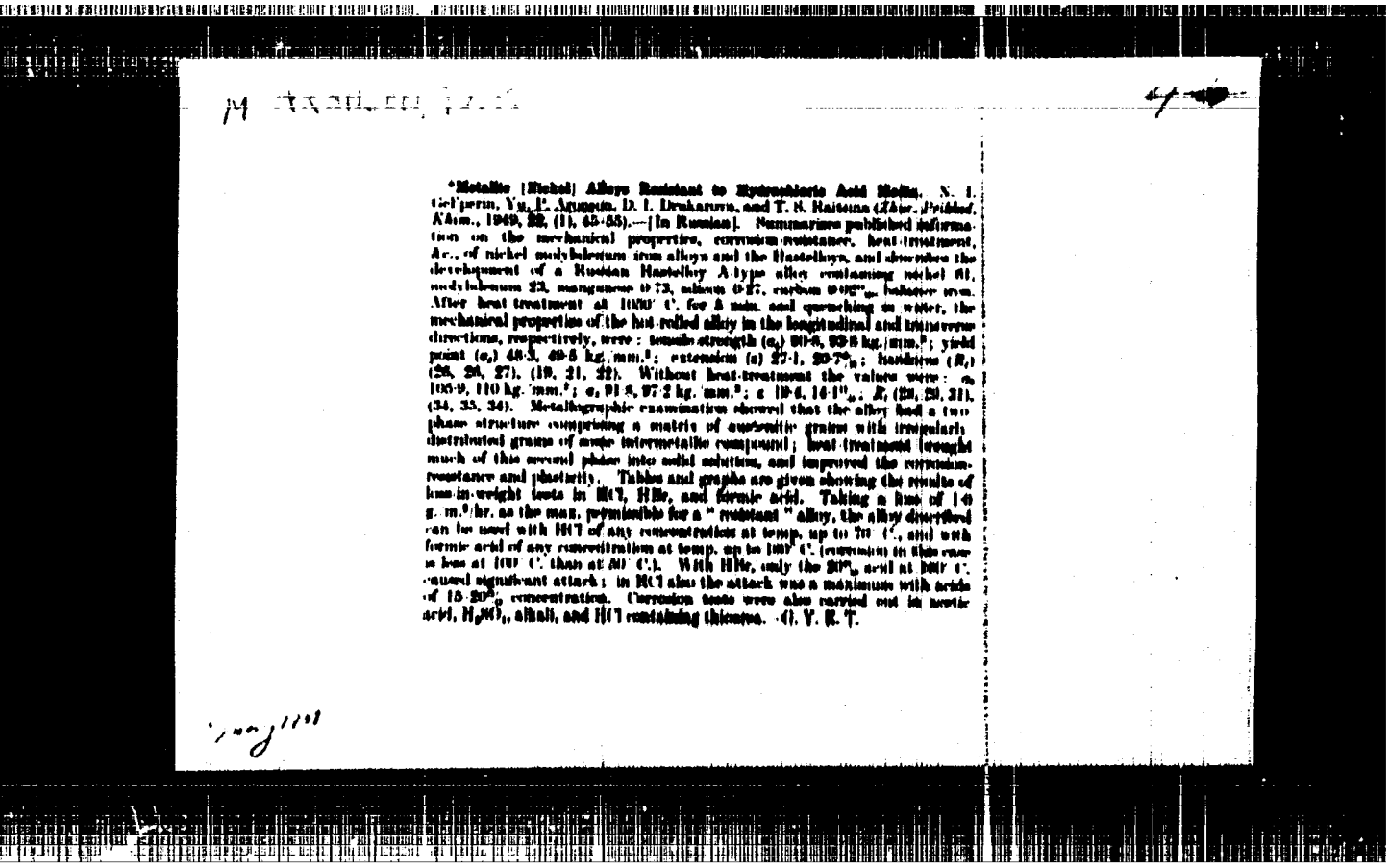
M. Hartenhaus

418.1L4 METALLURGICAL LITERATURE CLASSIFICATION



Corrosion-resistant materials for equipment of the chemical pharmaceutical industry. A. G. Natradze and Vic P. Aronson. *Med. Prom. S.S.S.R.* 1949, No. 3, 10 11. A review of the usual properties of stainless steel, acid-resistant cast Fe, nonferrous alloys, rubber coatings, Bakelite-type coatings, polyvinyl chloride formulations, and bituminous and silicate coatings. G. M. Kosolapoff

A-U Sci Res Chem-Phar. Inst. im S. Ordzhonikidze



*Metallic [Nickel] Alloys Resistant to Hydrochloric Acid Media. N. I. Gel'perin, Yu. P. Agureev, D. I. Drukarova, and T. N. Raitsina (Zhur. Prikhd. Khim., 1969, 32, (1), 45-55).—[In Russian]. Summarises published information on the mechanical properties, corrosion-resistance, heat-treatment, &c., of nickel-molybdenum iron alloys and the Hastelloys, and describes the development of a Russian Hastelloy A-type alloy containing nickel 61, molybdenum 23, manganese 0·73, silicon 0·17, carbon 0·07%, balance iron. After heat treatment at 1100° C. for 5 min. and quenching in water, the mechanical properties of the hot-rolled alloy in the longitudinal and transverse directions, respectively, were: tensile strength (σ_b) 91·6, 93·6 kg./mm.^{2}; yield point (σ_s) 48·3, 49·8 kg./mm.^{2}; extension (δ) 27·1, 20·7%; hardness (H_r) (26, 26, 27), (19, 21, 22). Without heat-treatment the values were: σ_b 105·9, 110 kg./mm.^{2}; σ_s 91·8, 97·2 kg./mm.^{2}; δ 19·6, 16·1%; H_r (23, 29, 31), (34, 35, 34). Metallographic examination showed that the alloy had a two-phase structure comprising a matrix of austenitic grains with irregularly distributed grains of some intermetallic compound; heat-treatment brought much of this second phase into solid solution, and improved the corrosion-resistance and ductility. Tables and graphs are given showing the results of loss-in-weight tests in HCl, HBr, and formic acid. Taking a loss of 1·0 g./m.^{2}/hr. as the max. permissible for a "resistant" alloy, the alloy described can be used with HCl of any concentration at temp. up to 70° C., and with formic acid of any concentration at temp. up to 100° C. (corrosion in this case is less at 100° C. than at 80° C.). With HBr, only the 20% acid at 100° C. caused significant attack; in HCl also the attack was a maximum with acids of 15–20% concentration. Corrosion tests were also carried out in acetic acid, H_2SO_4, alkali, and HCl containing thiourea.—(J. V. E. T.

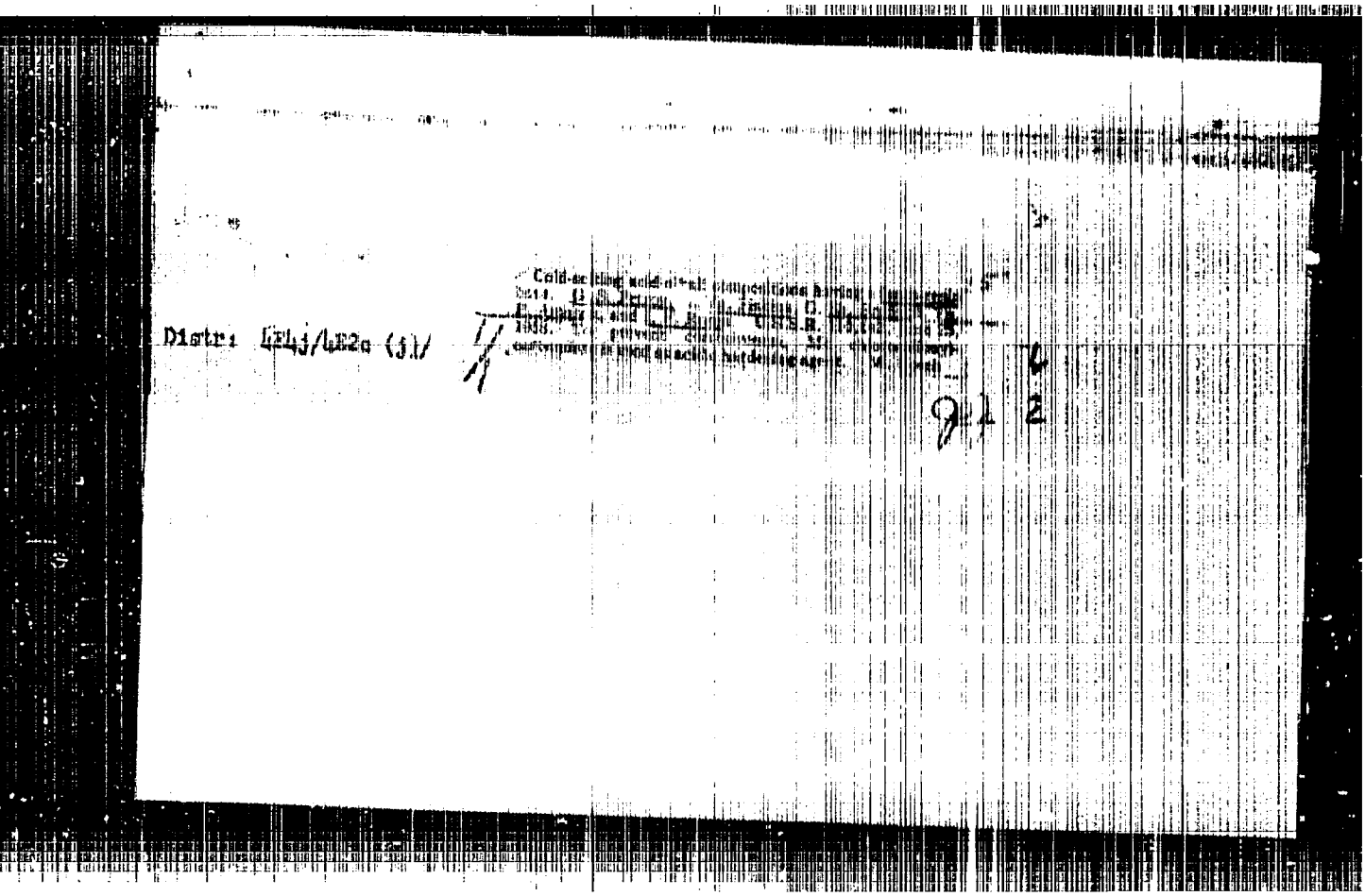
ARONSON, YU. P.

