Kuznetsov M.P.

KUZNETSOV, M.P., inzh.

Floccules and mottled liquation in bessemer steel rails.
Biul. TSNIICHM no.23:30-35 '57. (MIRA 11:2)
(Railroads--Rails)
(Steel--Defects)

KUZNETSOV, M. P.
Dzherzhinskiy Metallurgical Plant, UKR. SSR

"Influence of the d Ladle Vacuum Treatment on Properties of the Bessemer Steel."

paper presented at Second Symposium on the Application of Vacuum Metallurgy.
Moscow 1-6 Jul. 1958

LEVIN, S.L., prof., doktor tekhn.nauk; KONOVALOV, V.S., insh.; CHERNENKO, F.A., insh.; KUZNETSOV, M.P., insh.; SOLOGUB, S.L., insh.

Some problems of smelting and pouring rimmed chromium steel. Izv.vys.ucheb.zav.; chern.met. no.10:15-22 O '58. (MIRA 11:12)

1. Dnepropetrovskiy metallurgicheskiy institut i metallurgicheskiy zavod imeni Dzerzhinskogo.
(Chromium steel--Metallurgy)

KUZNETSOV, M.P.

ДЕГАЗАЦИЯ СТАЛИ И СПЛАВОВ

М.А.Шумилов П.В.Гельд Ф.А.Сидоренко	Некоторые особенности процесса рассыпания ферросилиция.
Р.А.Рябов П.В.Гельд	Влияние углерода на водородопроницаемость стали.
Г.Н.Окороков А.Ю.Поляков А.М.Самарин	Особенности раскисления стали при дуговом вакуумном переплаве.
А.М.Самарин М.П.Кузнецов Д.П.Ульянов Я.М.Новик А.И.Лупутин	Повышение качества бессемеровских рельсов методом вакуумной обработки в ковше.
Г.Н.Ойкс Н.И.Антонов Г.А.Соколов В.И.Данилов В.З.Косов	Новая технология производства шарикоподшипниковой стали с применением вакуума.
Ч.Я.Агеев В.Г.Чернов	Влияние легирующих на поведение кислорода и азота при плавке его в вакууме.
Н.В.Попов З.Н.Серебрянский	Влияние технологических факторов вакуумной дуговой плавки на снижение содержания газов и неметаллических включений в подшипниковой стали.
Т.М.Воробьева Н.П.Забелурин Е.С.Калинников	Влияние вакуумирования при переливе из ковша в ковш на качество стали 30ХГСНА.

17

report submitted for the 5th Physical Chemical Conference on Steel Production, Moscow-- 30 Jun 1959.

BESSONOV, M.I.; KUZNETSOV, M.P.

Influence of time on the strength of oriented polymethylmethacrylate. Vysokom.soed. 1 no.5:761-767 My '59. (MIRA 12:10)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.
(Methacrylic acid)

KUZNETSOV, M.P., inzh.; BAPTIZMANSKIY, V.I., dotsent, kand.tekhn.nauk; [redacted], K.S., kand.tekhn.nauk

Nature of spotty segration in steel. Izv.vys.ucheb.zav.; chern. met. 2 no.5:35-39 My '59. (MIRA 12:9)

1. Zavod im. Dzerzhinskogo, Dnepropetrovskiy metallurgicheskiy institut. Rekomendovano kafedroy teorii metallurgicheskikh protsessov Dnepropetrovskogo metallurgicheskogo instituta.
(Steel--Defects)

SOV/133-59-3-14/32

AUTHORS: Samarin, A.M., Novik, L.M., Tsukanov, G.E., Kuznetsov, M.P. and Lukutin, A.I.

TITLE: Vacuum Treatment of Bessemer Steel (Vakuumnaya obrabotka bessemerovskoy stali)

PERIODICAL: Stal', 1959, Nr 3, pp 231-238 (USSR)

ABSTRACT: The application of vacuum treatment of Bessemer steel in a 22-ton ladle before teeming in order to improve the quality of steel was introduced at the Dzerzhinskiy Works in 1957. The design of the installation is outlined and the lay-out shown in Figure 1. Main point - the evacuation is effected by two parallel pairs of pumps, RVN60 and RVN-30, connected in series. The dependence of the output of pumps operating separately and connected in series on pressure is shown in Figure 2 and the change of pressure in the vacuo chamber with time in Figure 3. At the 8th minute of treatment the pressure in the chamber falls to 2 mm Hg. The gases pumped out of the chamber are cooled in a cooler and purified from dust in a cyclone and a filter. The investigation of the vacuo treatment on the quality of steel was carried out on 38 heats of rail steel and 17 heats of rimming steel. The duration of the treatment of

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rail steel varied between 12-15 minutes during which the metal was boiling violently - its level was rising up to 500 mm. In all cases, the metal was deoxidised with ferromanganese and ferrosilicon during tapping into the ladle; aluminium (150 - 500 g/t) was introduced after the treatment when the steel was already well deoxidised. A number of heats were carried out in which vanadium (0.1 - 0.15%) or boron (0.005%) were introduced under vacuum through a special charging arrangement 3-4 minutes before the end of the treatment. The chemical composition of the metal remains practically unchanged during the vacuo treatment; the content of iron oxides in slag decreases by 20-30% and of silicon by 5-6% due to deoxidation with carbon. Changes in the content of oxygen in rail steel during the treatment and teeming are shown in Figure 4 and of hydrogen in Figure 5. Changes in the content of hydrogen in the treated steel along the depth of the ladle are shown in Figure 6; sulphur of a cross-section of rail from vacuo-treated and ordinary steel - Figure 7; the dependence of the tensile strength, relative elongation and relative necking of rails from ordinary and vacuo-

 treated steel with additions of aluminium and vanadium

before and after normalisation on the sum of [C + 0.25 Mn] - Figures 8, 9 and 10, respectively; the dependence of the impact strength of rails from vacuo-treated and ordinary steel on Σ[C + 0.25 Mn] at 20 °C - Figure 11, at - 40 °C - Figure 12, after deformation ageing - Figure 13. The mean duration of the vacuo treatment of rimming steel was 14.5 minutes at a minimum pressure of 16 mm Hg. The process is accompanied by a violent boiling (the level of the metal rises by 600 - 700 mm). As the pumping capacity was insufficient to decrease sharply the content of nitrogen, it was combined into stable nitrides by additions to some heats of aluminium (300 - 1 000 g/t) or vanadium (0.1%). The additions were made through the charging installation 4-5 minutes before the end of the treatment. The content of carbon decreases by 0.03 - 0.06% during the treatment. Changes in the content of oxygen and hydrogen during the treatment - Figures 14 and 15, respectively; indices of impact strength of the ordinary and treated metal are shown in Figure 16 and the table. On the basis of the results obtained, the following

 conclusions are drawn: a) vacuo treatment of liquid metal

Vacuum Treatment of Bessemer Steel [illegible]-39-3-14/32

in the ladle increases the quality of Bessemer steel to a level of the open-hearth steel; b) with the duration of the treatment of 14-15 minutes and a pressure in the chamber of 5-10 mm Hg for killed metal and of 15-20 mm Hg for rimming metal a deep degassing of the whole volume of the metal is obtained (the content of oxygen decreases 4.4 - 6 times, on average to 0.0013% in rail steel and to 0.0041 in rimming steel; the content of hydrogen decreases by a factor of more than 2, approximately to 2.4 cm^3/100 g in rail and to 2.4 cm^3/100 g in rimming steel ; the content of nitrogen in rimming steel decreases by 38.5%).
c) This decrease in the content of hydrogen in rail steel makes it flake insensitive without an application of slow cooling or isothermal treatment of the rolled product.
d) Vacuo treatment makes the deoxidation of aluminium unnecessary which, if needed, can be introduced after the treatment into the metal already well deoxidised by carbon. Alloying additions can be also introduced into already deoxidised metal at the end of the treatment through special charging installation in the top of the vacuo chamber.
e) Bessemer rails from vacuo-treated metal possess higher plastic properties and impact strength at positive and

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negative temperatures as well as after deformation ageing than rails made by the usual technology. On increasing carbon content to 0,8% and alloying with a small amount of vanadium (0.1 - 0.2%) or boron (0.003 - 0.005) or titanium (1-2 kg/t) and normalisation non-ageing rails can be obtained with higher physico-mechanical properties than those of rails from open-hearth steel. f) By vacuo treatment a good structural Bessemer steel can be obtained in which the zone of thermal influence of welded seam is not subjected to thermal ageing (decreased sensitivity of vacuo-treated metal to mechanical ageing is completely removed during normalisation of rolled products). There are 16 figures, 1 table and 2 Soviet references.

