PHASE I BOOK EXPLOITATION SOV/5633

Borisenko, Anatoliy Isidorovich

Zashchita molibdena ot vysokotemperaturnoy gazovoy korrozii (Protection of Molybdenum Against High-Temperature Gas Corrosion) Moscow, Izd-vo AN SSSR, 1960. 82 p. Errata slip inserted. 3,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR.

Resp. Ed. (Title page): A. A. Appen, Doctor of Chemical Sciences; Ed. of Publishing House: I. A. Shenger; Tech. Ed.: E. Yu. Bleykh.

PURPOSE : This book is intended for metal scientists and chemists working on new coatings for molybdenum and on improving coating methods.

COVERAGE: The author reviews the problems of protection of molybdenum and its alloys against high-temperature gas corrosion. He notes the scientific and technical achievements in this field and

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Protection of Molybdenum (Cont.)

points out the problems requiring further study. He concludes that further research must be directed at: 1) studying chromium and titanium coatings in order to find methods of improving their characteristics, 2) finding special alloys with the same thermal-expansion coefficient as that of molybdenum and with good malleability and toughness at any temperature, 3) studying the properties of multilayer coatings in order to create a coating whose overall quality reflects the best properties of the individual layers, and 4) studying the possible development of oxide coatings with a content of MoO_2 for the protection of molybdenum surfaces. No personalities are mentioned. There are 81 references: 49 English, 25 Soviet, 6 German, and 1 French.

TABLE OF CONTENTS:

BORISENKO, Anatoliy Isidorovich; APPEN, A.A., doktor khim. nauk, otv. red.; SUSHKOVA, T.I., red. izd-va; GALIGANOVA, L.M., tekhn. red.

[Protection of niobium from high temperature gas corrosion] Zashchita niobiia ot vysokotemperaturnoi gazovoi korrozii. Otvet. red. A.A.Appen. Moskva, Izd-vo Akad.nauk SSSR, 1961. 39 p. (MIRA 15:1)

(Niobium--Corrosion) (Protective coatings)

27912
S/080/61/034/010/004/016
D258/D301

15.2260

AUTHOR: Borisenko, A. I.

TITLE: The diffusional mobility of cobalt in a protective coating applied on molybdenum

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 10, 1961, 2175-2183

TEXT: The author's aim was to study the behavior of metal atoms entering the composition of protective coatings on molybdenum when subjected to high temperatures for prolonged periods. The present work investigated the diffusional mobility of these metals by using radioactive Co-60 and measuring the decrease in the radioactivity of a coated sample while successively removing thin layers of the coating. The compositions employed for coating were prepared as follows: The charge for the frit was moistened, ball-milled for 10 hrs. dried at 100°C, fused at 1450-1680°C, and the resulting frit was finely ground and mixed with high-melting fillers, water, bentonite (3.85% b.w.) and, in one composition, with B_2O_3. Samples of molybdenum (18 mm x 10 mm x 4 mm) were coated with the dross and then fired

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The diffusional mobility...

for 1.5 - 2 min. at 1450 - 1660°C in an atmosphere of argon. The thickness of the resulting coatings varied from 130 to 160 μ. The coated samples were then annealed for 22 hrs. at temperatures varying from 1000°C to 1400°C. Afterwards, thin uniform layers of the coating were successively removed by abrasion and the radioactivity of the sample measured after each removal. The results, obtained with No. 666 at 1100°C and shown in Fig. 3, are representative for the whole series. Co-60 migrates toward and across the boundary with Mo. Both the mobility of Co and the extent of its cross-over into the Mo zone are enhanced by a higher cobalt content of the coating. Thus, at 1400°C, 58% of the total radioactivity in samples coated with Nos. 666 and 667 migrated into the Mo zone; the corresponding figures for Nos. 572 and 643 were 38% and 25% respectively and include the radioactivity of the boundary zone. [Abstractor's note: It is not clear whether the boundary zone is included in the first two figures]. The highest concentration gradient in the boundary zone occurred with No. 643, while the lowest influence of temperature on the mobility of Co-60 was recorded with No. 572. The high rate of diffusion in coatings Nos. 666 and 667 is probably caused by their higher Co content and by the relatively low softening

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range of the corresponding frits (980 - 1100°C and 890 - 1010°C respectively). Another factor influencing the mobility of atoms in coating could be the viscosity of the vitreous mass, as mentioned by V. I. Malkin (Ref. 7: Usp. khim. 27, 3, 306 (1958)). There are 8 figures, 4 tables and 8 references: 4 Soviet-bloc and 4 non-Soviet-bloc. The references to the English-language publications read as follows: W. H. Harrison et al., J. Am. Cer. Soc. 35, 5, 113, (1952); D. G. Moon et al., Nat. Adv. Comm. Aeronaut. Washington, 39, (1951); Chromium and glass high-temperature coatings for molybdenum, Glass Ind. 34, 3, 143 (1955).

SUBMITTED: December 5, 1960

BORISENKO, Aleksandr Ivanovich; STEPANOV, G.Yu., dokt, fiz.-mat. nauk, retsenzent; TARAPOV, I.Ye., kand. fiz.-mat. nauk, red.; TUKYANSKAYA, F.G., red. izd-va; ROZHIN, V.P., tekhn. red.

[Gas dynamics of engines] Gazovaia dinamika dvigatelei. Moskva, Gos. nauchno-tekhn. izd-vo, Oborongiz, 1962. 793 p. (MIRA 15:4)

(Gas dynamics) (Gas turbines)

BORISENKO, Aleksandr Ivanovich; TARAPOV, Ivan Yevgen'yevich; TAL'SKIY, D.A., red.; GARINA, T.D., tekhn. red.

[Vector analysis and the fundamentals of the calculus of tensors] Vektornyi analiz i nachala tenzornogo ischisleniia. Izd.2., dop. Moskva, Gos.izd-vo "Vysshaia shkola," 1963. 261 p. (MIRA 16:12)
(Vector analysis) (Calculus of tensors)

BORISENKO, A.I., kand. tekhn. nauk; YAKOVLEV, A.I., inzh.

Study of the independent ventilation system of P-series machines with a wide range of angular velocity regulation. Vest. elektroprom. 34 no.3:30-34 Mr '63. (MIRA 16:8)

(Electric motors—Cooling)

BORISENKO, A.I., prof.; YAKOVLEV, A.I., inzh.

Study of the cooling of an enclosed d.c. machine. Elektrotekhnika 35 no.6:54-60 Je '64. (MIRA 17:8)

BORISENKO, Aleksandr Ivanovich, kand. tekhn. nauk, ispolnyayushchiy obyazannosti professora; YAKOVLEV, Aleksandr Ivanovich

Methodology for the thermal calculation of enclosed d.c. motors. Izv. vys. ucheb. zav.; elektromekh. 7 no.5:554-567 '64. (MIRA 17:9)

1. Khar'kovskiy aviatsionnyy institut (for Borisenko).
2. Vedushchiy inzhener laboratorii promyshlennoy aerodinamiki Khar'kovskogo aviatsionnogo instituta (for Yakovlev).

BORISENKO, A.I., doktor tekhn. nauk, otv. red.; TOROPOV, N.A., red.; IVANOV, V.Ye., red.; APPEN, A.A., doktor khim. nauk, red.; GORBUNOV, N.S., doktor khim. nauk, red.; KLEVTSUR, S.A., doktor tekhn. nauk, red.; NECHIPORENKO, Ye.P., doktor tekhn. nauk, red.

[Heat-resistant coatings; transactions] Zharostoikie pokrytiia; trudy. Leningrad, Nauka, 1965. 233 p. (MIRA 18:9)

1. Seminar po zharostoykim pokrytiyam, Leningrad, 1964.
2. Chlen-korrespondent AN SSSR (for Toropov, Ivanov).

BORISENKO, A.I., kand.tekhn.nauk; POSTNIKOV, I.M., doktor tekhn.nauk, prof.; SCHASTLIVYY, G.G., kand.tekhn.nauk; YAKOVLEV, A.I., inzh.