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000102210002-3"

ARONSON, Yu.P.

Using glass pipe lines in the medical supplies industry. Med. prom. 11 no.3:53-55 Mr '57 (MLRA 10:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze.
(PIPE, GLASS) (MEDICAL SUPPLIES)



Distr: 4243/4m2a (5)

NATRADZE, A.G., kand. tekhn. nauk; ARONSON, Yu.P.; ROZEN, I.F.; ROZANOVA, Yu.M.; ZOLOTNITSKIY, I.M., red.; KHARKIN, M.T., tekhn. red.

[Protecting chemical apparatus from corrosion in pharmaceutical plants] Zashchita khimicheskoi apparatury ot korrozii v khimiko-farmatsevticheskoi promyshlennosti. Pod obshchei red. A.G. Natradze. Moskva, Gos. izd-vo med. lit-ry, 1958. 283 p. (MIRA 11:9)
(Drug industry)
(Corrosion and anticorrosives)
(Protective coatings)

ARONSON, Yu. P.

Production, use, and machining of stainless steel in the U.S.A. Biul.tekh.-ekon.inform. no.5:89-94 '59. (MIRA 12:8)
(United States--Steel, Stainless)

ARONSON, Yu.P.; ROZEN, I.F.

Improvement in the method of manufacturing heat-conducting protective coatings for chemical apparatus. Khim. i mash. no. 12:105-116 '59.
(MIRA 13:10)

(CHEMICAL APPARATUS) (GRAPHITE)

S/081/62/000/006/048/117
B149/B108

AUTHORS: Aronson, Yu. P., Rozanova, Yu. M.

TITLE: Resistance of some metals and alloys to corrosion by organic acids

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1962, 353, abstract 6I208 (Sb. "Khimiya i meditsina" no. 12, M., Medgiz, 1959, 117 - 131)

TEXT: The corrosion resistance was tested of X18H12M3T (Kh18N12M3T) and 1X18H9T (1Kh18N9T) steels in boiling CH_3COOH of various concentrations and of Cu in boiling formic acid in air and in a neutral atmosphere. It was found that the resistance of stainless steel to CH_3COOH is increased if the acid is purified by addition of 2.5 % CrO_3. 100 % CH_3COOH, obtained by concentrating glacial acetic acid with acetic anhydride has the highest corrosive action. Even Kh18N12M3T steel is not resistant to this acid in the vapor phase. This steel can be used with 100 % CH_3COOH in the liquid

Card 1/2

phase and under all the other conditions investigated. 1Kh18N9T steel cannot be used in the vapor phase of acid of 80 % or higher concentration. It is resistant to the liquid phase of 10, 50, 80, 90, and 98 % CH_3COOH.

The corrosion of Cu in boiling formic acid can be decreased by blowing oxygen-free nitrogen through the acid. Under these conditions Cu is resistant to 50, 76 and 80 % boiling formic acid. The rate of its corrosion is not higher than 0.1 mm per year. [Abstracter's note: Complete translation.]

5.3610,5.3620

77533
SOV/80-33-1-42/49

AUTHORS: Rozanova, Yu. M., Aronson, Yu. P.

TITLE: Investigation of the Possibility of Removal of the Adverse Effect of Iron Compounds in the Preparation of 2-Amino-2-mercapto-1,3,4-thiodiazole

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 1, pp 233-237 (USSR)

ABSTRACT: It is shown that on cyclization of $H_2NCSNHNHCSNH_2$ (I) in the presence of iron, the yield of 2-amino-5-mercapto-1,3,4-thiodiazole (II) (main product) decreases from 39-40 to 20-24%. In the presence of metallic granular tin (or powder), 20% HCl (chemically pure), and iron, the yield of (II) increases from 20-24 to 65-67%, and in the absence of iron the yield increases from 39-40 to 65-67%. The use of metallic tin in the above reaction makes possible the use of technical instead of cp HCl. The yield in the above

Card 1/5

Investigation of the Possibility of Removal of the Adverse Effect of Iron Compounds in the Preparation of 2-Amino-2-mercapto-1,3, 4-thiodiazole

77533
SOV/80-33-1-42/49

case increases from 18-22 to 65-67%. The addition of tin in the form of powder is recommended. Tin can be easily recovered with granular Zn from the mother liquor. The use of Zn dust, $SnCl_2$, granular Zn, does not give satisfactory results. The cost of Zn and Sn is 6 rubles per 1 kg. of I. On substitution of technical for pure HCl the saving will be 200 rubles per 1 kg of I.. There are 2 tables; and 2 references, 1 German, 1 U.S. The U.S. reference is: Am. Pat. 2759947, October 27, 1955.

ASSOCIATION: Ordzhonikidze All-State Scientific Research Chemical-Pharmaceutical Institute (Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut imeni S. Ordzhonikidze)

SUBMITTED: September 13, 1958

Card 2/5

Investigation of the Possibility of Removal of the Adverse Effect of Iron Compounds in the Preparation of 2-Amino-2-mercapto-1,3, 4-thiodiazole

7533
SOV/80-33-1-42/49

Key to Table 1: (a) Taken (in g); (b) $H_2NCSNHNHCSNH_2$; (c) HCl, chemically pure (20%); (d) iron shavings, or 10% solution of $FeCl_3$; (3) iron content in the reaction mixture (in %); (f) yield of recrystallized compound II. (g) shavings; * = Technical HCl.

a	b	c	d	e	f
	10	53	-	-	39.43
	16.2	85	g	-	39.85
	16.2	85	1.15	1.4	20.00
	16.2	85	3.40	4.0	11.82
	10	43	$FeCl_3$ 10 ml	0.15	24.2
	10	52	1.25	0.07	22.5
	10	52	1.25	0.07	23.3
	16.2	85*	-	0.03	20.0
	10	53*	-	0.04	20.4

Card 3/5

Key to Table 2: (a) Taken (in g); (b) $H_2NCSNHNHCSNH_2$; (c) 20% HCl solution (in ml); (d) 10% $FeCl_3$ solution (in ml); (e) metallic Sn (in g); (f) yield of compound (II); (g) chemically pure; (h) technical; (i) granulated; (j) 3 in little pieces; (k) 2.73 Sn, isolated from the mother liquor; (l) 40 granulated; (m) 15.8 Sn, isolated from the mother liquor.

77533 SOV/80-33-1-42/49

k	a	d	e	f
	g		i	
30	159	1.25	3.5	65.08
30	160	—	3.5	65.2
30	159	1.25	5	64.5
30	160	—	5	64.9
30	150	1.25	7	64.5
30	160	—	7	64.9
	h			
50	226			
50	266	—	15	66.07
50	266	—	—	22.2
50	266	—	7	66.9
30	160	—	—	18.2
120	640	—	3.5	65.1
84	448	—	15	65.2
30	160	—	0.8	65.1
			j	65.1
20	107	—	k,	—
350	1866	—	l	63.1 *
120	640	—	m	65.1

Card 5/5

Table 2.