ASSOCIATIONS: Institut metallurgii AN SSSR (Institute of Metallurgy of the Ac.Sc.USSR) and Zavod im. Dzerzhinskogo (im. Dzerzhinskiy Works)

KUZNETSOV, M.P., inzh. (Dneprodzerzhinsk)

In order to increase rail quality. Put' i put. khoz. no.6:20-21 Je '59. (MIRA 12:10)
(Railroads--Rails)

PHASE I BOOK EXPLOITATION SOV/4548

Akademiya nauk SSSR. Komissiya po fiziko-khimicheskim osnovam proizvodstva stali

Primeneniye vakuuma v metallurgii (Use of Vacuum in Metallurgy) Moscow, Izd-vo AN SSSR, 1960. 334 p. Errata slip inserted. 4,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni A.A. Baykova. Komissiya po fiziko-khimicheskim osnovam proizvodstva stali.

Resp. Ed.: A.M. Samarin, Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House: G.M. Makovskiy; Tech. Ed.: S.G. Markovich.

PURPOSE: This collection of articles is intended for technical personnel interested in recent studies and developments of vacuum steelmaking practice and equipment.

COVERAGE: The book contains information on steel melting in vacuum induction furnaces, and vacuum arc furnaces, reduction processes in vacuum, and degassing of steel and alloys. The functioning of apparatus and equipment, especially vacuum furnaces and vacuum booster pumps is also analysed. Personalities are mentioned in connection with some of the articles and will appear in the Table of Contents. Three articles have been translated from English. Some of the

PART IV. DEGASSING OF STEEL AND ALLOYS

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Kuznetsov, M.P.

18 3200

23173
S/148/60/000/007/018/023/XX
A161/A033

AUTHORS: Garger, K. S.; Kuznetsov, M.P.; Ortenberg, R. V.; Gerasimchuk, R. V.; Lyaudis, B. V.

TITLE: The burning-out of carbon in the converter process

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no. 7, 1960, 32 - 36

TEXT: A continuous and direct analysis of steel in the converter being still too difficult, the samples are analyzed after tilting. The method is connected with loss of time and impairs the life of converters. In principle, sampling is possible without stopping the blast, and the analysis lasts 5 - 6 min. Therefore the sample must be taken in the first half of the heat (in the 4th minute). The dependence of the carbon content (Z_C) on time must be known to determine the moment when the process is to be stopped. As proven by S. I. Filippov et al. (Ref. 2: Nauchnyye doklady vysshey shkoly, Metallurgiya, 1958, No. 2, 24) component elements burn simultaneously but at a different rate depending on the metal temperature the $Z_C = f(t)$ equation being determined by

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The burning-out of carbon in the ....

these rates. Two types of kinetic carbon burning curves have been found in experiments with a 8 kg laboratory induction furnace (Ref. 1: S. I. Filipov, Teoriya protsessa obezuglerozhivaniya stali (Theory of the steel decarbonization process) Metallurgizdat, 1956) below 1500°C the burning is slower, and above 1500°C in the second half of the heat it is higher and constant:

$$\frac{dZ_C}{dt} = B$$

At Z_C below 0.2 % C, the carbon oxidation rate is inhibited by diffusion. The constant carbon burning rate is taken as the basis of the US patent (Ref. 3: D. Murphy, US Patent No. 2807537, 1957). The purpose of the present work was to find the equation for the carbon burning curves throughout the converter heat (Figure 1) to apply electronic computers for the converter process control. Two heat groups were studied, with sampling at tilts, and by "freezing on". To eliminate the dependence on the iron charge and C content in iron (Z_C^0) a relative value was used instead of Z_C, $\varphi = \frac{Z_C}{Z_C^0}$. The time moment value $\varphi = 0.7$ was chosen

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The burning-out of carbon in the .....

for the time unit after a careful analysis. It corresponds to 3.0 - 3.2 % C in the metal bath, when Mn and Si in most cases are already no longer burning. This rated time is designated by τ. The carbon burning equation finally evolved for the case of air blast through bottom (curve 1 in Figure 3) is:

$$Z_C = Z_C^o \exp (- 0.331 \tau^{2.936}). \quad (3)$$

It can apparently be applied to any converter process. The equation for the carbon burning rate ω_c is easily obtained by differentiating the expression (3)

$$\omega_t = \frac{d\varphi}{dt} = - 0.972 \tau^{1.936} \exp (-0.331 \tau^{2.936}) \quad (4)$$

The burning maximum is at $\tau = 1,265$, and the CO concentration in the separating gas is highest at this moment. The accuracy of the data obtained was checked by the "confidence interval method". Curves 3 and 4 present the results of calculations, with dependabilities 0.90 and 0.80. It was concluded that linear approximation is only applicable for short time intervals. The equation may be presented in the form of nomograms or tables. Computers would calculate the

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The burning-out of carbon in the ....

moment for the process stop more accurately. A. M. Kublitskiy, V. A. Savchenko and Yu. K. Siryachenko took part in the experiments; some data were obtained collectively with V. I. Yavoyskiy, G. N. Oyks and L. S. Tsykin of the Moskovskiy institut stali (Moscow Steel Institute). M. P. Kuznetsov carried out the first tests with the "freezing-on" sampling method. There are 4 figures and 7 references: 6 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads: D. Murphy, USA Patent No. 2807537, 1957.

ASSOCIATION: Dneprodzerzhinskiy vechernly metallurgicheskiy institut (Dneprodzerzhinsk Metallurgical Evening Institute) and Dneprovskiy metallurgicheskiy zavod im. Dzerzhinskogo (Dnepr Metallurgical Plant im. Dzerzhinskiy)

SUBMITTED: March 1, 1960

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APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928120017-1"

KUZNETSOV, M. P.

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PHASE I BOOK EXPLOITATION SOV/5411

Konferentsiya po fiziko-khimicheskim osnovam proizvodstva stali. 5th, Moscow, 1959.

Fiziko-khimicheskiye osnovy proizvodstva stali; trudy konferentsii (Physicochemical Bases of Steel Making; Transactions of the Fifth Conference on the Physicochemical Bases of Steelmaking) Moscow, Metallurgizdat, 1961. 512 p. Errata slip inserted. 3,700 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni A. A. Baykova.

Responsible Ed.: A. M. Samarin, Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House: Ya. D. Rozentsveyg. Tech. Ed.: V. V. Mikhaylova.

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Physicochemical Bases of (Cont.) SOV/5411

PURPOSE: This collection of articles is intended for engineers and technicians of metallurgical and machine-building plants, senior students of schools of higher education, staff members of design bureaus and planning institutes, and scientific research workers.

COVERAGE: The collection contains reports presented at the fifth annual convention devoted to the review of the physicochemical bases of the steelmaking process. These reports deal with problems of the mechanism and kinetics of reactions taking place in the molten metal in steelmaking furnaces. The following are also discussed: problems involved in the production of alloyed steel, the structure of the ingot, the mechanism of solidification, and the converter steelmaking process. The articles contain conclusions drawn from the results of experimental studies, and are accompanied by references of which most are Soviet.

S/135/61/000/002/007/012
A006/A001

AUTHORS: Pisklich, V. D., Engineer, Kryzhanovskiy, A. L., Kuznetsov, M. P., Bortunov, Ye. M., Burkhan, G. N.