Study of the heat emission of electrical machines with medium power ratings. Elektrotekhnika 36 no.10:3-7 O '65.

(MIRA 18:10)

BORISENKO, A.L.

Characteristic function of a flow past a lattice of round cylinders. Sber. trud. Lab. probl. bystr. mash. no.5:19-26 '55. (MLRA 9:2)
(Fluid dynamics) (Turbomachines)

USSR/Cultivated Plants - Commercial. Oil- [illegible]ring. Sugar-[illegible]ring.

Abs Jour : Ref Zhur - Biol., No 10, 1958, 44264

Author : Gorbachko, A.M.
Inst :
Title : The Process of Beet Bowing in Rovenskaya Oblast.

Orig Pub : Sakharnaya svekla, 1957, No 10, 19-21

Abstract : No abstract.

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GORB, T.V. [Horb, T.V.], doktor sel'skokhoz.nauk; TERESHCHENKO, F.K., kand.biolog.nauk; BOGAYEVSKIY, O.T. [Bohaievs'kyi, O.T.], kand. veterin.nauk; POTYEMKIN, M.D. [Pot'omkin, M.D.], akademik; KNIGA, M.I. [Knyha, M.I.]; POPOV, O.Ya., kand.sel'skokhoz.nauk; KHMELIK, G.G. [Hmelyk, H.H.], kand.sel'skokhoz.nauk; SHRAM, I.P., kand.sel'skokhoz.nauk [deceased]; KOPIL, A.M., kand.sel'skokhoz. nauk; TSELYUTIN, V.K., kand.sel'skokhoz.nauk; BOZHKO, P.Yu., doktor sel'skokhoz.nauk; KROMIN, S.S., kand.sel'skokhoz.nauk; ZEMLYANSKIY, V.M. [Zemlians'kyi, V.M.], kand.sel'skokhoz.nauk; BORISENKO, A.M. [Borysenko, A.M.], kand.biolog.nauk; ZAKHARENKO, V.B., kand.biolog. nauk; SMIRNOV, I.V. [Smyrnov, I.V.], kand.biolog.nauk; KHRABUSTOVSKIY, I.F. [Khrabustovs'kyi, I.F.], kand.biolog.nauk; TORSTYANETSKAYA, M.N., [Trostianets'ka, M.N.], assistent; ALESHKO, P.I., inzh.; VASIL'YEV, Vasyl'iev, O.F., kand.tekhn.nauk; BUGAYENKO, I.I. [Buhaienko, I.I.], starshiy prepodavatel'; TRAKHTOMIROVA, O.O., kand.ekonom.nauk; BUTKO, S.D., kand.ekonom.nauk; TELESHIK, K.G. [Teleshyk, K.H.], doktor ekonom.nauk; YAROSHENKO, V.D., kand.ekonom.nauk; LISIY, I.Y. [Lysyi, I.I.], red.; YEROSHENKO, T.G. [IEroshenko, T.H.], tekhn.red.

[Handbook for zootechnicians] Dovidnyk zootekhnika. 2., dopovnene i pereroblene vyd. Kyiv, Derzh.vyd-vo sil's'kohospodars'koi lit-ry URSR, 1960. 728 p. (MIRA 15:2)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I. Lenina (for Potemkin). 2. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Kniga).
(Stock and stock breeding)

TUMASHEVA, N.I.; BORISENKO, A.M.

Content of copper, zinc and iron in patients with syphilitic lesions of the nervous system. Zhur. nevr. i psikh. 65 no.1:37-39 '65. (MIRA 18:2)

1. Kafedra kozhnykh i venericheskikh bolezney (zaveduyushchiy - dotsent N.I. Tumasheva) Vinnitskogo meditsinskogo instituta.

BORISENKO, A.M.; BORISENKO, V.A.

Copper, zinc, and iron content in the blood of donors supplying blood repeatedly. Probl. gemat. i perel. krovi 10 no.1:50-52 Ja '65. (MIRA 19:1)

1. Vinnitskiy meditsinskiy institut.

BORISENKO, A.M.

Content of copper, zinc, and iron in the blood in various stages of syphilis. Vest. derm. i ven. no.2:52-56 '65.

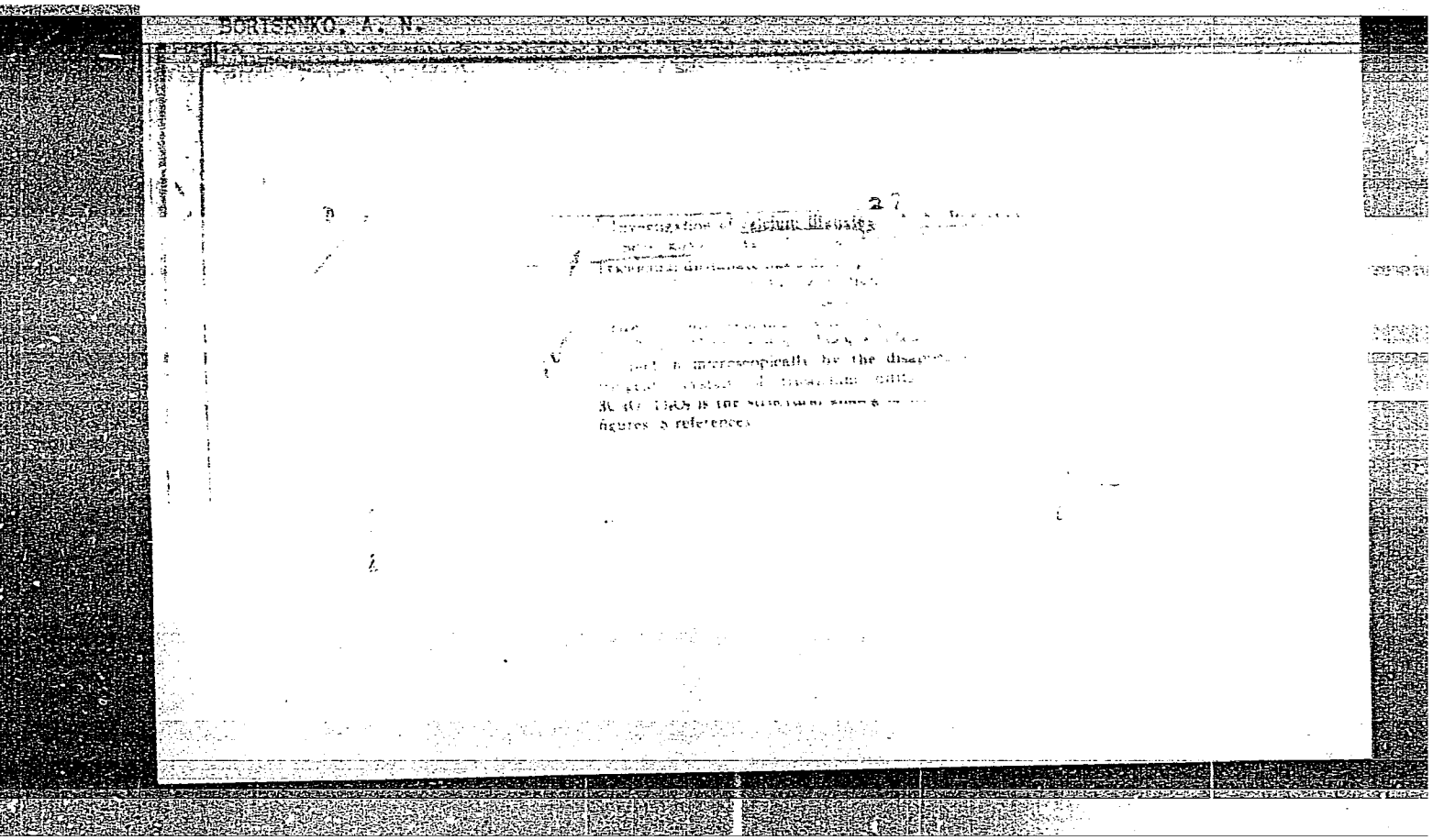
(MIRA 18:10)

1. Kafedra kozhnykh i venericheskikh bolezney (zav. - dotsent N.I. Tumasheva) Vinnitskogo meditsinskogo instituta imeni N.I.Pirogova.