S/852/62/000/000/008/020
B124/B101

AUTHORS: Aronson, Yu. P., Uritskaya, M. Ya.

TITLE: Furane resin FL-2 (FL-2) examined for its suitability as a lining for chemical apparatus

SOURCE: Primeneniye polimerov v antikorrozionnoy tekhnike. Ed. by I. YA. Klinov and P. G. Udyma. Moscow, Mashgiz, 1962. Vses. sovet nauchnotekhn. obshchestv., 61-66

TEXT: The degree to which FL-2 furane resin can be hardened by thermal treatment under different conditions was examined; also its chemical stability, adhesion, corrosive action on metals, and suitability for use in the impregnation of graphite plates. Cement based on FL-2 resin is hardened without heating, using the catalytic action of acids or substances that form acids when hydrolyzed. Graphite having a grain size of 20-30 μ was used as a filler. The rate of hardening was ascertained by the Vicat method. Addition of equimolecular amounts of H_2SO_4 and $Fe_2(SO_4)_3$ accelerated the hardening process more than HCl. The activity of sulfo acids and of sulfo chlorides rises with decreasing molecular weight. When

Card 1/3

Furane resin FL-2 (FL-2) examined... S/852/62/000/008/020
B124/B101

FL-2 resin has been kept at 120°C for 5 hrs, only 1.2% can be extracted with acetone, whereas 18.2 % can be extracted if there has been no heat treatment. After heat treatment the cement withstands boiling aqueous solutions of non-oxidizing mineral acids and organic acids as well as 30% NaOH. When kept at 200°C for 9 hrs the resin becomes stable even against organic solvents, only 0.15% of it remaining unhardened. Adhesion of cement to steel measured 18.2 kg/cm^2 when it was based on FL-2 resin using p-chlorobenzene sulfonic acid, 28.2 kg/cm^2 using a mixture of phenyl urethylane sulfochloride and sulfuric acid, 30.3 kg/cm^2 with a mixture of $Fe_2(SO_4)_3$ and H_2SO_4. The drop in adhesion virtually to zero after 100 hrs heat treatment at 100°C is attributed to the corrosive action of the accelerators, among which p-chlorobenzene sulfonic acid shows the lowest rate of corrosion (0.0006 g/m^2.hr) and iron chloride the highest (0.09 g/m^2.hr). The most suitable anti-corrosive undercoats are bakelite varnish containing graphite and water glass containing sodium silicofluoride. The following method of impregnation is recommended: Graphite plates are so placed in a metallic vessel that they do not touch one another or the walls of the vessel. Then FL-2 resin is added along with 0.04 g of p-phenyl

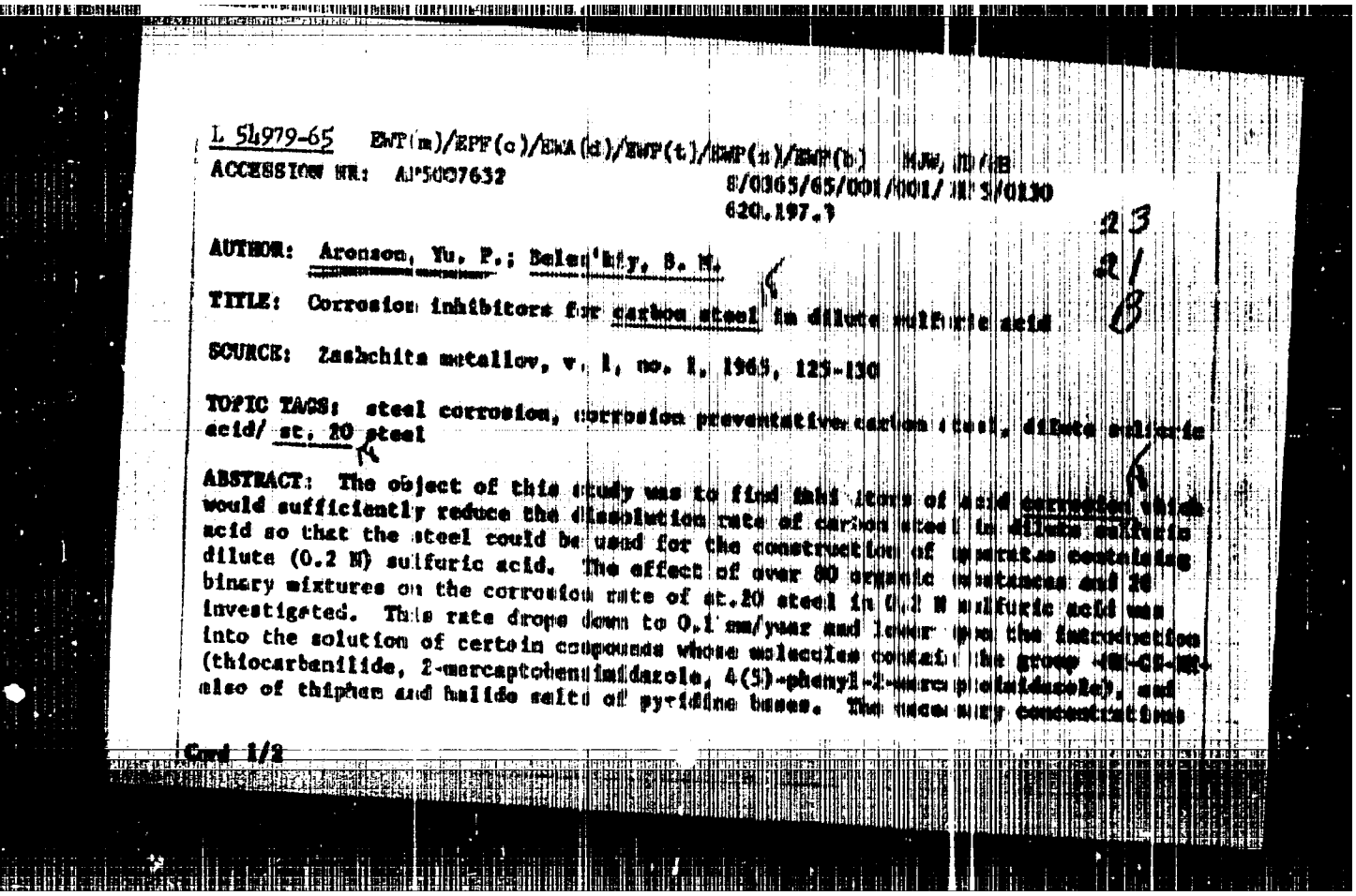
Card 2/3

Furane resin FA-2 (FL-2) examined...

urethylane sulfochloride per kg of resin; the vessel is put into an autoclave and heated to 40-45°C; the pressure in the autoclave is lowered to 12-15 mm Hg, maintained for 30 min, then raised to 3 at for 30 min, and finally lowered to 1 at. The plates are removed, wiped with a pad soaked in acetone, and replaced in the autoclave; the pressure is increased to 3 at and the temperature is kept at 120°C for 5 hrs. The resin can be used for impregnation three times. There are 1 figure and 4 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut im. S. Ordzhonikidze (All-Union Chemical and Pharmaceutical Scientific Research Institute imeni S. Ordzhonikidze)

Card 3/3



L 54979-65 EWT(m)/EPF(c)/EWA(d)/EWP(t)/EWP(z)/EWP(b) MJW/JD/HB

ACCESSION NR: AP5007632 S/0365/65/001/001/0123/0130

620.197.3

AUTHOR: Aronson, Yu. P.; Belen'kiy, B. M.