TITLE: Reconditioning of Rolls by Automatic Building-Up

PERIODICAL: Svarochnoye proizvodstvo, 1961, No. 2, pp. 28-31

TEXT: The selection of proper conditions for the building-up of rolls is only possible if various method be tested at the same plant using the same rolling mill and rolls. At the Metallurgical Plant imeni Dzerzhinskiy a comparison was made in 1958-59 of results obtained by building-up steel rolls of a 550 roughing stand of the 330 and 260 section mills using alloyed steel wire and conventional welding wire under ceramic flux. The tests were made with the participation of workers of the Plant including G. P. Klimenko, V. P. Latyshev, P. F. Novikov, N. S. Nazarova. The following technology of building-up the rolls was employed: Preheating of the roll at the spot to be built-up to 380-400°C by an electric inductor; temperature control was made with thermopencils composed of 40% nickel carbonate and 60% petroleum paraffin. Building-up was performed under conditions given in Table 1. The sequence of building-up was selected according to the shape of the

grovves to the built-up by taking into account the inclined position of the roll. (Figure 2) During the building-up process temperature of the surfaces was maintained at about 380-400°C. The rolls were then cooled in a thermostat for about 12 - 18 hours down to 40 - 60°C. The built-up rolls were subjected to mechanical processing. The chemical composition of the built-up metal was determined (Table 2); wear resistance of the rolls was compared with that of rolls which had not been built-up (Table 3). As a result of the investigations performed it was found that automatic arc building-up of steel rolls under ceramic fluxes was one of the simplest and best available methods for reconditioning the rolls. The use of ceramic fluxes combined with Sv-08 wire, produces built-up metal of high wear resistance. The ceramic fluxes can successfully replace the scarce and expensive high-alloy electrode wires and assure considerable economical advantages. The comparison of some variants of building-up showed the advantage of using ceramic fluxe; building-up with such fluxes is recommended for large-scale production, which is however impeded by the lack of this material produced on a large scale.

S/135/61/000/002/007/012
A006/A001

Reconditioning of Rolls by Automatic Building-Up

Table 1

Condition parameters of building-up rolls

Wire grade	30ХГСА (30KhGSA)	60ХГ (60KhG)	Х20Н10Г6 (KH20N10G6)	ЭИ701 (EI701)	Св-08 (Sv-08)	Св-08 (Sv-08)
Flux type	АН-348 (AN-348)	АН-348 (AN-348	АН-20 (AN-20)	АН-20 (AN-20)	ЖС-320/т (ZhS-320/t)	ЖС-450/т (ZhS-450/t)
Wire diameter in mm	3.5	5	5	3.5	5	5
Current in amps	370-390	700-800	550-600	370-390	550-600	550-600
Arc voltage in v	32-36	36-38	30-32	30-34	28-30	28-30
Wire feed rate in mm/hr	109	56	56	109	37	37
Roll revolution speed in rpm	0.43	0.57	0.57	0.43	0.31 (0.43)	0.31(0.43)

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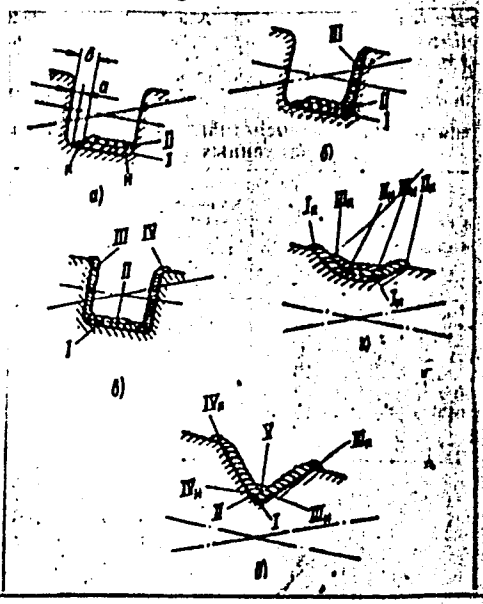
Reconditioning of Rolls by Automatic Building-Up . .

Figure 2

Schematic drawing of building-up grooves: I_n, II_n etc. are first, second etc. initial beads of built-up metal layers; I_k, II_k etc. are first, etc., final beads, of built-up metal layers.

Figure 2:



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Reconditioning of Rolls by Automatic Building-Up

Table 2
Chemical composition of base, filler and built-up metal

Metal investigated	Material	Chemical composition						
		C	Cr	Mn	Si	Ti	S	P
Bead	55	0.55	0.20	0.60	0.30	-	0.03	0.015
Electrode	-08(Sv-08)	0.09	0.06	0.44	Traces	-	0.05	0.016
Metal built-up under ceramic fluxes	ZhS-320/t	0.28 0.28 0.28	2.33 2.20 2.17	2.44 2.20 2.30	1.52 1.44 1.46	0.39 0.34 0.38	0.020 0.018 0.020	0.025 0.026 0.022
	ZhS-450/t	0.73 0.83 0.72	10.05 10.65 10.09	3.20 3.34 3.08	1.44 1.60 1.71	0.54 0.56 0.56	0.032 0.038 0.023	0.009 0.010 0.024

There are 4 tables, 5 figures and 4 Soviet references.
ASSOCIATIONS: Zhdanovskiy metallurgicheskiy institut (Zhdanov Metallurgical Institute (Pisklich); Dneprodzerzhinskiy metallurgicheskiy zavod imeni F. E. Dzershinskogo (Dneprodzerzhinsk Metallurgical Plant imeni F. E. Dzerzhinskiy) (Kryzhanovskiy, Kuznetsov, Bortunov, Burkhan)

Card 5/5

GARBER, K.S., dotsent; NIKITIN, A.I.; LYAUDIS, B.V.; MALINOVSKIY, B.N., kand. tekhn.nauk; BEL'SKIY, O.I.; VOLKOV, L.G.; KUZNETSOV, M.P.; KUTSENKO, A.D., SOROKIN, A.A.; STAKHURSKIY, A.D.; TRUBITSYN, L.M.; TRUSEYEV, A.I.; SHAFRAN, I.K., inzh.; SHESTAK, P.I.; UL'YANOV, D.P.

Automatic control of converter smelting by means of compu' rs. Stal' 23 no. 7:608-610 Jl '63. (MIRA 16:9)

1. Dneprodzerzhinskiy metallurgicheskiy zavod-vtuz im. M.I. Arsenicheva (for Garger). 2. Institut kibernetiki AN UkrSSR (for Malinovskiy). 3. Zavod im. Dzerzhinskogo (for Shafran).

MOLOTKOV, L.F., dotsent, kand. tekhn. nauk; YUFEROV, V.M., dotsent, kand. tekhn. nauk; KUZNETSOV, M.P., inzh.; CHERNEVICH, Ye.M.; BORTUNOV, Ye.M.; SOROCHAN, N.G.; MADZHAR, P.I.

Ways of increasing the output of rolled products acceptable for their mechanical properties during the rolling of M16S, St.3M, and 15KhSND steel on universal mills. Stal' 24 no.9:824-827 S '64.
(MIRA 17:10)

AGAMIROV, A.M., inzh.; BARANKIN, V.A., inzh.; KUZNETSOV, M.P., inzh.

[Safety engineering instructions in electrical equipment installation operations] Instruktivnye ukazaniia po tekhnike bezopasnosti pri proizvodstve elektromontazhnykh rabot. Moskva, Stroiizdat, 1964. 144 p. (MIRA 17:10)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye po proizvodstvu elektromontazhnykh rabot. 2. Glavnoye upravleniye po proizvodstvu elektromontazhnykh rabot.

KUZNETSOV, M.P.; SOKOLOVA, M.P., red.; BRONSHTEYN, I.I., red.

[Collection of safety engineering regulations for electric equipment installation operations] Sbornik pravil tekhniki bezopasnosti pri proizvodstve elektromontazhnykh rabot. Moskva, Energiia, 1964. 335 p. (MIRA 17:11)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye po proizvodstvu elektromontazhnykh rabot.