BORISENKO, A.N.; TSYGANOV, S.V., professor, zaveduyushchiy.

Effect of nicotinic acid upon the course of acute aniline poisoning. Farm. i toks. 16 no.3:34-39 My-Je '53. (MLRA 6:7)

1. Kafedra farmakologii Odesskogo farmatsevticheskogo instituta.
(Aniline--Toxicology) (Nicotinic acid)



BORISENKO, A. N.

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figures & references

Borisenko, A.N.

AUTHORS: Borisenko, A.N. (Engineer) & Popov, G.R. (Engineer) 110-2-9/22

TITLE: A high voltage d.c. converter. (Vysokovol'tnyy preobrazovatel' postoyannogo toka)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, No.2, pp.32-33 (USSR)

ABSTRACT: High-voltage d.c. supplies are required for television sets, oscillographs and the like. The convertors developed in the Institute consist of special reservoir circuits and semi-conducting rect fiers and generate several thousand volts d.c. in equipment of very small size and weight. The efficiency of the equipment is 38%, its dimensions 80 x 47 x 32 mms, and its weight 150 grams. An input of 200 milliamps at 12 V d.c. is converted to 1 kV d.c. on a load of 1 megohm. The output characteristics, given in Fig.1, can easily be varied by altering circuit components. A schematic circuit diagram is given in Fig.2. Given the characteristics of the triode, it is not difficult to design the generator. The symmetrical generator circuit with two triodes shown in Fig.3. avoids having a constant magnetic flux in the core: thus, the size of the transformer is reduced whilst doubling the output power. There are 3 figures, no literature references)

ASSOCIATION: The Scientific Research Element-Electro-Carbon Institute of the Electro-technical Industry (NEI EP)

AVAILABLE: Library of Congress.

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LESHCHINSKIY, A.F.; BORISENKO, A.N.

Effect of vitamin B_1 on the animal organism under the influence of ionizing radiations. Farm.i toks. 23 no.2:169-173 Mr-Ap '60. (MIRA 14:3)

1. Kafedra fiziologii s farmakologiyey (zav. - prof.M.A.Rozenberg) Odesskogo farmatsevticheskogo instituta.

(RADIATION SICKNESS) (THIAMINE)

ALEKSEYEV, A.F.; BORISENKO, A.P.; GLIKSON, V.I.; GROMOVA, N.F.; KRASOVSKAYA, A.I.; NOVIKOVA, M.N.; OVCHAROVA, A.I.; KHVOYNIK, P.I.; CHURAKOV, V.P.; SHASTITKO, V.M.; GEORGIYEV, Ye.S., red.; SHIL'DKRUT, V.A., red.; LEVCHUK, K.V., red.; LEKANOVA, I.S., tekhn.red.

[Prices on the world capitalistic market; a handbook] TSeny mirovogo kapitalisticheskogo rynka; spravochnik. Moskva, Vneshtorgizdat, 1958. 391 p. (MIRA 12:7)

1. Moscow. Nauchno-issledovatel'skiy kon"yunkturnyy institut. (Prices)

BORISENKO, A.P.

KAPELINSKIY, Yu.N.; POLYANIN, D.V.; MENZHINSKIY, Ye.A.; IVANOV, I.D.; SERGEYEV, Yu.A.; KOSTYUKHIN, D.I.; DUDUKIN, A.N.; IVANOV, A.S.; FINOGENOV, V.P.; ZAKHMATOV, M.I.; SOLODKIN, R.G.; DUSHEN'KIN, V.N.; BOGDANOV, O.S.; SEROVA, L.V.; GONCHAROV, A.N.; KARKHIN, G.I.; LYUBSKIY, M.S.; PUCHIK, Ye.P.; SEROVA, L.V.; KAMENSKIY, N.N.; SABEL'NIKOV, L.V.; FEDOROV, B.A.; GERCHIKOVA, I.N.; KARAVAYEV, A.P.; KARPOV, L.N.; SHIPOV, Yu.P.; VLADIMIRSKIY, L.A.; KUTSENKOV, A.A.; RYABININA, E.D.; ANAN'YEV, P.G.; ROGOV, V.V.; BELOSHAPKIN, D.K.; SEYFUL'MULYUKOV, A.M.; PARFENOV, A.Ya.; SMIRNOV, V.P.; ALEKSEYEV, A.F.; SHIL'DKROT, V.A.; CHURAKOV, V.P.; BORISENKO, A.P.; ISUPOV, V.T.; ORLOVA, N.V., red.; GORYUNOVA, V.P., red.; BELOSHAPKIN, D.K., red.; GEORGIYEV, Ye.S., red.; KOSAREV, Ye.A., red.; KOSTYUKHIN, D.I., red.; MAYOROV, B.V., red.; PANKIN, M.S., red.; PICHUGIN, B.M., red.; POLYANIN, D.V., red.; SOLODKIN, R.G., red.; UFIMOV, I.S., red.; EKHIN, P., red.; SMIRNOV, G., tekhn.red.

[Economy of capitalist countries in 1957] Ekonomika kapitalisticheskikh stran v 1957 godu. Pod red. N.V.Orlova, IU.N.Kapelinskogo i V.P.Goriunova. Moskva, Izd-vo sotsial'no-ekon.lit-ry, 1958. 686 p. (MIRA 12:2)

1. Moscow. Nauchno-issledovatel'skiy kon"yunkturnyy institut. (Economic conditions)

BORISENKO, A.P.

KAPELINSKIY, Yu.N.; POLYANIN, D.V.; ZOTOV, G.M.; IVANOV, I.D.; SERGEYEV, Yu.A.; MENZHINSKIY, Ye.A.; KOSTYUKHIN, D.I.; DUDUKIN, A.N.; IVANOV, A.S.; FINOGENOV, V.P.; ZAKHMATOV, M.I.; SOLODKIN, R.G.; DUSHEN'KIN, V.N.; BOGDANOV, O.S.; SEROVA, L.V.; GONCHAROV, A.N.; LYUBSKIY, M.S.; PUCHIK, Ye.P. [deceased]; KAMENSKIY, N.N.; SABEL'NIKOV, L.V.; GERCHIKOVA, I.N.; FEDOROV, B.A.; KARAVAYEV, A.P.; KARPOV, L.N.; VARTUMYAN, E.L.; SHIPOV, Yu.P.; ROGOV, V.V.; BOGDANOV, I.I.; VLADIMIRSKIY, L.A.; LEBEDEV, B.I.; ANAN'YEV, P.G.; TRINICH, F.A.; GOLOVIN, Yu.M.; MATYUKHIN, I.S.; SEYFUL'MULYUKOV, A.M.; SHIL'DKRUT, V.A.; ALEKSEYEV, A.F.; BORISENKO, A.P.; CHURAKOV, V.P.; SHASTITKO, V.M.; GERUS, V.G.; ORLOV, N.V., red.; KAPELINSKIY, Yu.N., red.; GORYUNOV, V.P., red. V redaktirovanii prinimali uchastiye: BELOSHAPKIN, D.K., red.; GEORGIYEV, Ye.S., red.; KOSAREV, Ye.A., red.; PANKIN, M.S., red.; PICHUGIN, B.M., red.; SHKARENKOV, Yu.S., red.; MAKAROV, V., red.; BORISOVA, K., red.; CHEPELEVA, O., tekhn.red.