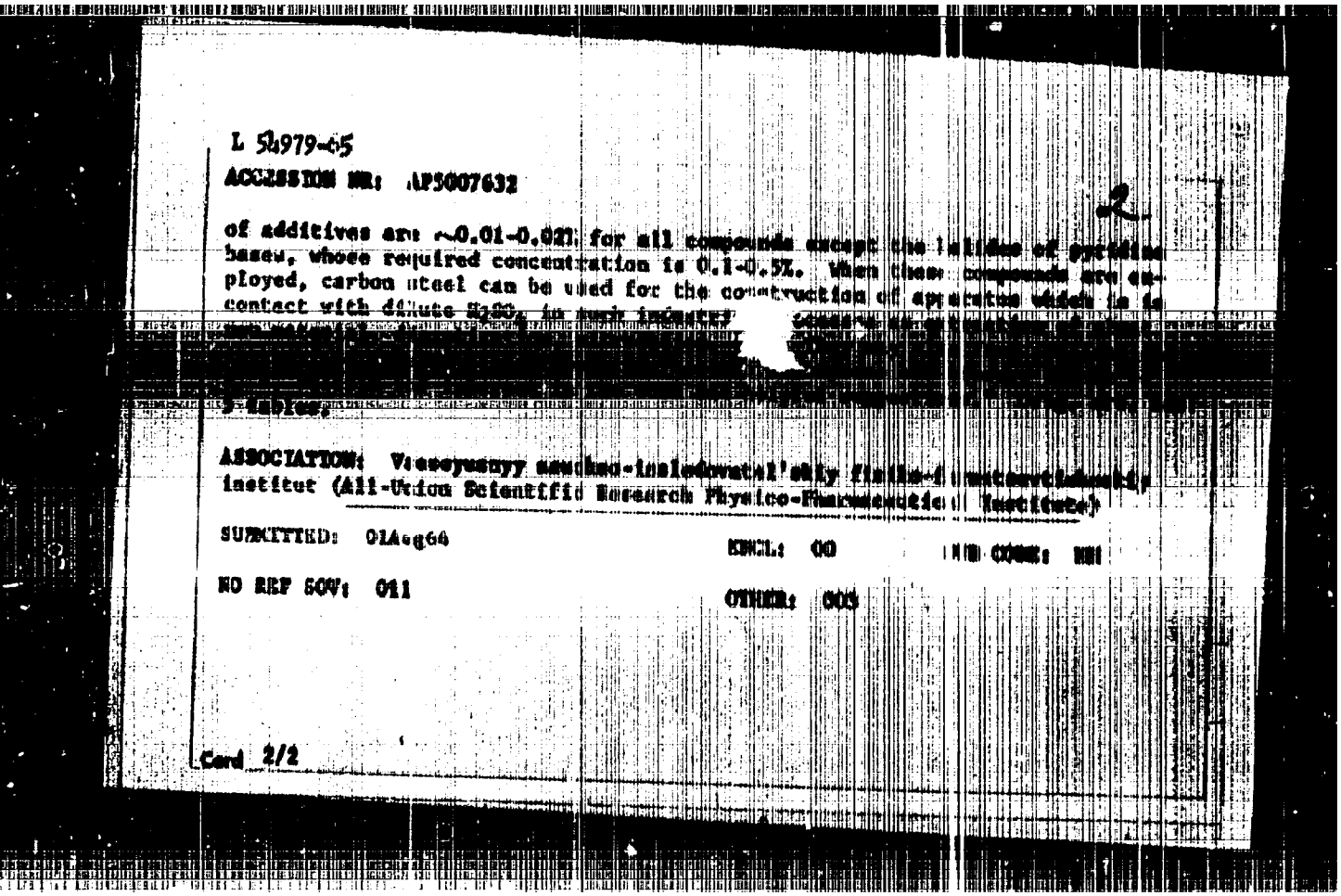
TITLE: Corrosion inhibitors for carbon steel in dilute sulfuric acid

SOURCE: Zashchita metallov, v. 1, no. 1, 1965, 123-130

TOPIC TAGS: steel corrosion, corrosion preventative carbon steel, dilute sulfuric acid/ st. 20 steel

ABSTRACT: The object of this study was to find [illegible] would sufficiently reduce the dissolution rate of carbon steel in dilute sulfuric acid so that the steel could be used for the construction of [illegible] dilute (0.2 N) sulfuric acid. The effect of over 80 organic substances and 20 binary mixtures on the corrosion rate of st.20 steel in 0.2 N sulfuric acid was investigated. This rate drops down to 0.1 mm/year and lower [illegible] into the solution of certain compounds whose molecules contain the group -NH-CS-NH- (thiocarbanilide, 2-mercaptobenzimidazole, 4(5)-phenyl-2-mercaptoimidazole), and also of thiphen and halide salts of pyridine bases. The most [illegible]

Card 1/2



L 54979-65

ACCESSION NR: AP5007632

of additives are: ~0.01-0.02% for all compounds except the halides of cyclic bases, whose required concentration is 0.1-0.5%. When these compounds are employed, carbon steel can be used for the construction of apparatus which is in contact with dilute H_2SO_4, in such instances

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy [illegible] institut (All-Union Scientific Research Physico-Pharmaceutical Institute)

SUBMITTED: 01Aug64 ENCL: 00 SUB CODE: MM

NO REF SOV: 011 OTHER: 005

Card 2/2

ACC NR: AP7004789

SOURCE CODE: UR/0413/67/000/001/0122/0122

INVENTOR: Balezin, S. A.; Aronson, Yu. P.; Belen'kiy, S. M.

ORG: none

TITLE: Method of inhibiting the corrosion of ferrous metals in acid solutions. Class 48, No. 190167. [announced by the All-Union Chemical and Pharmaceutical Scientific Research Institute (Vsesoyuznyy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy institut)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1967, 122

TOPIC TAGS: ~~metal~~ corrosion protection, ~~metal~~ corrosion inhibitor, ACID CORROSION, MERCAPTAN, FERROUS METAL

ABSTRACT: This Author Certificate introduces a method of inhibiting the corrosion of ferrous metals in acid solutions, according to Author Certificate no. 162738. To improve the degree of protection against corrosion, derivatives of mercaptoimidazole are added to the acid solution in the form of granules containing stearic acid and propargyl alcohol.

SUB CODE: 13/ SUBM DATE: none [AZ]

Card 1/1

UDC: 620.197.3

ARONTRIKHER, L. I.

Arontrikher, L. I. "Approximate solution of some differential equations," Trudy Grozn. neft. in-ta, symposium 6, 1948, P. 112-17

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

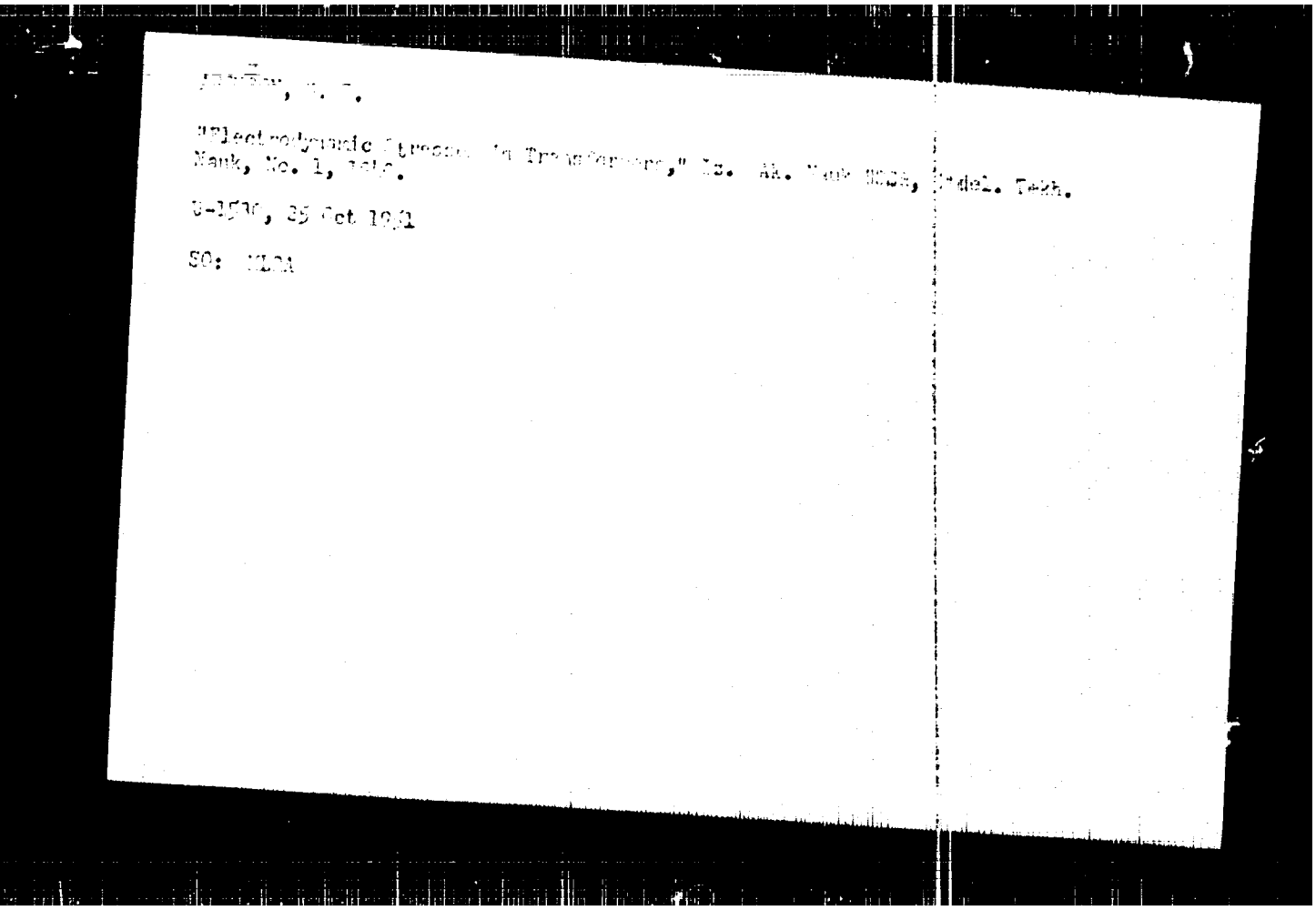
ARONZON, A.B., insh.