BOGDANOV, K.D.; DELIBASH, B.A.; VENETSIANOV, Ye.A.; GUREYEV, V.A.; ZHIVOV, M.S.; ZEVAKIN, A.I.; NAYFEL'D, M.R.; NEYMAN, Kh.G.; KUZNETSOV, M.P.; RIZOVATOV, A.V.; RUBINSHTEYN, Ya.A.; [illegible]; TRUNKOVSKIY, L.Ye.; KHROMCHENO, G.Ye.

[Organization and performance of electrical equipment installation operations] Organizatsiia i proizvodstvo elektromontazhnykh rabot. Moskva, Stroiizdat, 1964. 602 p. (MIRA 18:3)

KUZNETSOV,M.S.

Conference of active members of the Academy of Sciences of the Ukrainian S.S.R. June 6-7, 1955. Visnyk AN URSR 26 no.7:64-67 Jl'55. (MLRA 8:10)

(Academy of Sciences of the Ukrainian S.S.R.)

BERMANT, Ye. Ye., inzh.; KUZNETSOV, M.S., inzh.

Planning and accounting of railroad haulage and wage system for car shunting brigades. Stal' 21 no.6:563 Je '61. (MIRA 14:5)

1. Zavod "Zaporozhstal'."
(Railroads, Industrial--Accounting)
(Metallurgical plants--Equipment and supplies)

KUZNETSOV, M.T., kandidat tekhnicheskikh nauk.

Tests carried out on end mills having double front-surfaced teeth. Vest.mash. 33 no.9:43-48 S '53. (MLRA 6:10)
(Milling machines)

KUZNETSOV, M.T.

Psychopathology of cerebral cysticercosis. Zhur. nevr. i psikh. vol. 64 no.5:760-767 '64. (MIRA 17:7)

1. Respublikanskaya psikhonevrologicheskaya bol'nitsa (glavnyy vrach S.I.Volynets, nauchnyy rukovoditel' - prof.M.A.Chalisov), Mogilev.

KUZNETSOV, M.V.

KUZNETSOV, M.V.

Chronic hemolytic anemia with predominantly intravascular hemolysis. Vrach.delo supplement '57:14-15 (MIRA 11:3)

1. Kafedra terapii (zav.-prof. A.I.Frankfurt) Saratovskogo meditsinskogo instituta.
(ANEMIA)

NIKOLAYEV, Yevgeniy Vladimirovich; BOYKOVICH, D.I., inzh., retsenzent; KUZNETSOV, M.V., inzh., retsenzent; OSMINKIN, Ya.M., nauchn. red.; KOMAROVA, N.K., red.

[Safety measures on shipyard sidings] Tekhnika bezopasnosti na pod"ezdnykh putiakh sudostroitel'nykh predpriiatii. Leningrad, Sudostroenie, 1965. 54 p. (MIRA 18:3)

KUZNETSOV, M.V.

Drying with combined steam and electric heating. Prom.energ. 15 no.2:13-16 F '60. (MIRA 13:5)
(Drying apparatus)

ACC NR: AP6013509 UR/0120/66/000/002/0102/0108

AUTHOR: Nazarov, A.S.; Ivanovskiy, G.F.; Kuznetsov, M.V.

ORG: None

TITLE: Getter-ionic pumps with directly heated titanium evaporators

SOURCE: Pribory i tekhnika eksperimenta, no.2, 1966, 102-108

TOPIC TAGS: vacuum pump, getter ionic vacuum pump, titanium/GIN-5 vacuum pump

ABSTRACT: This paper describes a series of three getter-ionic vacuum pumps with directly heated titanium evaporators. Type GIN-5 has a 5000 liter/sec, type GIN-2 - a 2000 l/sec, and type GIN-05M1 - a 500 l/sec pumping speed. Enumeration, discussion and presentation of pump parameters, and a design drawing and photograph are given. The getter ionic pump are attractive by their simplicity, reliability, convenience of operation and a much smaller weight than electric discharge pumps; however, they are critically vulnerable to air breakthrough. The limit of the getter-ion pump vacuum level is 3.10^{-9} torr, with the heater on. The pumping speed can be regulated by the rate of titanium evaporation, which is related in a definite way to the evaporator temperature and its power. The evaporator-heater is a 3 mm dia. U-shaped titanium-molybdenum wire with a titanium reserve of 24 grams. The pump schematic is shown in Fig. 1. Here 1 - is the central anode; 2 - the heateable anode, 3 - the cathodes; 4 - the directly

Card 1/2 UDC: 621.528.5

ACC NR: AP6013509

heated titanium evaporator, 5 - forepump outlet manifold. The residual gases comprised H_2, H_2O, CH_4, CO and Ar. The foreline vacuum, preliminary to starting the getter ion pump, should not be worse than 10^{-3} to 10^{-4} torr. It is supplied by a foreline pump of another, suitable type. Orig. art. has 12 figures and 1 table.

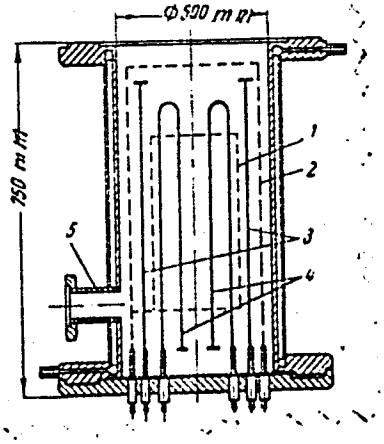


Fig. 1. Schematic of getter-ionic vacuum pump GIN-5.

SUB CODE: 13 SUBM DATE: 28Jun65 ORIG REF: 006 OTH REF: 007

Card 2/2

L 08252-67 EWP(l)/EWA(m)/EWP(t)/ETI IJP(c) JD/WW/JG

ACC NR: AP6029906 (A, N) SOURCE CODE: UR/0413/66/000/015/0070/0071

INVENTORS: Nazarov, A. S.; Makh, E. A.; Ivanovskiy, G. F.; Kuznetsov, M. V. 61

ORG: none

TITLE: Getter-ion pump. Class 27, No. 184389

SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 70-71

TOPIC TAGS: ionization, magnetic field, electric field, anode, cathode

ABSTRACT: This Author Certificate presents a getter-ion pump with ionization in the electric and the magnetic fields. The pump contains an anode and an evaporator of the getter substance, serving simultaneously as the cathode (see Fig. 1). To increase the effectiveness of ionization of the residual gases, the anode is made in a spiral shape, while the cathode-evaporator is Π-shaped in form and is located on the out-