[The economy of capitalistic countries in 1958] Ekonomika kapitalisticheskikh stran v 1958 godu. Pod red. N.V.Orlova, IU.N.Kapelinskogo, V.P.Goriunova. Moskva, Izd-vo sotsial'no-ekon.lit-ry, 1959. 609 p. (MIRA 12:12)

1. Moscow. Nauchno-issledovatel'skiy kon"yunkturnyy institut. (Economic conditions)

KORNIYENKO, A.M., kand. tekhn. nauk; BORISENKO, A.P., inzh.

Measurement of the absolute vibration of turbine rotors using a noncontact method. Energ. i elektrotekh. prom. no.4:37-39 O-D '65.
(MIRA 19:1)

BORISENKO, Anastasiya Spiridonovna; KUDRYASHOV, Nikolay Vasil'yevich;
MASHKINA, A., red.

[Jersey cattle on the "Malino" State Farm] Dzhersheiskii skot v sovkhoze "Malino." Moskva, Moskovskii rabochii, 1964. 45 p. (MIRA 17:9)

BORISENKO, A.T.

GEL'PERIN, N.I.; KROKHIN, N.O.; BORISENKO, A.T.

Distillation (cohobation) of eugenol aqueous solutions. Report No.1: Cohobation in cube apparatus. Trudy VNIISNDV no.2:141-146 '54. (MLRA 10:7)

(Distillation) (Eugenol)

GEL'PERIN, N.I.; IDEL'SON, Ye.M.; LIVSHITS, A.K.; ZIL'BERG, V.I.; BORISENKO, A.T.; GABRIYELOVA, L.I.

Improving methods of xanthate production. Report no.1: Preparation of potassium and sodium butyl and theyl xanthates from anhydrous alcoholates. Sbor.nauch.trud.GINSTVETMET no.16:153-169 '59. (MIRA 14:4)

(Xanthic acid) (Alcoholates)

BORISENKO, A.T.

BORISENKO, A.T.; GERASIMOV, N.N.

Single-core cable instrument for measuring the diameter of wells.
Razved.i prom.geofiz.no.17:91-93 '57. (MIRA 10:12)
(Oil well logging, Electric)

GEL'PERIN, N.I.; IDEL'SON, Ye.M.; LIVSHITS, A.K.; BORISENKO, A.T.; GABRIYELOVA, L.I.; ZIL'BERG, V.I.

Improving methods of xanthate production. Report no.2: Preparation of potassium and sodium isobutyl and isoamyl xanthates from practically anhydrous alcoholates. Sbor.nauch.trud.GINTSVETMET no.16:170-179 '59. (MIRA 14:4)

(Xanthic acid) (Alcoholates)

GEL'PERIN, N.I.; IDEL'SON, Ye.M.; LIVSHITS, A.K.; BORISENKO, A.T.; ZIL'BERG, V.I.

Improved method for the production of xanthates. Report no.4: Preparing xanthates by the continuous method from isobutyl, butyl SK, and isopropyl alcohol. Sbor. nauch. trud. Gintsvetmeta no.19:255-262 '62. (MIRA 16:7)

(Xanthic acid)

KONOVALOV, Yevmeniy Grigor'yevich; BORISENKO, Aleksandr Vasil'yevich; FEDOROV, L.I., kand.tekhn.nauk, red.; TIMOFEYEV, L., red.izd-va; VOLOKHANOVICH, I., tekhn.red.

[Vibration turning] Ostsilliruiushchee tochenie. Minsk, Izd-vo Akad.nauk BSSR, 1960. 30 p. (MIRA 14:1)
(Turning)

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E194/E135

1.1100

AUTHORS: Konovalov, Ye.G., and Borisenko, A.V.

TITLE: Certain operating characteristics of an oscillating cutter

SOURCE: Akademiya navuk Belaruskay SSR. Fiziko-tekhnicheskiy institut. Sbornik nauchnykh trudov. no.6. Minsk, 1960. 216-227

TEXT: In lathe turning operations the chip tends to wind itself round the tool and work piece and can be a considerable nuisance. Existing types of chip breaker are not reliable, and for automatic machines and production lines it is necessary to develop new methods of turning which overcome the problem of chip breaking. One such method is that in which the cutter is given an oscillatory motion in the direction of the feed. Cutting then takes place with variable feed and the chips resemble those formed during milling. In the Laboratoriya novykh metodov obrabotki materialov (Laboratory for new methods of working materials) of the FTI AN BSSR an oscillating cutter head was designed for a turning lathe type 1A62. The construction

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is illustrated schematically in Fig.1. The tool 1 in the tool holder 2 is made to oscillate along the axis of the work piece by the cam 3 which is driven along a spline shaft 4 through the gearing 5. The tool holder is held against the cam by springs. The amplitude of oscillation is altered by changing the cam shape but a fine adjustment 7 is also provided. In another design the cam was driven by a separate motor of 0.6 kW. The tests were made with cutters tipped with the carbides T5 K10 and T15K6 working steels 20, 45 and 18ХГТ (18KhGT). The cutter geometry was:
a) $\varphi = 90^o$; $\varphi_1 = 6^o$; $\lambda = 0^o$; $\gamma = 7^o$; $\alpha = 11^o$; $r = 0.5$ mm:
b) $\varphi = 60^o$; $\varphi_1 = 26^o$; $\lambda = 0^o$; $\gamma = 7^o$; $\alpha = 11^o$; $r = 0.5$ mm.
[Abstractor's note: In Soviet terminology φ = plan angle, φ_1 = working trail angle, λ = cutting edge side rake, γ = rake and α = clearance; r is presumably nose radius.]
Theoretical formulae are derived for the instantaneous rate of feed of the oscillating cutter and expressions are derived for the conditions when the feed is zero so that the chip must break. Then an expression is obtained for the amplitude necessary to cause chip breakage. However, the actual amplitude differs from that calculated because of elastic vibration of the lathe, the tool and

the part and moreover it is not always necessary to reduce the feed to zero to ensure chip breaking. Accordingly, tests were made to ensure chip breakage under different cutting conditions. The amplitude of oscillation was measured by a vibrograph which recorded on a moving tape fitted on the tool holder. Fig.2 shows a graph of the minimum amplitude in mm as function of the feed rate in mm/rev. for steel grade 18KhGT (dotted line) and steel 45 (solid line). It is found that the minimum amplitude to ensure chip breakage is greater than the calculated value by some 20-30%. In the case of the tough steel grade 18KhGT the minimum amplitude is proportional to the feed; however, for steel grade 45 at feeds greater than 0.25 mm/rev. proportionality is not observed. This is because the break occurs where the chip is thin. Further tests showed that the use of emulsified cutting oils reduced the stable value of the minimum amplitude. The minimum amplitude is increased with increasing depth of cut. However, changes in the cutting speed (in the range 62-190 metres/min) or in the rake angle of the cutter (from -5 to +15°) or in the cutting edge side rake (-5 to +15°) have practically no influence on the minimum amplitudes. By introducing empirical coefficients into the

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theoretical formula the following expression is obtained for the minimum amplitude necessary to ensure chip breaking:

$$A_{min} = q_{\varphi}\, q_t\, q_o\, q_{\varkappa} \frac{S}{1.5 \left| \sin \pi \frac{f}{n} \right|} \text{ mm} \qquad (7)$$

where values of q are taken from Table 1.
When an oscillating cutter is used the finish is not so fine as with a normal tool. It was found that the smoothest surface was obtained for ratios of oscillation frequency to spindle speed which give the minimum amplitude for chip breaking, i.e. when this ratio is 0.5, 1.5 or 2.5. Fig.7 shows a graph of the relationship between the surface roughness in microns and the ratio of the frequency of oscillation to the spindle speed where V = 70 m/min, S = 0.5 mm/rev., t = 2 mm, using steel grade 45. The dotted line shows the surface roughness with normal cutting methods. The influences of feed, cutting speed and use of cutting fluid and depth of cut on surface finish with an oscillating cutter are much the same as with an ordinary tool. The variations in rate of feed with an oscillating cutter would tend to promote tool wear, and so

Certain operating characteristics ...

will the increase in the impact loading. On the other hand, with an oscillating cutter the cutting edge periodically leaves the cutting zone so that it runs cooler. This was confirmed by measuring the electromotive force between tool and workpiece which was less with an oscillating cutter than with a normal tool. Tool wear studies showed that with an oscillating cutter in the majority of cases the tool performance was 30-40% better than with a normal tool. It is considered that an oscillating cutter can be successfully used on ordinary turning lathes and it is particularly effective when used on automatics or on automatic lines. There are 11 figures, 1 table and 6 Soviet-bloc references.