Semiautomatic unit for manufacturing crankshafts of agricultural machinery. Trakt. i sel'khozmash. no.3:36-39 Mr '59. (MIRA 12:4)

(Cranks and crankshafts)

ARONZON, A.B.; SAL'MAN, I.M.

Combined automatic line for machining bushings of cutting devices. Biul. tekh.-ekon. inform. no.8:15-17 '60. (MIRA 13:9)
(Machine tools) (Automatic control)



[illegible], V. F.

"Electrodynamic Stresses in Transformers," Iz. Ak. Nauk SSSR, Otdel. Tekh. Nauk, No. 1, 1950.

U-1538, 25 Oct 1951

SO: [illegible]

[illegible]/Electricity - Operator [illegible] [illegible] 52
Engineering [illegible]

PA 237T37

"Discussion: On V. Yu. Lomonosov's Article 'Operator Calculus in Electrical Engineering Education,'" Prof G. A. Sisoyan, Dr Tech Sci, Georgian Polytech Inst imeni Kirov; Prof G. S. Aronzon, Dr Tech Sci, Moscow Automobile Highway Inst; Cand Tech Sci M. Yu. Shukhatovich, Inst of Mining; Prof A. Ya. Berger, Leningrad [illegible] Inst of Commun; Doc A. A. [illegible]-Trinitskiy, Cand Tech Sci, Ural Polytech Inst

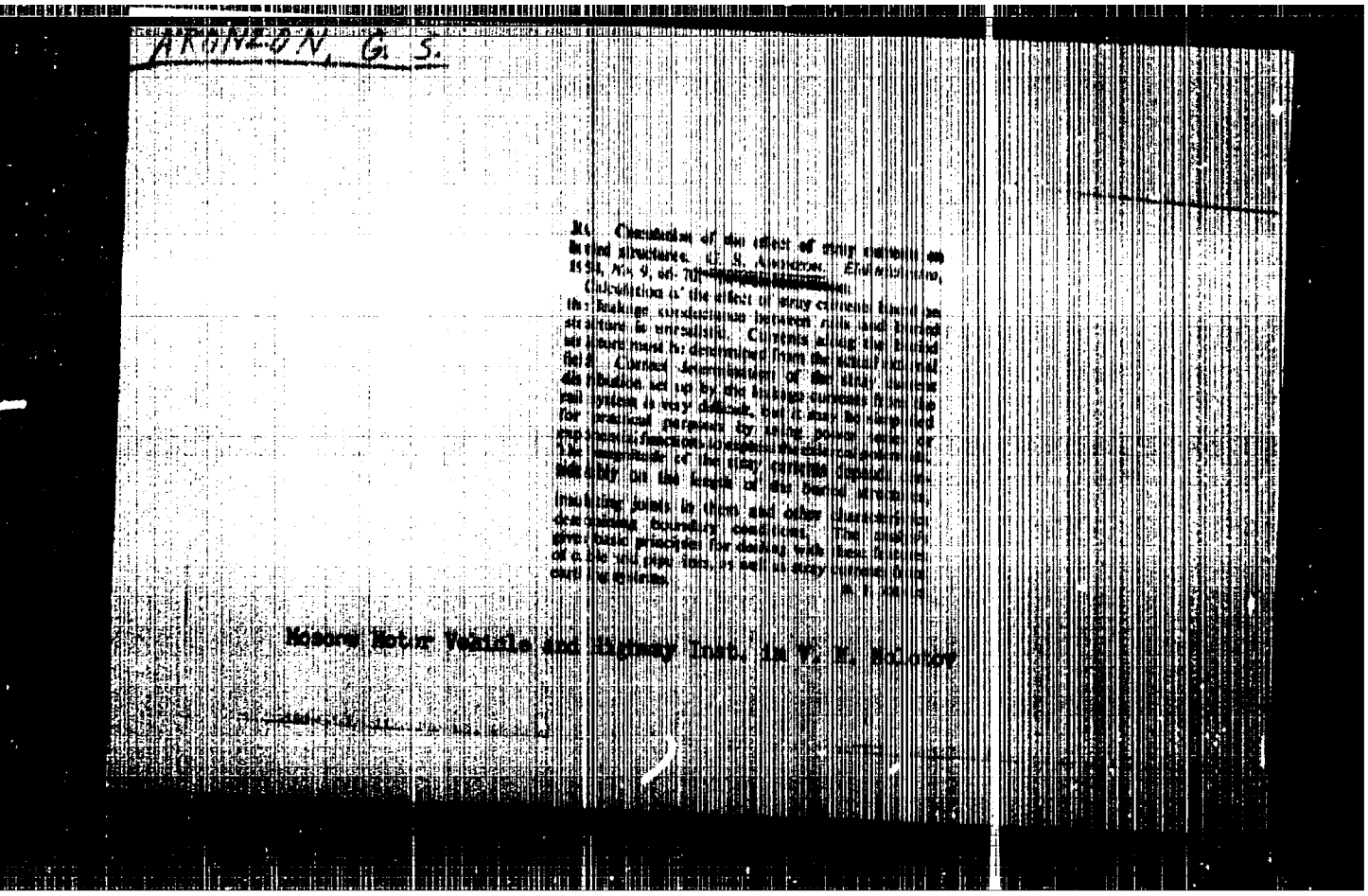
"Elektrichestvo" No 7, pp 87-91

237T37

Above authors, continuing discussion of Lomonosov's article (article and 1st part of discussion appeared in "Elektrichestvo," No 1, 1952), generally disagree with Lomonosov's position that operator calculus is unimportant in electrical engineering education.

237T37

ARONZON, G. S., Prof



AUTHOR: Aronzon, G.S., Doctor of Technical Sciences, Professor 105-9-12/32

TITLE: Calculating the Parameters of a Drainage Protection (Raschet parametrov drenazhnoy zashchity)

PERIODICAL: Elektrichestvo, 1957, Nr 9, pp 50-52 (USSR)

ABSTRACT: The author shows how, by means of a known potential of a subterranean building the basic parameters of a drainage protection, that is to say the amperage and voltage of the drainage, can be determined. As this potential depends on the current distribution in the rail system the equation for the rail current is put down first. After this the drainage-protection parameters are determined for a limiting case with remote load. The author assumes that the subterranean building runs parallel to the rails, and he mentions the potential for a ground point situated next to the building. Then the potential of the subterranean building at the drainage point is determined. The rail-, ground- and building-potential is changed by the inclusion of the drainage. Curves are obtained which, by means of the formulae obtained, show the dependence of amperage and voltage on the distance between the subterranean building and the rails. A comparison of the rails shows that even an essential decrease of the insulation conductivity of the subterranean building influences the amperage and voltage of the drainage only little. On the other hand, amperage and voltage are

Card 1/2

Calculating the Parameters of a Drainage Protection 105-9-12/[illegible]

essentially influenced by the conditions of insulation in the rail system. There are 3 illustrations and 4 Slavic references.

ASSOCIATION: Moscow Institute for Motor Highways (Moskovskiy avtomobil'no-dorozhnyy institut)
SUBMITTED: September 20, 1956
AVAILABLE: Library of Congress

Card 2/2

ARONZON, Gavriil Semenovich; BANNIKOV, Sergey Petrovich; SHKSHE[illegible], M.R., dotsent; GALAKTIONOVA, Ye.N., tekhn.red.