Card 1/2 UDC: 533.582

L 09252-67
ACC NR: AP6029906

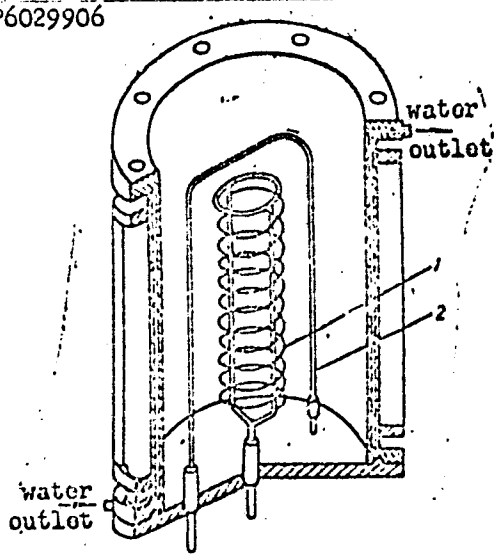
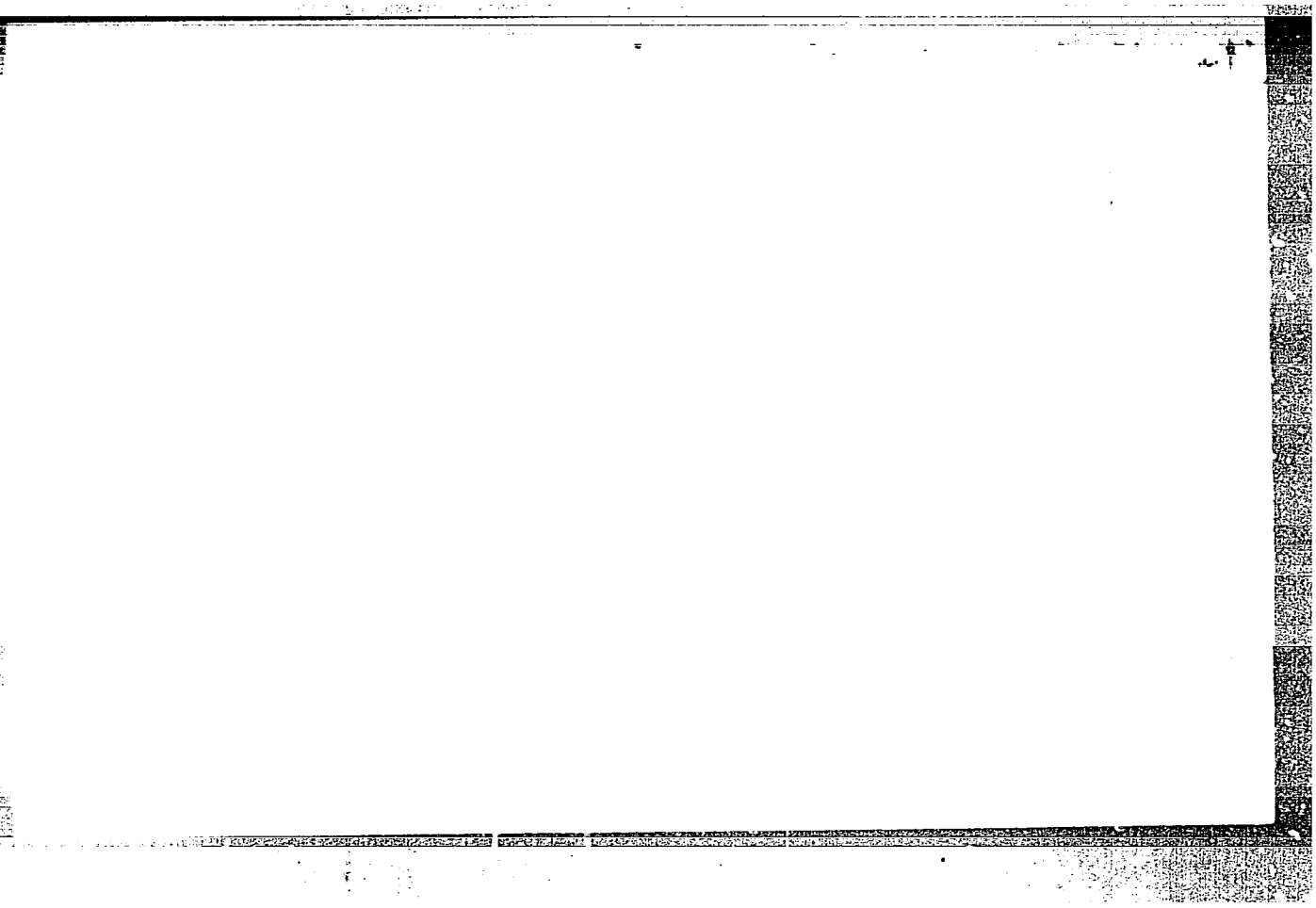


Fig. 1. 1 - anode;
2 - cathode evaporator

side of the anode in the plane of its axial section. Orig. art. has: 1 figure.

SUB CODE: 13, 20/09/ SUBM DATE: 14Apr65

Card 2/2



APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000928120017-1"

KUZNETSOV, M.Ya.

Increasing labor productivity through efficient grouping of equipment. Spirt. prom. 24 no.3:21 '58. (MIRA 11:6)
(Distilleries)

KUZNETSOV, M.Ya.

Layout for continuous cooking at the Michurinsk alcohol plant.
Spirt. prom. 24 no.6:37 '58. (MIRA 11:10)
(Michurinsk--Distilling industries)

KUZNETSOV, M.Ya.

Studying work practices of the operators of wet machines. Bum. prom. no.3:24-25 Mr '64. (MIRA 17:3)

1. Nachal'nik normativno-issledovatel'skoy gruppy Solombal'skogo kombinata.

AUTHOR: Kuznetsov, N., (Ryazan') 107-58-6-35/58

TITLE: Video-Amplifier With Definition Control (Videousilitel' s regulirovkoy chetkosti)

PERIODICAL: Radio, 1958, Nr 6, p 40 (USSR)

ABSTRACT: The spectrum of the TV signal depends to a considerable degree on the type of broadcast. A definition control reduces the influence of high-frequency interference on the picture spectrum. Increasing the upper frequencies of the TV spectrum will provide improved definition. Figure 1 shows the circuit diagram of a video-amplifier in which a potentiometer permits an even blip control of the frequency characteristic at a frequency of 3 megacycles. The elements of the stages have been selected in such a way that an amplitude characteristic was obtained which permits the use of this video-amplifier with any type of kinescope. The amplitude of synchro-impulses does not depend on the contrast control, and a dropping out of step or a lateral deviation of the lines with intensive or weak signals is almost excluded. Tubes "6N15P", "6Zh1P" and "6P15P" are used. Except for the modifications, the circuit arrangement of this video-amplifier is a standard one. Figure 2 shows the frequency charac-

Card 1/2

teristics at different positions of the aforementioned potentiometer.
There is 1 diagram amd 1 graph.

 1. Television amplifiers-Characteristics

L 21516-66 EWT(d)/EWP(m)/EWT(m)/EWP(w)/EWP(f)/EWP(v)/T-2/EWP(k)/ETC(m)-6 WW/EM
ACC NR: AP5017035 SOURCE CODE: UR/0209/65/000/007/0061/0067

AUTHOR: Kuznetsov, N. (Chief designer; Professor; Doctor of technical sciences)

ORG: none

TITLE: Turbofan engine

SOURCE: Aviatsiya i kosmonavtika, no. 7, 1965, 61-67

TOPIC TAGS: turbofan engine, turboprop engine, turbojet engine, VTOL aircraft, aircraft, acoustic noise, fuel consumption, aeronautic engineering, turbine, turbine blade

ABSTRACT: According to designer N. Kuznetsov, the turbofan engine has many advantages over turbojet and turboprop engines and is therefore being widely used on all types of civil and military aircraft, including VTOL's. The turbofan engine occupies an intermediate position between the turbojet and the turboprop engine. During flight at speeds of 850 to 950 km/hr the turboprop engine loses efficiency, since the rise of supersonic streams decreases propeller efficiency and at the same time greatly increases the noise level, necessitating passenger-cabin insulation and therefore in-

Card 1/3

L 21516-66
ACC NR: AP5017035

creasing weight. Turboprop engines are much more difficult to position than are turbofan engines, thus complicating the grouping of the engines in swept-wing passenger-aircraft configurations. A turboprop engine, at a designated cruising speed, loses its advantage principally because of its increased fuel consumption.