Card 5/8

KONOVALOV, Ye.G.; BORISENKO, A.V.

Dynamics of oscillating turning. Dokl.AN BSSR 4 no.8:340-342 Ag '60. (MIRA 13:8)

1. Fiziko-tekhnicheskiy institut AN BSSR. Predstavleno akad. AN BSSR K.V.Gorevym.

(Turning)

BORISENKO, A. V., Cand. Tech. Sci. (diss) "Investigation of Process of Sharpening an Oscillating Cutter," Minsk, 1961, 16 pp. (Acad. of Sci. Belorussian SSR, Dept. Tech. Sci.) 220 copies (KL Supp 12-61, 263).

S/123/62/000/013/013/021
A004/A101

AUTHORS: Konovalov, Ye. G., Borisenko, A. V.

TITLE: Some characterstic features of the work with oscillating tools

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 13, 1962, 72, abstract 13B441 ("Sb. nauchn. tr. Fiz.-tekhn. in-t AS BSSR", 1960, no. 6, 216 - 227)

TEXT: The investigations of the FTI, AS BSSR, were carried out on the 1A62 lathe with a head for oscillating turning, in which the oscillating motion is imparted to the tool from a cam kinematically connected to the spindle rotation. The tests were carried out with tools fitted with T5K10 and T15K6 sintered carbide bits in machining the steel grades 20, 45 and 18ХГТ (18KhGT). It is pointed out that oscillating turning ensures a reliable chip breaking in turning any materials at all cutting conditions. The optimum geometry is selected without using any chip-breaking devices. For ensuring the breaking up of the chips, the ratio of the oscillation frequency to the number of spindle revolutions should not be an integral number. In finishing operations it is neces-

Card 1/2

Some characteristic features...

sary that this ratio amounts to 0.5, 1.5, 2.5. The tool life in oscillating turning increases up to 40%. The authors present the working principle and a schematic of the head for oscillating turning. There are 11 figures and 6 references.

M. Degtyareva

[Abstracter's note: Complete translation]

Card 2/2

KOCHERGIN, S.V.; GORYUSHKIN, F.F., dorozhnyy master; BORISENKO, D.G., brigadir; GRINEVICHUS, E.A. [Grinevicus, E.]; KURS, V.G., brigadir; SELIONOV, S.I.; BEN'KOVSKIY, V.Ya.; PIRIYEV, A.M.

Letters to the editor. Put' i put.khoz. 7 no.2:36-37 '63. (MIRA 16:2)

1. Zamestitel' nachal'nika Rossoshanskoy distantsii Yugo-Vostochnoy dorogi (for Kochergin). 2. Stantsiya Kudinovo, Moskovskoy dorogi (for Goryushkin). 3. Stantsiya Rshanitsa, Moskovskoy dorogi (for Borisenko). 4. Starshiy dorozhnyy master, stantsiya Klaypeda, Litovskoy dorogi (for Grinevichus). 5. Stantsiya Cheremkhovo, Vostochno-Sibirskoy dorogi (for Kurs). 6. Zamestitel' nachal'nika distantsii, Manzovka, Dal'nevostochnoy dorogi (for Selionov). 7. Nachal'nik otdela zashchitnykh lesonasazhdeniy sluzhby puti, g.Kuybyshev (for Ben'kovskiy). 8. Zamestitel' nachal'nika distantsii, Khachmas, Azerbaydzhanskoy dorogi (for Piriyev).

(Railroads--Track)

BORISENKO, D.I.

Yeast section of the Lokhvitsa Alcohol Combine. Spirt. prom. 22 no.3:34 '56. (MLRA 9:11)

1. Lokhvitskiy spirtovyy kombinat.
(Yeast)

BORISENKO, D.M. [Borysenko, D.M.]

Flexure with a nodal diameter of a circular conic plate.
Nauk. zap. Kyiv. un. 16 no.16:225-230 '57. (MIRA 13:3)
(Flexure) (Elastic plates and shells)

BELYAYEV, V.S.; BORISENKO, L.D.; BORISENKO, E.V.; KORABLEV, A.A.; KOLYSHKIN, O.M.; KUTLUNIN, V.A.; MALYAGIN, M.S.; SOKOLOV, A.I.; CHUDAKOV, A.I.; ABRAMOV, V.I., otv.red.izd-va; BOLDYREVA, Z.A., tekhn.red.

[Manual for the coal mine mechanic] Spravochnik mekhanika ugol'noi shakhty. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1960. 612 p. (MIRA 13:12)
(Coal mining machinery)

BORISENKO, F.A., inzh.; URCHUKIN, V.G., inzh.

Remodeling of a blast furnace. Stal' 23 no.1:14-15 Ja '63.
(MIRA 16:2)

1. Zaporozhskoye upravleniye "Yushdommaremont".
(Blast furnaces—Maintenance and repair)

BORISENKO, F.F.

Treatment of hypertension in polyclinics. Tr. Akad. med. nauk SSSR Vol.20:176-186 1952. (CIML 25:5)

1. Of the Institute of Therapy (Director -- A.L. Myasnikov, Active Member AMS USSR), Academy of Medical Sciences USSR.

BORISENKO, F.F., kand. med. nauk (Moskva)

Use of histamine in the polyclinic in treating patients with hypertension. Vrach.delo no.1:1283-1286 D '58. (MIRA 12:3)

1. Institut terapii AMN SSSR.
(HYPERTENSION) (HISTAMINE)

BORISENKO, F.F., kand.med.nauk (Moskva)

Role of certain occupational factors in the etiology of hypertension. Sov.zdrav. 17 no.11:43-46 N'58 (MIRA 11:10)
(HYPERTENSION, etiol. & pathogen.
occup. factors (Rus))
(OCCUPATIONAL DISEASES,
hypertension, occup. factors in pathogen (Rus))

BORISENKO, F.F.; POGODIN, B.I.

Difficulties of differential diagnosis in periarteritis nodosa.
Khim. med. 38 no.5:126-130 My '60 (MIRA 13:12)
(ARTERIES--DISEASES)

BORISENKO,G.

More attention to needs of state farms. Sov.profsoiuzy 3 no.7: 44-46 J1'55. (MIRA 8:10)

1. Predsedatel' Krasnodarskogo kraykoma profsoyuza rabochikh promyshlennosti prodovol'stvennykh tovarov
(Krasnodar Territory--State farms)

BORISENKO, G.A.

Raising cotton in hills. Sbor.trud.po agron.fiz. no.6:148-155 '53. (MIRA 11:7)
(Cotton growing)

BORISENKO, G.A.