[Electrical engineering and electric equipment of motor vehicles] Elektrotekhnika i elektrooborudovanie avtomobilei. Moskva, Mauchno-tekhn.izd-vo M-va avtomobil'nogo transporta i shosseinykh dorog RSFSR, 1960. 558 p. (MIRA 13:9)
(Motor vehicles--Electric equipment)

ARONZON, I.M.; SOLNTSEVA, T.V., red.

[Graphicoanalytical design of plane mechanisms; manual for students of the Department of Technology] Grafoanaliticheskii raschet ploskogo mekhanizma; uchebnoe posobie dlia studentov tekhnologicheskogo fakul'teta. Moskva, Mosk. in-t nar. khoz. im. G.V.Plekhanova, 1962. 34 p. (MIRA 15:1)

1. Moscow. Institut narodnogo khozyaystva. Kafedra vysshey matematiki i teoreticheskoy mekhaniki.

[illegible], [illegible]

[illegible], [illegible]: "Ignition and increasing its precision in an arc rectifier". Moscow, 195[illegible]. Acad Sci USSR. Power Engineering Inst imeni G. M. Krzhizhanovskiy. (Dissertation for the Degree of Candidate of TECHNICAL Sciences)

SO: Knizhnaya Letopis' No. 51, 1. December 1955

AUTHOR: ARONZON,M.Z., BORISOV,V.N. PA - 2166

TITLE: Electric Disruptive Strength of Air in an Air Switch. (Elektricheskaya prochnost' vozdukha v vozdushnom vyklyuchatele. Russian).

PERIODICAL: Izvestiia Akad.Nauk SSSR, Otdel Tekhn. 1957 Vol , Nr 1, pp 149-152 (U.S.S.R.)
Received: 3 / 1957 Reviewed: 4 / 1957

ABSTRACT: The level and the character of the modification according to time of the electric disruptive strength of compressed air moving in an air switch is investigated in order to ascertain possible reasons for faulty ignition. The objects used in connection with this investigation were: the experimental chamber with a number of exchangeable electrodes of various shapes and the interspaces of a switch of Russian manufacture. The device used was worked out in 1953 at the Institute for Energy of the Academy of Science of the U.S.S.R. For purposes of investigation comparison of the modification of the character of the electric disruptive strength of the interelectrode space according to time served as a basis, viz. usually in the case of a constant length (30 mm) of this space, different shapes of electrodes, stopping down of the input apertures of the electrodes with diaphragms of different diameters, in the case of a complete stoppage of the egress of air by one of the electrodes, and in the case of an intended

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Electric Disruptive Strength of Air in an Air Switch.

formation of vortices in the chamber by the removal of equalizing partition walls. It was found that, with certain conditions governing the egress of compressed air which is determined by the configuration of the electrodes, the electric disruptive strength of the operation sphere of the air switch is considerably lower than in the case of immobile air with the same pressure. The decrease of disruptive strength below the level of the acting voltage is the basic cause of the occurrence of repeated ignition during the currentless interval. This disadvantage can be eliminated by means of a slight stopping down of the output apertures of the electrodes or by the application of a system with unilateral blowing. (8 illustrations).

ASSOCIATION: Not given
PRESENTED BY:
SUBMITTED: 13.6.1956
AVAILABLE: Library of Congress

Card 2/2

105-58-3-14/31

AUTHOR: Aronson, N. Z., Candidate of Technical Sciences

TITLE: On the Theoretical Proof of the Minimum Arc Voltage Principle (O teoreticheskom obosnovanii printsipa minimuma napryazheniya dugi)

PERIODICAL: Elektrichestvo, 1958, Nr 3, pp. 56 - 60 (USSR)

ABSTRACT: Here, it is shown that the investigation of R. Rompe - W. Weizel (Reference 7) contain principal errors and that therefore the conclusions drawn in both works are incorrect. Furthermore, the possibility to prove the minimum principle in certain special cases is shown here. In addition to the already known proof of the minimum principle for a long arc with volume cooling, a proof for another characteristic case as well - for a long stabilized arc, the energy dissipation of which is dependent upon the heat conductivity, is obtained, basing on the fundamental differential equation. In this case this proof is strictly speaking only valid at a certain idealization of the phenomenon, namely, if an independence of the plasma from temperature is assumed. Such an idealization is

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On the Theoretical Proof of the Minimum Arc Voltage Principle

permitted as far as the heat conductivity of the plasma is a quantity varying essentially less with temperature than the electroconductivity. It is known that this condition is best satisfied in the arc plasma with a low ionization degree. Just in this case the most exact satisfaction of the minimum principle can be expected. If, besides, the approximated equation (17) is also satisfied, the minimum principle permits to consider the radiation energy, as well. (17) reads as follows: $S(T) \quad \lambda(T)$. $S(T)$ and $\lambda(T)$ denote functions, which characterize the temperature dependence of the volume cooling, of the conductivity of unit volume of the arc plasma, respectively. λ denotes a certain constant quantity. For both types of arc discharge mentioned (and only for those) the correctness of the minimum principle was also confirmed by the experimental methods. Therefore, this principle can be considered as specially pertaining only to these two types of arcs. Nothing can be said on experimental confirmations of the minimum principle in its general formulation, neither exist theoretical proofs on the afore-said matter. Therefore an application of the minimum principle to other types of arcs is unfounded. There are 9 references, 1 of which is Soviet.

Card 2/3

105-58-3-14/31

On the Theoretical Proof of the Minimum Arc Voltage Principle

ASSOCIATION: Energeticheskiy institut im. Krzhizhanovskogo AN SSSR
(Institute for Power Engineering imeni Krzhizhanovskiy
AS USSR)

SUBMITTED: March 22, 1957

Card 3/3

SOV/24-58-4-30/39

AUTHORS: Aronzon, N. Z., Borisov, V. N. and Obolduyev, S.G. (Moscow)

TITLE: Circuit for Generating Unipolar Current Pulses (Skhema dlya generatsii unipolyarnykh impul'sov toka)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 4, pp 144-145 (USSR)

ABSTRACT: Equipment is being extensively used which requires powerful current and voltage pulses of very short durations. In such generators a capacitance is usually discharged across a load by means of a controlled gas discharge device. This capacitance and the inductance of the load form an oscillating circuit and the task of the switching device is to allow the passage of the first half-wave of the current of the oscillating discharge. If the amplitude of current pulses exceeds several thousand ampères and their duration is below a few μsec, existing gas discharge devices, although having a high throughput capacity as regards the current, will be unsuitable due to back-firings. To eliminate this drawback, a method has been described by Chuchalin and Razin (Ref 1)

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Circuit for Generating Unipolar Current Pulses

consisting of connecting an additional gas discharge device in parallel with the storage capacitance which "absorbs" from the capacitance the charge of opposite polarity. However, as was mentioned in the dissertation of one of the authors, N. Z. Aronzon, "Striking and its improvement in an arc valve", such a method proved impracticable in the case of such high current intensities due to the difficulties of striking the "absorbing" ignitron. Therefore, the simpler method of eliminating back-firings is of interest which consists in connecting a resistance into the discharge circuit so that this circuit becomes a damped one. An obvious disadvantage of this method is that for obtaining an equal amplitude of the current intensity the voltage has to be 2.5 times as high as in circuits without such damping resistance. However, this disadvantage can to some extent be eliminated by using as a damping element a resistance in parallel with a capacitance. If the values of the resistance R_2 and the capacitance C_2 (Fig 1) are

Circuit for Generating Unipolar Current Pulses

suitably chosen, unipolar impulses can be generated by means of such a circuit, the amplitudes of which are considerably higher than in circuits with only a resistance as a damping element. In the above mentioned dissertation a calculation is given for a selected ratio of the parameters. In this paper the author calculates the optimum ratio of the parameters for a circuit arrangement as shown in Fig 1, wherein L and R_1 are respectively the inductance and the resistance of the load, C_1 is the storage capacitance. In view of the difficulties of analytical investigation of the problem, the authors applied the oscillographic investigation on models. It can be seen from the results graphed in Fig 3 that the maximum attainable amplitude of unipolar current impulses by means of a circuit as shown in Fig 1 is 0.59 to 0.55, i.e. about 50 to 60% higher than the relative amplitude of an ordinary aperiodically damped discharge. In Fig 4 characteristic oscillograms of unipolar pulses are graphed for various ratios of the circuit parameters;

Circuit for Generating Unipolar Current Pulses

in this figure curve 3 corresponds to the maximum attainable amplitude.
There are 4 figures and 1 Soviet reference.