A jet engine at subsonic speeds (900 to 950 km/hr) experiences elevated gas temperatures ahead of its turbine, resulting in a sharp increase in noise produced by the high-velocity exhaust gases; this is an undesirable feature in a passenger aircraft. By contrast, the turbofan engine has an external by-pass which supplies air through a nozzle and lowers the exhaust velocity. This engine uses considerably smaller turbine blades, its weight is substantially less for a given thrust, its noise level is considerably lower, and its external cooling and stabilizing features provide an additional basis for preferring it over the jet engine. In addition, it provides greater safety during takeoff, landing, and in flight, even in case one engine should malfunction. The turbofan engine is economical at cruising speeds and provides excellent takeoff qualities, its takeoff power being 20—25% higher than with turbojet engines; the overall performance of the turbofan

Card 2/3

L 21516-66
ACC NR: AP5017035

engine is 12—15% higher than that of the turbojet engine. Incorporating by-pass and two-stage engine-design elements, the turbofan engine is very flexible in its application on any type of modern aircraft; generally, however it is used on subsonic aircraft. Turbofan engines cost no more to produce than turboprop or turbojet engines. Orig. art. has: figures

[ATD PRESS: 4199-F]

SUB CODE: 21, 01, 13 / SUBM DATE: none

Card 3/3 dda

KUZNETSOV, N., general-mayor aviatsii; KRYSHKEVICH, I., polkovnik

On terrestrial orbits. Av. i kosm. 48 no.10:49-53 O '65.
(MIRA 18:11)

GUGIN, V.; KUZNETSOV, N. (Voronezh)

"Voronezh" television set. Radio no.2:35-37 F '60.
(MIRA 13:5)
(Television--Receivers and reception)

KASHRIKHIN, P., podpolkovnik; KUZNETSOV, N., podpolkovnik

Our experience in tank marksmanship training; comments on the article published in no.1: Voen. vest. 43 no.5:113-114 My '64. (MIRA 17:6)

KUZNETSOV, N., general-mayor aviatsii, Geroy Sovetskogo Soyuza, voyennyy letchik pervogo klassa

Cadets are in the air; what a flight trainer does. Av.i kosm. 45 no.3:33-41 Mr '63. (MIRA 16:3)
(Flight training)

1. DOLGIY, A. G. ENG.; KUZNETSOV, N. A.

2. USSR (600)

4. Docks

7. Wooden box dock of new construction. Rech. transp. 12. No. 5. 1952.

9. Monthly List of Russian Accessions, Library of Congress, January 1953, Unclassified.

DOLGIY, A.G., inzhener; KUZNETSOV, N.A.

Calking wooden vessels with shavings. Rech.transp. 14 no.12: 25-26 D '55. (MLRA 9:3)
(Ships--Maintenance and repair)

RADIN, Vladimir Isakovich; KUZNETSOV, N.A., red.; BORUNOV, N.I., tekhn. red.

[Amplidynes]Elektromashinnye usiliteli. Moskva, Gosenergoizdat, 1962. 75 p. (Biblioteka po avtomatike, no.58) (MIRA 15:10)
(Rotating amplifiers)

ZHOVINSKIY, Viktor Naumovich; KUZNETSOV, N.A., red.; BUL'DYAYEV, N.A., tekhn. red.

[Voltage memory networks and time delay blocks] Skhemy zapominaniia napriazhenii i bloki zapazdyvaniia. Moskva, Gosenergoizdat, 1963. 79 p. (Biblioteka po avtomatike, no.72) (MIRA 16:6)

(Automatic control) (Delay lines)
(Electronic analog computers)

POZDEYEV, Anatoliy Dmitriyevich; ROZMAN, Yakov Borisovich; KUZNETSOV, N.A., red.; BORUNOV, N.I., tekhn. red.

[Electromagnetic clutches and brakes with solid armatures] Elektromagnitnye mufty i tormoza s massivnym iakorem. Moskva, Gosenergoizdat, 1963. 103 p. (Biblioteka po avtomatiko, no.82) (MIRA 16:12)
(Electric machinery) (Clutches (Machinery))

KUZNETSOV, N. A.

"The Effect of a Combined Paranephral and Vagosympathetic Dicaine Block on the Course and Treatment of an Ulcerous Disease." Sub 26 Dec 51, Acad Med Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

KUZNETSOV, N.A., zasluzhennyy vrach RSFSR

Execution of the decree of the Central Committee of the CPSU and of the Council of Ministers of the U.S.S.R." On measures for the further improvement of medical care and the protection of public health in the U.S.S.R." in Vladimir Province. Zdrav. Ros. Feder. 5 no.7:8-13 Jl '61. (MIRA 14:7)

1. Zaveduyushchiy Vladimirskim oblastnym zdravookhraneniya.
(VLADIMIR PROVINCE—PUBLIC HEALTH)

[redacted]

[redacted] The author describes the physical characteristics of radomes for

wall. To insure interchangeability of radomes, it is necessary to specify a wall thickness larger than the nominal value, and the machine the wall down to a contour of specified dimensions. At the present time a search is under way for ways of producing radomes without the need of further machining of the wall. L. Dombrovskiy.

SUB CODE: EC ENCL: 00

KUZNETSOV, N.A.

SOV/112-58-1-613

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1958, Nr 1, p 92 (USSR)

AUTHOR: Kuznetsov, N. A.

TITLE: The Electric Propulsion Plant of "Lena" Diesel Electric Ship (Grebnaya elektricheskaya ustanovka dizel'-elektrokhoda "Lena")

PERIODICAL: Tr. Tsentr. n.-i. in-ta rechn. flota, 1957, Nr 85, p 90

ABSTRACT: "Lena" icebreaker with an electric propulsion plant built in Holland has the following principal characteristics: 130.2 m long, 11,540 t displacement, 15.5 knots speed. The icebreaker can lead boats through ice up to 3-m thick. Its propulsion plant comprises 4 Diesel-generators each with 360 rpm, 2,050 hp Diesel, and 1,392 kw, 400 v generator. One 2-armature propulsion motor is installed. Each armature has a capacity of 3,500 hp, 800 v, 150/180 rpm. Amplidynes are used for excitation of the generators and the motor. Three excitor sets are used for excitation (of them, 1 in reserve). Each set comprises 4 machines: (1) the driving motor, (2) the amplidyne for excitation of 2 generators, (3) the amplidyne for excitation of 1 armature of the

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The Electric Propulsion Plant of "Lena" Diesel Electric Ship

propulsion motor, and (4) a generator of standard voltage for supplying control potentiometers. The main power scheme comprises 2 circuits, each circuit consisting of 2 generators and 1 armature of the propulsion motor. The 2-circuit scheme permits the following modes of operating machinery: (1) 4 generators supplying 2 armatures of the propulsion motor; (2) 2 generators of different circuits supplying 2 armatures of the propulsion motor; (3) any 3 generators supplying 2 armatures; (4) 2 generators of the same circuit supplying 1 armature; (5) 1 generator supplying 1 armature. The plant can be remote-controlled, from the bridgehouse, by means of varying the control-winding currents of the amplidynes. The generator field amplidyne has 3 control windings: a potentiometer-controlled master winding, an armature-reaction compensation current winding and a stabilizing voltage-feedback winding. The motor-field amplidyne is controlled by these four windings: a potentiometer-controlled master winding, a rigid voltage-feedback winding, a flexible voltage-feedback winding, and the regulating winding fed by

The Electric Propulsion Plant of "Lena" Diesel Electric Ship

the following three voltages: by a difference between the standard voltage and the amplidyne voltage, by a reverse emf of the amplidyne (to protect the Diesels against runaway when reversing), and by a difference between the standard voltage and the tachometer-generator voltage (to protect against runaway when the propeller emerges from the water). The above plant is recommended for application on high-power icebreaker-type ships.

M.I.K.

AVAILABLE: Library of Congress

1. Icebreakers--Propulsion 2. Icebreakers--Electrical systems
3. Diesel engines--Equipment 4. Icebreakers--Performance

Card 3/3

KUZNETSOV, N.A., insh.

Electric propulsion on Russian rescue vessels. Trudy NTO sud.prom. 8 no.5:131-139 '59. (MIRA 13:7)
(Ship propulsion, Electric)
(Auxiliary vessels)

KUZNETSOV, N.A.

Diesel freighter for use on the upper Yenisey. Sudostroenie 25 no.2:1-5 F '59. (MIRA 12:4)

(Freighters)
(Yenisey River--Navigation)

KONSTANTINOV, Vasiliy Nikolayevich: VILESOV, D.V., doktor tekhn. nauk prof., retsenzent; KUZNETSOV, N.A., Laureat Gos. premii, retsenzent; SUPRUN, G.F., doktor tekhn.nauk nauchn. red.; CHFAS, M.A., red.

[Synchronization of marine synchronous generators] Sinkhronizatsiia sudovykh sinkhronnykh generatorov. Leningrad, Sudostroenie, 1965. 289 p. (MIRA 19:1)

"UZHOV, N. A.