Checkrow planting of potatoes on ridges. Dokl. Akad. sel'khoz. 21 no.8:12-16 '56. (MLRA 9:10)

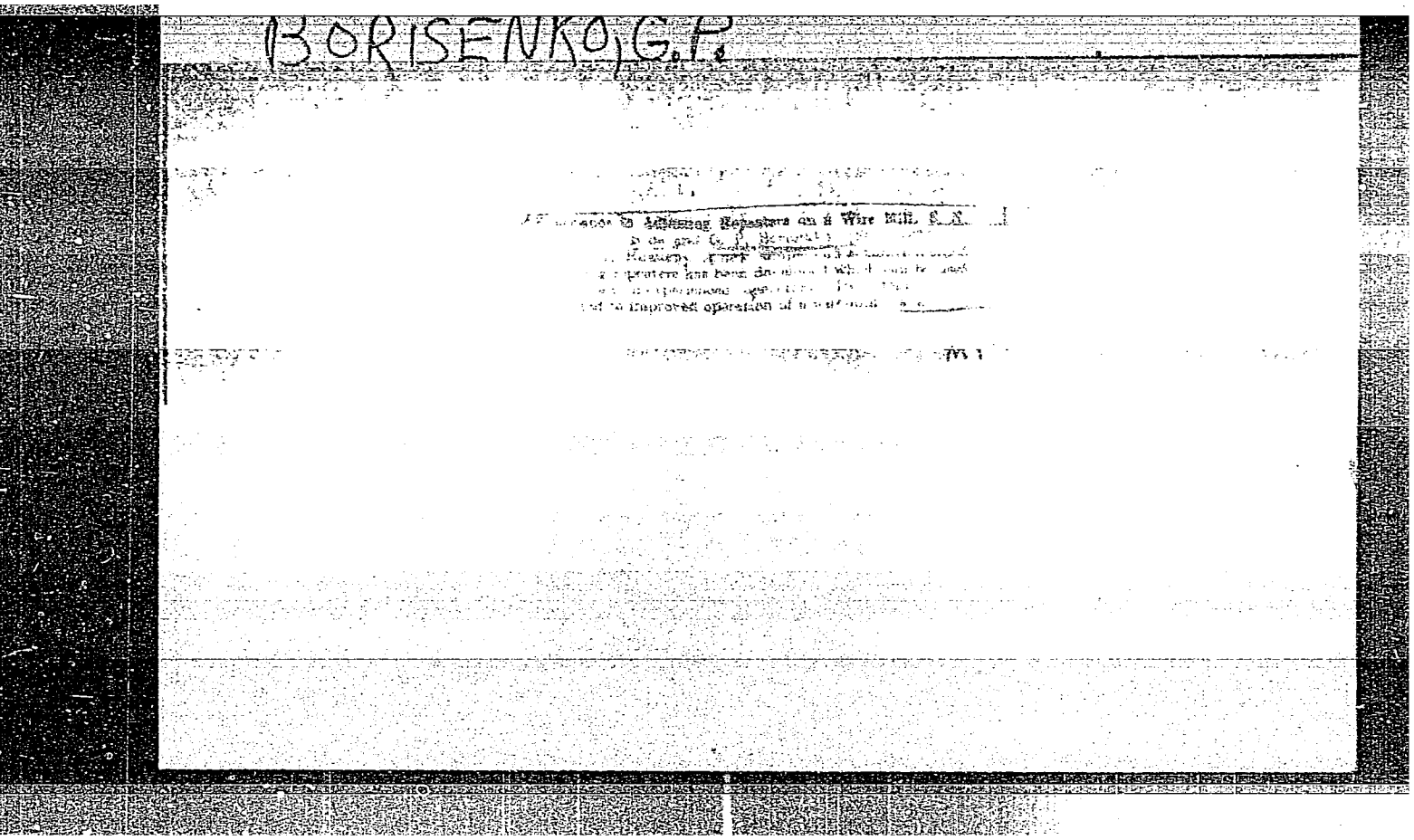
1. Agrofizicheskiy nauchno-issledovatel'skiy institut. Predstavleno akademikon I.I. Samoylovym.
(Potatoes)

BELYAYEV, V.G.; BORISENKO, G.A.

Profiling the ball-return channel for ball transmissions.
Stan. i instr. 35 no.6:13-16 Je '64 (MIRA 17:8)

LIPYAVKIN, Aleksandr Fedorovich, dotsent, kand. tekhn. nauk; BORISENKO, Georgiy Fedors'yevich,, arkhitektor; NIKOL'SKIY, A.K., dots., kand. tekhn. nauk, nauchnyy red.; SHIROKOVA, G.M., red.izd-va; MOCHALINA, Z.S., tekhn. red.

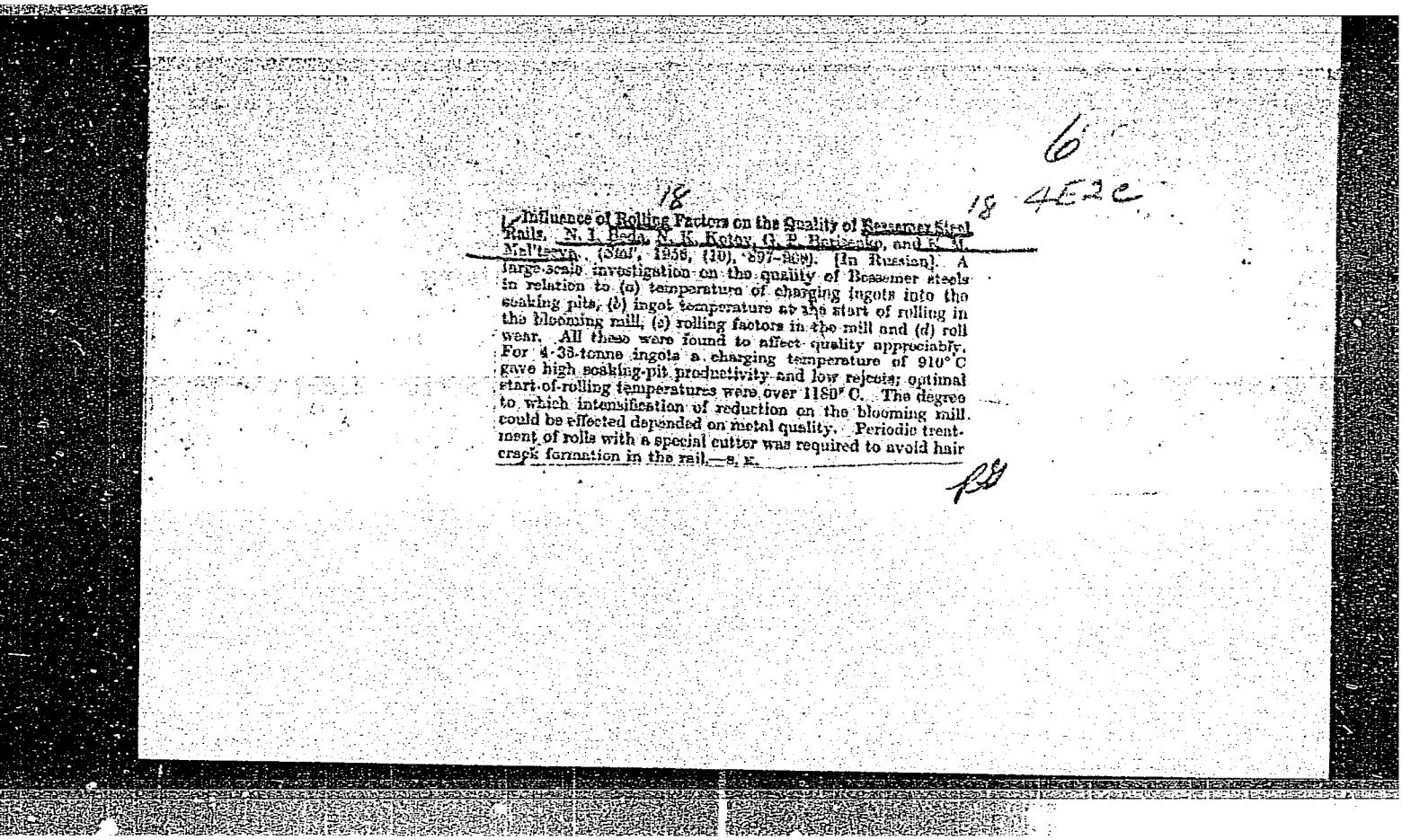
[Apartment houses built of silicate and mesh-reinforced silicate blocks without cement]Stroitel'stvo bestsementnykh zhilykh domov iz silikatnykh i armosilikatnykh blokov. Moskva, Gosstroiizdat, 1962. 56 p. (MIRA 15:11)
(Sand-lime blocks)
(Volgograd—Apartment houses)



FILIPOV, S.N., inzhener; BEDA, N.I., inzhener; BORISENKO, G.P., inzhener.