SUBMITTED: November 15, 1957

8(0) SOV/105-58-11-21/28

AUTHORS: 1) Zalesskiy, A. M., Professor (Leningrad)
2) Sergeyev, P. V., (Town of Ust'-Kamenogorsk)
3) Gusa, V., Tsigelka, Ya. (Czechoslovakia)
4) Aronzon, N. Z., Candidate of Technical Sciences

TITLE: On a Theoretical Motivation of the Principle of Minimum Arc Voltage (O teoreticheskom obosnovanii printsipa minimuma napryazheniya dugi)

PERIODICAL: Elektrichestvo, 1958, Nr 11, pp 85-88 (USSR)

ABSTRACT: This is a comment on the article by N. Z. Aronzon, published in Elektrichestvo, 1958, Nr 3, pp 56-60. Aronzon attempts to prove that the assertion which is to the point that the "minimum principle" of arc voltage as advanced by Shteyenbek does not represent an exact law, but only an approximative rule is erroneous. The solution presented by Aronzon is a substantiation of just the opposite truth. He showed that the exact solution by no means validates this principle. This has moreover been shown by less stringent theoretical derivations and by many experiments. Aronzon wants to prove the correctness of this principle under any circumstances. Hence in some

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special cases he introduces evidently unreal assumptions in order to arrive at a substantiation of the "minimum principle". These assumptions are subjected to a detailed critical review. The summary is to the point that the "minimum principle" is no regularity corresponding to the basic nature of facts, but only a rough approximation theory, which is to be discarded. There is no reason to doubt the applicability of the principle of minimum resistance to the electric arc. In a general form the principle of least resistance and of maximum power dissipation can be formulated as follows: All processes in nature proceed in the direction of least resistance to the transformation of energy, or if termed in other words, in the direction of maximum energy consumption. The viewpoint adopted by Aronzon is correct, but he limits his investigation to the special case of the energy balance in the arc. His conclusions do not apply to a power arc. Zalesskiy gives a very indeterminate assertion, that the incorrectness of the minimum principle has been proved long ago. He should have given an exact reference to the paper including this statement. Rompe and Vaytsel' suppose that the minimum principle in application to a stabilized arc proves to hold only due to purely acciden-

On a Theoretical Motivation of the Principle of Minimum Arc Voltage

tal circumstances. In fact it could successfully be proved that this circumstance is not accidental. It follows from the properties of the differential equation describing the arc behaviour. The retorts given by Zalesskiy are studied and then shown to be incorrect. Emphasis is repeatedly placed upon the fact that no method of an accurate calculation has hitherto been developed for the calculation of an arc with preponderating volume cooling and that thus the minimum principle up till now constitutes the only means of calculating such arcs. The fact that this principle applies to this case is substantiated not only in the papers by Kishteyn and Koppel'man, but also by the well known circumstance that the voltage gradient across the arc is independent of the current. (This latter statement is commented in the book by Zalesskiy as follows: "This result is very interesting and is confirmed by experimental information.") Sergeyev in his comment does not touch the minimum principle itself. He raises the question in what direction the unstable and unsteady arc proceeds to a stable and steady state operation, and he maintains that this always implies a transition to a state with a maximum

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On a Theoretical Motivation of the Principle of Minimum Arc Voltage

energy dissipation. This assumption is not true, as, for example, an arc will always try to contract to minimum length, which corresponds to a minimum of energy dissipation. The remarks of Gusa and Tsigelka concerning power arcs are absolutely correct. There are 2 figures and 2 references.

ASSOCIATION: 4) Energeticheskiy institut imeni Krzhizhanovskogo AN SSSR (Institute of Power Engineering imeni Krzhizhanovskiy, AS USSR)

ARONZON, N. Z.

14(6),8(0) PHASE I BOOK EXPLOITATION SOV/3071

Akademiya nauk SSSR. Energeticheskiy institut

Elektroenergetika, vyp. 1 (Electric Power Engineering, Nr 1) Moscow, Izd-vo AN SSSR, 1959. 139 p. Errata slip inserted. 2,800 copies printed.

Eds. of Publishing House: P. P. Ogarkov and Ye. N. Grigor'yev; Tech. Ed.: Ye. V. Zelenkova; Editorial Board: Yu. G. Tolstov, Doctor of Technical Sciences (Resp. Ed.), I. M. Markovich, Doctor of Technical Sciences, I. S. Stekol'nikov, Doctor of Technical Sciences, P. I. Zubkov, Candidate of Technical Sciences, V. I. Levitov, G. V. Mikhnevich, Candidate of Technical Sciences, V. I. Levitov, Candidate of Technical Sciences, and N. D. Bol'shov (Secretary)

PURPOSE: This collection of articles is intended for specialists in the various fields of electric power engineering treated in it.

COVERAGE: The first issue of the collection of articles, Elektroenergetika, appeared in April 1959. It is published by ENIN imeni G. M. Krzhizhanovskiy of the Academy of Sciences, USSR. The articles in this issue are based on research and work by the authors under the auspices of ENIN. The articles are on a high theoretical and technical level and represent original contributions to various present-day problems in electrical engineering. References are given after most of the articles.

Kozlovskiy, G. P., and G. V. Mikhnevich. Equivalent Circuit of Station Generators Equipped With Strong-Action Regulators 98

The author presents a method of representing a group of a station generators by two identical generators equivalent to the group in their static characteristics. The method is used in studying static stability and the nature of transients of station generators. There are 4 references, all Soviet.

Gorushkin, V. I. Application of the Method of Successive Approximations for Calculating Complex Electrical Networks 103

There are 7 references, all Soviet.

Gol'tsman, V. A. Transformation of a Single-phase System Into a Three-phase Using Static Devices According to a Scheme Developed by F. A. Kalantarov and L. A. Tsaytlin 114

The method used consists in employing capacitors in the circuit. The author derives formulas expressing the transformation. There are 3 references, all Soviet.

Aronzon, N. Z. Properties of a Certain Type of Oscillatory Circuit 117

No references are given.

[illegible] Derivation of Formulas of Various Numerical Methods for ... Ordinary Differential Equations 120

There are 3 references, all Soviet.

Stekol'nikov, I. S. The Mechanism of Discharge in Large Gap Spacings for Alternating Current 127

The author, a well-known specialist in problems of lightning protection, investigated the mechanism of discharge at industrial frequency and at various spacings of the air gap, all of them having practical applications. On the basis of several experiments, using various types of circuits and varying the parameters, the author concludes that the electric strength of a given spacing is not subject to substantial change when circuit parameters are varied. There are 8 references: 2 Soviet, 4 English and 2 German.

ARONZON, N.Z.; MEZHUYEVA, V.V.

Investigation of an arc in a quenching chamber with air blast. Zhur. tekh. fiz. 30 no.5:555-560 My '60. (MIRA 13:8)

1. Energeticheskiy institut im. G.M.Krzhizhanovskogo AN SSSR, Moskva.
(Electric arc)

S/057/62/032/001/011/018
B104/B138

AUTHOR: Aronzon, N. Z.

TITLE: Study of the process of arc suppression in an air blast

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 1, 1962, 76-88

TEXT: The process of the deformation of a residual arc column after a spark discharge was investigated, together with related effects leading to suppression of the arc. An electron-optical converter was used to take high-speed pictures of the discharge gap, which had an air blast on either side (Fig. 4) which reduced the diameter and temperature of the residual arc column. If the discharge gap is much larger than the nozzle diameter, the narrowing in the central part of the residual arc column, and the cooling, will be less than around the other. The equation

$$\left(\frac{da}{dt}\right)_{t=0} = -\sigma_0 c_0 \frac{dp_e}{da} p_s^{\frac{1}{k}} \left(\frac{2}{k-1}\right)^{\frac{1}{2}} \left(\frac{1}{k} p_s^{\frac{1-k}{k}} - \frac{1+k}{2k}\right) \left(1 - p_s^{\frac{k-1}{k}}\right)^{-\frac{1}{2}} - \frac{da_0}{da_0} v_r. \quad (5)$$

is derived for the rate of deformation rate of the residual arc column.

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Study of the process of arc ...