"Investigation of the Basic Open-Hearth Process for Making Soft Steel, Deoxidized with Aluminum." Sub 17 Apr 51, Inst of Metallurgy imeni A. A. Baykov, Acad Sci USSR

Dissertations presented for science and engineering degrees in Moscow during 1951.

So. Sum. No. 480, 9 May 51.

[illegible], I. A.

Skorostnoe tochenie i frezerovanie [High-speed grinding and cutting]
Magadan, Tekhn. otd. Glav. upr. stroit. Dal'nego Severa, 1953. 58 p.

SO: Monthly List of Russian Accessions, Vol. 6 No. 11 February 1954

1. KOROLEV, A., KUZNETSOV, N.A.

2. USSR (600)

4. Metals

7. Work in the field of metal economy. A. Korolev, N. Kuznetsov. Za ekon. mat., No. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953, Unclassified.

NOSOVA, Yelizaveta Mikhaylovna; KUGEL', Arkadiy Vasil'yevich; KUZHETSOV, Nikolay Andreyevich; CHUMACHENKO, T., redaktor; VUYEK, M., tekhnicheskiy redaktor

[A founder's manual] Spravochnik liteishchika. Kiev, Gos. izd-vo tekhn. lit-ry USSR, 1955. 455 p. (MLRA 8:6)
(Founding)

KUZNETSOV, N.A.; MATYUKHIN, V.V., starshiy doroshnyy master.

Track laid on combined ballast. Put' i put.khoz. no.6:7-8 Je '57. (MIRA 10:7)

1. Nachal'nik Krinichnenskoy distantsii puti Donetskoy dorogi (for Kuznetsov).

(Railroads--Track)

NOSOVA, Yelizaveta Mikhaylovna; KUGEL', Arkadiy Vasil'yevich; KUZNETSOV, Nikolay Andreyevich; ZHAROV, N.T., kand. tekhn. nauk; LUPANDIN, I.V., red.; GORKAVENKO, L.I., tekhn. red.

[Foundryman's handbook] Spravochnik liteishchika. Izd.2., perer. i dop. Kiev, Gos. izd-vo tekhn. lit-ry USSR, 1961. 610 p. (MIRA 14:10)

(Founding)

KUZNETSOV, Nikolay Antonovich; NEYMARK, M.M., red.; FREGER, D.P., red. izd-va; BOL'SHAKOV, V.A., tekhn. red.

[Mechanized production line for group processing of traveler rings for textile machinery]Mekhanizirovannaia potochnaia liniia gruppovoi obrabotki krutil'nykh kolets tekstil'nykh mashin. Leningrad, 1961. 17 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Organizatsiia i ekonomika proizvodstva, no.7) (MIRA 15:8)
(Assembly-line methods) (Machinery industry)

KUZNETSOV, N.A., otv.red.; VITKOVSKIY, A.P., red.; BOZHENKO, Ye.F., red.; GAVRILENKO, I.G., red.; GRINEK, V.S., red.; IGRUNOV, N.S., red.; KRUPA, G.D., red.; RAZDOBARKIN, V.I., red.; RYABOKOBYLENKO, V.I., red.; SEMENOV, M.K., red.; CHEFRANOV, B.N., red.; FUNSHTEYN, D.A., red.; PETROPOL'SKAYA, O.A., red.

[Belgorod Boiler-Making Factory] Belgorodskii kotlostroitel'nyi. Voronezh, TSentral'noe-Chernozemnoe knizhnoe izd-vo, 1964. 185 p. (MIRA 18:7)

1. Belgorodskiy Gosudarstvennyy kotlostroitel'nyy zavod. 2. Direktor Belgorodskogo Gosudarstvennogo kotlostroitel'nogo zavoda (for Chefranov). 3. Nachal'nik byuro tekhnicheskoy informatsii i izobretatel'stva Belgorodskogo Gosudarstvennogo kotlostroitel'nogo zavoda (for Gavrilenko). 4. Glavnyy konstruktor spetsial'nogo konstruktorskogo byuro energeticheskikh kotlov Belgorodskogo Gosudarstvennogo kotlostroitel'nogo zavoda (for Semenov). 5. Zamestitel' glavnogo inzhenera Belgorodskogo Gosudarstvennogo kotlostroitel'nogo zavoda (for Ryabokobylenko).

KUZNETSOV, N.A., inzh.; KONONOV, V.S., inzh.

Increasing the reliability and durability of equipment of the chemical machinery industry. Mashinostroenie no.3:17-18 My-Je '64. (MIRA 17:11)

L 04216-67 EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l)

ACC NR: AP6025414 SOURCE CODE: UR/0103/66/000/007/0110/0118

30
B

AUTHOR: Kuznetsov, N. A. (Moscow)

ORG: none

TITLE: Method for the realization of relay-linear algorithms

SOURCE: Avtomatika i telemekhanika, no. 7, 1966, 110-118

TOPIC TAGS: algorithm, automatic control design, optimal automatic control

14

ABSTRACT: The synthesis of relay-linear algorithms of the first and second kind controlling plants whose motion is described by linear differential equations of the type

$$\dot{X} = AX + Bu, \qquad (1)$$

was discussed earlier by the author (Avtomatika i telemekhanika, No 5, 1966). Here A is a matrix $\|a_{ij}\|$; B a column $\|b_i\|$; and u a scalar of the control interaction with $|u| \leq u_m$ ($i, j = 1, \ldots, n$). The linear control algorithm

Card 1/2 UDC: 62-505:518.5

ACC NR: AP6025414

$$u(X) = -K^{*}X, \tag{2}$$

can be easily established if the quadratic quality criterion

$$J(X_0) = \int_0^{\infty} [X^{*}QX + \rho u^2]\, dt, \tag{3}$$

is given ("*" is the transposition sign). A. I. Lur'ye (Tekhnicheskaya kibernetika, No 4, 1963) found in a closed form the dependence of the coefficients in Eq. (2), $k_1, \ldots, k_n$ on the matrix coefficients A, B, and Q. In practice, however, the conditions imposed on the transient process in Eq. (1) in the case of a linear control algorithm are not given by the quadratic criterion of the form of Eq. (3) but through the allowed overcontrol and the Q-factor of Eq. (1) which then permits an experimental determination of the k_1's. Consequently, the author investigates the methods for the practical realization of the relay-linear algorithms discussed, and compares, on an illustrative example of a second order system, the transfer processes within plants with control algorithms of the first and second type. Orig. art. has: 12 formulas and 13 tables.

SUB CODE: 09/ SUBM DATE: 01Dec65/ ORIG REF: 007/ OTH REF: 001

Card 2/2

ACC NR: AP6016130 SOURCE CODE: UR/0103/66/000/005/0005/0014

AUTHOR: Kuznetsov, N. A. (Moscow)

ORG: none

TITLE: Construction of control algorithms in the case of variable optimality criteria

SOURCE: Avtomatika i telemekhanika, no. 5, 1966, 5-14

TOPIC TAGS: optimal control, nonlinear automatic control

ABSTRACT: To construct the control algorithms, the motion of a controlled object in an n-dimensional phase space was considered. Upon mathematically defining the transient process and its quality criterion, the finite state was described by a piecewise continuous function. In this context, a system with variable optimality criterion is said to be a control system which is optimal with respect to the quality criterion, and can be described by a discontinuous function. The simplest solution of the optimal control algorithm problem involves a consecutive finding of k Bellman functions $V_i(x)$ ($i=1,\ldots,k$) with certain specified boundary conditions. A specific case is the synthesis of relay-linear control algorithms for linear objects; this problem, involving the quadratic criterion, has been solved and described by Letov. In second order systems, the synthesis of the relay-linear control algorithm cannot be obtained in an explicit

UDC: 62-505

Card 1/2

ACC NR: AP6016130

form; several parametric equations for the change-over line have been developed including a parametric equation for the optimum change-over line. Orig. art. has: 29 formulas, 3 figures.

SUB CODE: 12/ SUBM DATE: 27Sep65/ ORIG REF: 009/ OTH REF: 002

Card 2/2 mLE

KRAMSKOY, E.I.; KUZNETSOV, N.A.; RIVKIN, Ye.I.