The adjustment of wire rolling mill guides. Stal' 16 no.7:614-619 Jl '56. (MLRA 9:9)

1. Zavod imeni Petrovskogo.
(Rolling (Metalwork)) (Wire)



18 18 4E2c

Influence of Rolling Factors on the Quality of Bessemer Steel Rails. N. I. Bedia, N. K. Kotov, G. P. Berlenko, and E. M. Mal'tsova. (Stal', 1956, (10), 897–900). [In Russian]. A large-scale investigation on the quality of Bessemer steels in relation to (a) temperature of charging ingots into the soaking pits, (b) ingot temperature at the start of rolling in the blooming mill, (c) rolling factors in the mill and (d) roll wear. All these were found to affect quality appreciably. For 4·35-tonne ingots a charging temperature of 910° C gave high soaking-pit productivity and low rejects; optimal start-of-rolling temperatures were over 1180° C. The degree to which intensification of reduction on the blooming mill could be effected depended on metal quality. Periodic treatment of rolls with a special cutter was required to avoid hair crack formation in the rail.—S. K.

BELA, N.I., inzhener; KOTOV, N.K.; BORISENKO, G.P.; MAL'TSEVA, Ye.M.

Effect of technological factors in rolling on the quality of bessemer steel rails. Stal' 16 no.10:897-900 O '56. (MLRA 10:9)

1. Zavod imeni Petrovskogo.
(Rolling (Metalwork)) (Railroads--Rails)

AUTHOR: Beda, N.I., Borisenko, G.P., Ing., and Galemin, M.P. Dots.

TITLE: Rolling of rails using a split calibre on blooming mill rolls. (Prokatka rel'sov s primeneniyem razreznogo kalibra v valkakh bluminga)

PERIODICAL: "Stal'" (Steel), 1957, (5) pp. 431 - 435 (U.S.S.R.)

ABSTRACT: This paper is a contribution to the discussion on the rational calibration of rails. The influence of the initial height of billets and the use of a fourth traperoid pass and changes in the shape and dimensions of the open (lower) part of the traperoidal passes on the quality of rails was investigated. In order to eliminate the influence of steel making and other technological factors half of the ingots from each ladle of each experimental melt was rolled on a blooming mill 1000 in 17 passes into billets 210 x 165 mm (I series) or 220 x 165 (II series) and the second half of the ingots into billets 190 x 165 mm. Then all the billets were rolled according to Fig. 1 on a mill 800. The influence of the height of billet on the quality of rails is shown in Table 1. The traperoidal pass with displaced line of split is shown in Fig. 2 and the deformation of metal in traperoidal passes is shown in Figs. 3 and 4. Mechanical properties of rails rolled with 3 and 4 traperoidal passes respectively were compared: bending

Rolling of rails using a split calibre on blooming mill rolls. (Cont.) 133-5-12/27

strength of the rail foot (Fig. 5 and Table 2), types of foot fractures (Fig. 6) and impact strength of rails (Fig. 7). On the basis of the results obtained the following conclusions were drawn: 1) The deformation of metal in traperoidal passes has a substantial influence on the quality of the rails (elimination of surface cracks). The optimum number of traperoidal passes is 4. 2) The initial billets for rolling rails of the type P-43 should be of a height not less than 240-260 mm. 3) In order to decrease the width of flanges in the last traperoidal pass (when high billets are used) the design of the first traperoidal pass with a displaced line of split is recommended. There are 2 tables, 7 figures and 5 Slavic references.

ASSOCIATION: Petrovskiy Works and Dnepropetrovsk Metallurgical Institute (Zavod im. Petrovskogo i Dnepropetrovskiy Metallurgicheskiy Institut)

AVAILABLE:

Card 2/2

S/137/61/000/007/022/072
A060/A101

AUTHORS: Chekmarev, A. P.; Borisenko, G. P.

TITLE: Investigation of tension on a continuous section mill

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 7, 1961, 7, abstract 7D42 ("Tr. Konferentsii: Tekhn. progress v tekhnol. prokatn. proiz-va". Sverdlovsk. Metallurgizdat, 1960, 351-362)

TEXT: On the continuous light-section mill 250 with manual control of the main drive motors, the effect of tension upon the dimensional stability of the rolled profile was studied. The peculiarities of the technological process of rolling on this mill and the method of tension determination by means of a loop-holder of special design are described. The total pull in the strip between the stands of the planishing group of the mill is calculated from a formula relating it to the pull indication of the dynamometer, located in one of the arms of the loop-holder, and the constant of this mechanism. The measurement of tension between groups of the mill was carried out by means of a stationary tensometer pulley. The method of determining the mismatch in the velocity conditions of rolling is given. It is measured by the ratio of the possible input velocity

Card 1/2

Investigation of tension on ...

of the metal into the stand next in the direction of motion to the velocity of metal output from the preceding stand. An industrial test has shown the great reliability and high precision of the proposed tensometers. The necessity of taking into account the effect of tension upon the quality of rolling is demonstrated. The arising of shrinkage in the strain seat, rather than between the stands of the mill, is experimentally verified. In rolling a circle of 20 mm diameter the magnitude of maximum admissible velocity mismatch amounts to 1.8 - 2.0 percent.

V. Mezis

[Abstracter's note: Complete translation]

Card 2/2

BORISENKO, G. P., inzh.

Effect of the speed of slip on the coefficient of friction in upsetting. Nauch. trudy DMI no.48:335-341 '62.
(MIRA 15:10)

(Forging) (Friction)

CHEKMAREV, A. P., akademik; OSTAPENKO, V. V., inzh.; BORISENKO, G. P., inzh.; GETMANETS, V. V., inzh.; LEVCHENKO, L. N., inzh.

Rolling of angle steel on a continuous mill. Nauch. trudy DMI no.48:79-93 '62. (MIRA 15:10)

1. Akademiya nauk Ukrainskoy SSR (for Chekmarev).

(Rolling(Metalwork))

CHEKMAREV, A. P., akademik; BORISENKO, G. P., inzh.

Forward slip in rolling angles on continuous mills. Nauch. trudy DMI no.48:94-107 '62. (MIRA 15:10)

1. Akademiya nauk Ukrainskoy SSR (for Chekmarev)

(Rolling(Metalwork))

CHEKMAREV, A. P., akademik; BORISENKO, G. P., inzh.