σ is the cross section of the residual arc column, $p_z = p/l_0$ is the pressure drop, a known function of z, c_0 is the speed of sound in the column for z = 0, v_z is the velocity of gas flow in the column, a function of z. The complex function σ(z,t) is discussed for small t and large t. It is shown that the cross section of the residual arc column diminishes exponentially in all points at a specific stage of deformation. The shape of the residual arc column is determined by the shape and size of the suppression chamber. It is shown by the model of incompressible and compressible liquids that deformation of the residual column is not an interruption but an exponential reduction of thickness. The more rapid this reduction, the more rapid will be the cooling and deionization processes. The equations

$$\frac{dT}{dt}=\frac{1}{\frac{d\rho}{dT}[h(T)-h(T_0)]}\left[2\pi\lambda(T)k_1(T-T_0)-\frac{\sigma i^2}{T}\right]\frac{\pi\gamma u}{ti} \qquad (19)\text{-}(20)$$

$$\frac{u}{l}=\frac{l}{\gamma\pi r_0^2}\exp\left\{\left[\frac{T}{T_0}gRT_0\left(\frac{d^2P_z}{dz^2}\right)_{z=0}\right]^{1/2}t\right\}.$$

Card 2/4

Study of the process of arc ...

which describes the cooling of the residual column, are derived in an approximate study of energy withdrawal and supply. l = arc length, ϱ = density, h(T) = enthalpy, u(t) and i(t) = voltage and current in the arc, and λ = thermal conductivity. Arc suppression is not possible unless the condition

$$u^2(t) < \frac{2l^2\lambda(T)h_1(T-T_0)}{r_0^2 T}\exp\left\{t\left[\frac{T}{T_0}gRT_0\left(\frac{d^2\rho_0}{dx^2}\right)_{x=0}\right]^{1/2}\right\}. \qquad (21)$$

is satisfied. The suppressing power of a chamber remains almost constant if the condition $\lambda(T)/I$ = const (where I is the arc-current amplitude), is satisfied. The experimentally verified approximation U^2I=const interrelates the restoring voltage and the amplitude of the suppression current. There are 8 figures and 9 references: 2 Soviet and 7 non-Soviet. The three references to English-language publications read as follows: G. K. Simpson, E. Mech. Electrical J., June 1959; J. Slepian. AIEE Transactions, April, 60, 1941; A. M. Cassie. Introduction to the theory of circuit interruption; from H. Trenchem, Circuit Breaking, London, 1953.

Card 3/4

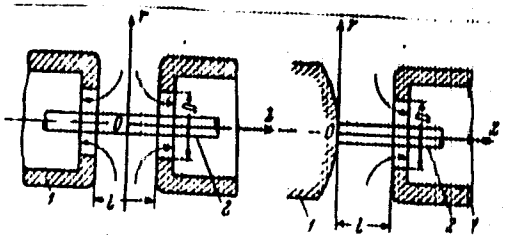
Study of the process of arc ...

S/057/62/032/001/011/018
B104/B138

ASSOCIATION: Energeticheskiy institut im. G. M. Krshizhanovskogo AN SSSR Moskva (Institute of Power Engineering imeni G. M. Krshizhanovskiy AS USSR, Moscow)

SUBMITTED: February 6, 1961

Fig. 4. Schematic diagram of suppression chambers with air blast on one, and on both sides.
Legend: (1) electrodes; (2) residual arc column.



Card 4/4

ARONZON, N.Z., kand.tekhn.nauk; KOZLOVKOV, A.F., kand. tekhn.nauk; KHACHATURYAN, S.A., kand.tekhn.nauk; KOZLOV, V.A., inzh.

Electrical model of a piston-type compressor station. Prom. energ. 20 no.10:43-45 O '65. (MIRA 18:10)

ARONZON, V.I., inzh.; VYSOTSKIY, Ye.A., inzh.; DVORKIN, A.[illegible], inzh.

Using piston raw-petroleum meters in pneumatically controlled systems. Priborostroenie no.12:21-22 D '65.

(MIRA 19:1)

ARDS, B. 1951

(Anat. & Biol. Inst. U. of Debrecen)

"Action of Cytotoxic Sera on the Organs of the Reticulo-Endothelial System."

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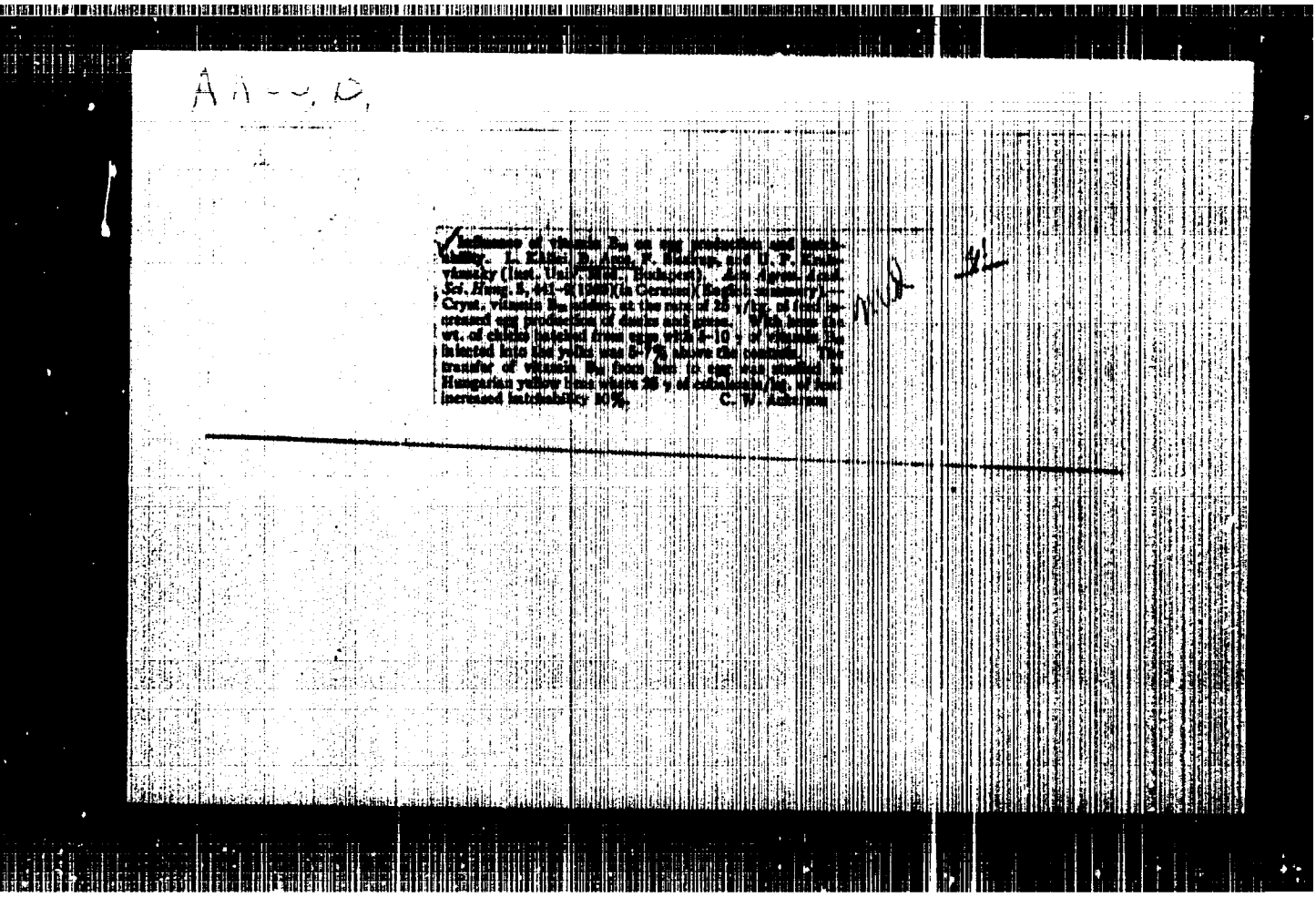

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Authors:

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TITLE: Electron-microscopic studies of the medial eminence in the rat [This paper was presented at the 29th Meeting of the Hungarian Physiological Society held in Szeged from 2 to 4 July 1964]

SOURCE: Academia scientiarum hungaricae. Acta physiologica, v. 26, Supplement, 1965, 49

TOPIC TAGS: electron microscopy, rat, brain, histology, neurology

ABSTRACT: The ultrastructure of the layers of the medial eminence is described. The surface of the brain is covered by a basal membrane. The endothelium of the portal vascular loops which penetrate into the medial eminence is very thin and fenestrated, like that of blood vessels which transport large volumes of fluid. In the palisade layer, especially near the vascular loops, large numbers of nerve fiber endings are present. The endings are characterized by two types of vesicles: a) those of small size with a thin content, similar to the synaptic vesicles in their order of magnitude, b) larger ones containing a denser material

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and similar to the neurosecretory vesicles. In the lateral and anterior parts of the medial eminence, there are few nerve endings and they give way to glial and ependymal soles. In this area and in the hypendyma, the vascular epithelium is not fenestrated. These ultrastructural properties support the view that a substantial transport of substances between blood vessels and nerve endings takes place in the area of the medial eminence. [JPRS]

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