Single-coordinate hydraulic servodrive with a jet amplifier.
Stan. i instr. 35 no.11:25-26 N '64. (MIRA 18:3)

POLITOV, Igor' Vladimirovich; KUZNETSOV, Nikolay Antonovich; KUR'YANOVA, O.V., red.; GLAZOV, G.A., prof., rec.

[Vibratory machining of parts for machines and instruments] Vibratsionnaia obrabotka detalei mashin i priborov. Leningrad, Lenizdat, 1965. 124 p. (MIRA 18:10)

MOSIN,M.I.; KATS, G.I.; KUZNETSOV, N.A.

[Kursk Magnetic Anomaly. History of its discovery, study, and the industrial adoption of its iron ore deposits; collection of documents and materials in two volumes, 1742-1962] Kurskaia magnitnaia anomaliia. Istoriia otkrytiia, issledovanii i promyshlennogo osvoeniia zhelezorudnykh mestorozhdenii; sbornik dokumentov i materialov v dvukh tomakh 1742-1962. Belgorod, Belgorodskoe knizhnoe izd-vo. Vol.2. 1926 - 1962. 1962. 629 p. (MIRA 17:8)

KUZNETSOV, Nikolay Andrianovich

[Calculating the cost per hectare tilled and per centner produces; based on conditions on collective and state farms of Leningrad and adjacent provinces] Planirovanie trudovykh zatrat na gektar poseva i tsentner produktsii (primenitel'no k usloviiam kolkhozov i sovkhozov Leningradskoi i smezhnykh oblastei). Lenizdat, 1958. 124 p. (MIRA 12:4)

(Agriculture--Costs)

KUZNETSOV, N.A.; PETROV, A.K.

"Agriculture" pavilion. Zemledelie 8 no.9:73-80 S '60.
(MIRA 13:8)

1. Direktor pavil'ona "Zemledeliye" Vystavk dostizheniy Narodnogo khozyaystva (for Kuznetsov). 2. Glavnyy metodist pavil'ona "Zemledeliye" Vystavki dostizheniy Narodnogo khozyaystva (for Petrov).
(Moscow--Agricultural exhibitions)

KUZNETSOV, N.A.; NETREBA, I.G.

Farm management system in the scientific basis of agriculture.
Zemledelie 23 no.5:67-77 My '61. (MIRA 14:4)

1. Direktor pavil'ona "Zemledeliye", Vystavka dostizheniy narodnogo khozyaystva (for Kuznetsov). 2. Glavnyy metodist pavil'ona "Zemeledeliye", Vystavka dostizheniy narodnogo khozyaystva (for Netreba).

(Agriculture)

KUZNETSOV, N.A.; ASTASHEVA, Z.A., metodist; SMIRNOVA, V.Ya., metodist

In the "Agriculture" Pavilion. Zemledelie 24 no.7:76-84 Jl '62. (MIRA 15:12)

1. Direktor pavil'ona "Zemledeliye" na Vystavke dostizheniy narodnogo khozyaystva (for Kuznetsov).
(Moscow—Agriculture—Exhibitions)

ACC NR: AR6034970 SOURCE CODE: UR/0272/66/000/008/0026/0026

AUTHOR: Vorob'yev, N. A.; Kuznetsov, N. A.

TITLE: Noncontact method of precise measuring of distances and small displacements

SOURCE: Ref. zh. Metrologiya i izmeritel'naya tekhnika, Abs. 8.32.214

REF SOURCE: Tr. Leningr. in-t aviats. priborostr., vyp. 45, 1965, 127-130

TOPIC TAGS: measuring instrument, noncontact measurement, distance measurement

ABSTRACT: A radio-engineering method is suggested for noncontact measurements of distances and small displacements of objects made of materials impermeable to radio waves. The principle of the measuring instrument is described, its operation is analyzed, and the results of experiments carried out on the model of the device are given. [Translation of abstract]

SUB CODE: 14, 09/

Card 1/1 UDC: 531.719.2.082.74:621.396

KUZNETSOV, Nikolay Borisovich; D'YAKOV, N.F., red.

[Reconditioning of rear-axle housings of the TDT-40 and TDT-60 hauling tractors] Vosstanovlenie korpusa zadnikh mostov trelevochnykh traktorov TDT-40 i TDT-60. Moskva, Biuro tekhn. informatsii, 1963. 7 p. (MIRA 17:9)

KUZNETSOV, N.D.

Combustion of wood charcoal powder in retort fire chambers. Gidroliz. i lesokhim prom. 8 no.2:22 '55. (MLRA 8:10)

1. Glavnyy konstruktor Syavskogo lesokhimicheskogo kombinata
(Charcoal)

KUZNETSOV, N.D.

Coupling for use in factory transportation. Gidrolis. i lesokhim. prom. 8 no.6:23 '55. (MLRA 9:1)

1.Glavnyy konstruktor Syavskogo lesokhimicheskogo kombinata.
(Car couplings)

KUZNETSOV, N.D.

Simple design of a manual overhead crane for machine rooms.
Gidrolis. i lesokhim.prom. 8 no.7:24 '55. (MIRA 9:4)

1.Glavnyy konstruktor Syavskogo lesokhimicheskogo kombinata.
(Cranes, derricks, etc.)

KUZNETSOV, N.D. (pos.Syzva)

Pneumatic apparatus for loading charcoal into closed freight cars. Zhel.dor.transp. 37 no.11:78-79 N '55. (MLRA 9:2)

1.Glavnyy konstruktor Syzvskogo lesokhimkombinata.
(Loading and unloading)

KUZNETSOV, Nikolay Dmitriyevich; SKOTNIKOV, Vladimir Yevgen'yevich; ALTUF'YEVA, A., redaktor izdatel'stva; ZHOROV, D.M., tekhnicheskiy redaktor

[Manual for individuals building their own homes] Posobie dlia individual'nogo zastroishchika. Moskva, Izd-vo Ministerstva Kommunal'nogo khoziaistva RSFSR, 1956. 155 p. (MLRA 10:2)
(Dwellings)

KUZNETSOV, N. D.

Lining cast-iron vats. Gidroliz. i lesokhim. prom. 9 no.4:27 '56. (MLRA 9:11)

1. Glavnyy konstruktor Syavskogo lesokhimicheskogo kombinata. (Concrete)

KUZNETSOV, N.D.

New fastening for packings in columns. Gidroliz. i lesokhim. prom. 9 no.7:22 '56. (MIRA 12:3)

1.Glavnyy konstruktor Syavskogo lesokhimicheskogo kombinata.
(Packed towers)

KUZNETSOV, N.D.

Fastening plate packing of rectification columns. Khim.prom. no.3:177 Ap-My '57. (MIRA 10:7)

1. Syavskiy lesokhimicheskiy kombinat.
(Distillation apparatus)

KUZNETSOV, N.D., inzhener.

Efficient burner for rapid combustion of firewood. Energomashinostroenie 3 no.4:27 Ap '57. (MLRA 10:5)
(Boilers)

AUTHOR: Kuznetsov, N.D., Engineer. 338

TITLE: Rational furnace for high-speed burning of timber. (Ratsionalnaya topka skorostnogo goreniya dlya drov.)

PERIODICAL: "Energomashinostroenie", (Power Machinery Construction), 1957, No. 4, p. 27, (U.S.S.R.)

ABSTRACT: The boilers concerned are operated with timber of varying origin, of lengths up to 1 m and moisture contents of up to 50 - 55%, with natural draught and a single chimney for four boilers. With dry timber, the output was 7-8 t/h; however, with raw timber the output decreased to 5-6 t/h. Simple modifications are described, which enabled the stepping-up of the output of each boiler to 8 t/h without blast and to 10-12 t/h with blast.

KUZNETSOV, N.D., inzhener.

Lever operated unloader for lumber yard log haulers. Der.prom. 6 no.6:16 Je '57. (MLRA 10:8)

1.Syavskiy lesokhimicheskiy kombinat.
(Materials handling)