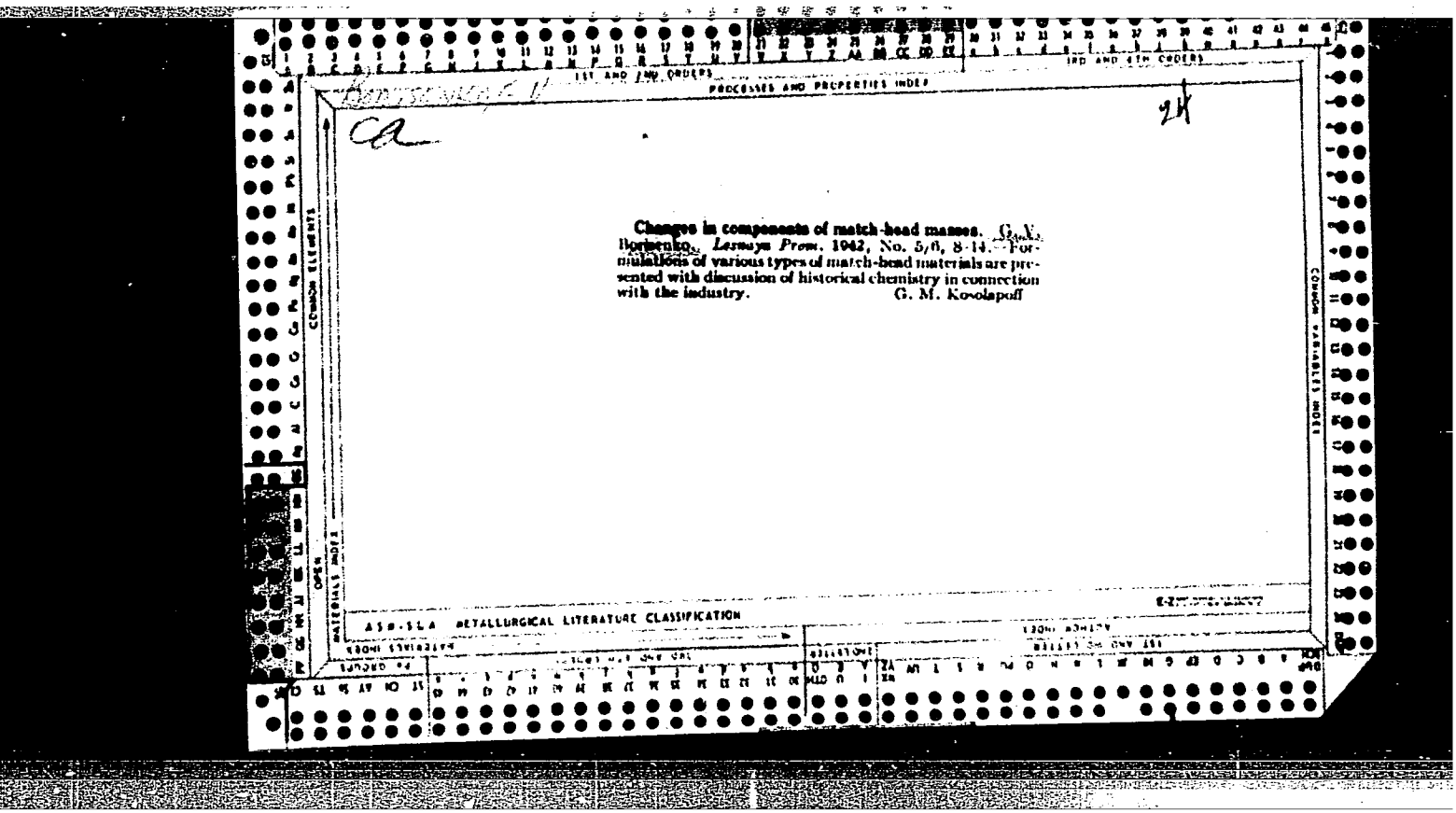
Investigating tension on a continuous shape mill. Nauch. trudy DMI no.48:108-120 '62. (MIRA 15:10)

1. Akademiya nauk Ukrainskoy SSR (for Chekmarev).

(Rolling mills)

ABOLIKHIN, I.P., inzh.; BORISENKO, G.S., inzh.

Machine for marking hot pipes. Mekh.i avtom.proizv. 18 no.3: 14-16 Mr '64. (MIRA 17:4)



Changes in components of match-head masses. G. V. Borisenko. *Lesnaya Prom.* 1942, No. 5/6, 8-14.—Formulations of various types of match-head materials are presented with discussion of historical chemistry in connection with the industry. G. M. Kosolapoff

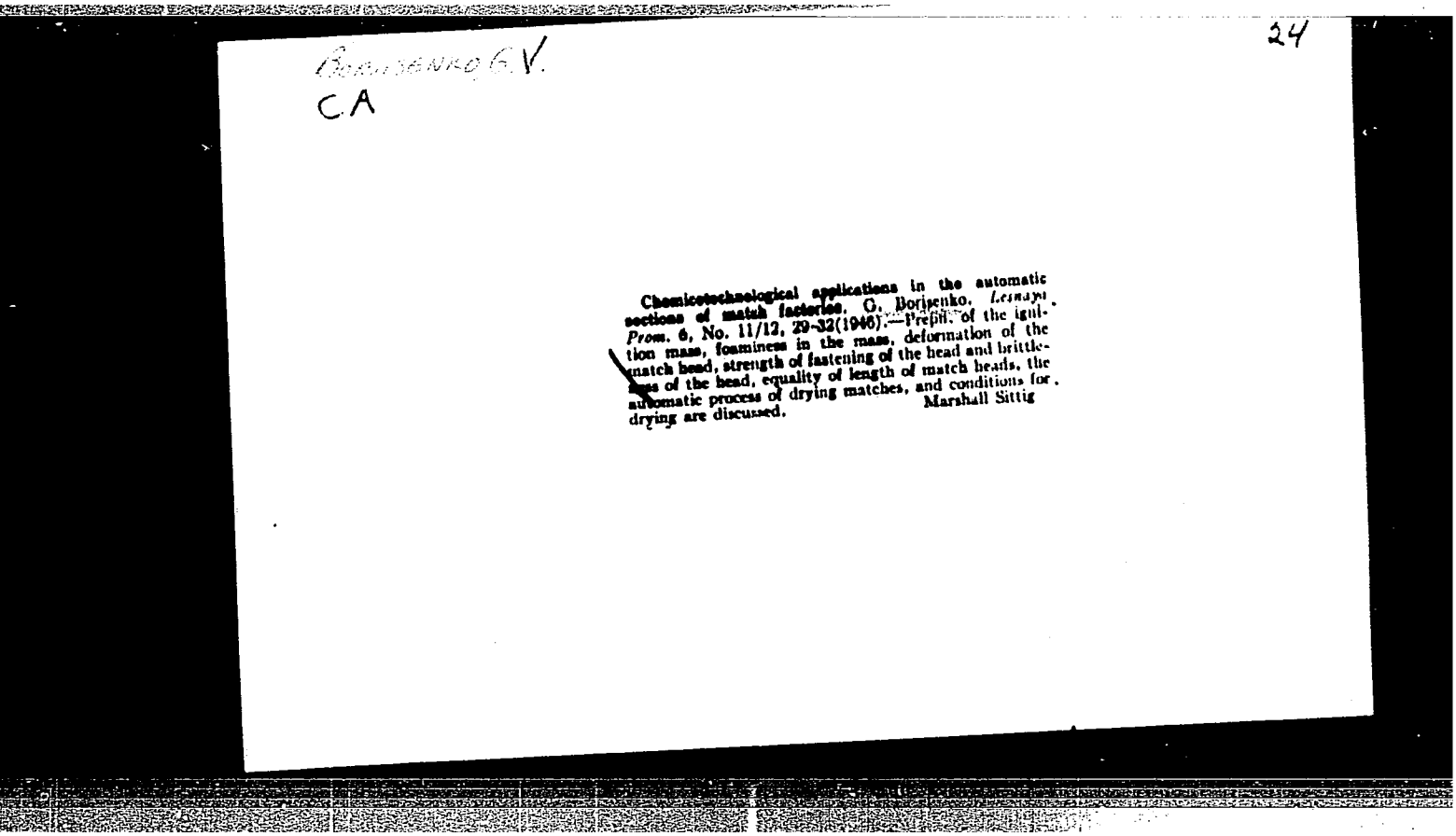
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

Ca

24

Replacing [scarce] components of match composition. V. A. Danilov and G. V. Borisenko. *Lesnaya Prom.* 1943, No. 5/6, 8-14.—$KClO_3$ in match compns. can be substituted up to 10% by KNO_3, but this would increase the hygroscopicity of the product; decreasing the accepted amt. of $KClO_3$ requires an increase of MnO_2. $K_2Cr_2O_7$ can be replaced by 4 times its amt. of $KClO_3$. MnO_2 can be replaced by substances having the same catalytic effect on $KClO_3$: e. g., the oxides and peroxides of heavy metals. S can be successfully replaced by boghead, oil shale or brown coal. However, any of these raises the ignition temp. from 180-90° to 260-70°. The increased ignition temp. can be compensated by increasing the amt. of $K_2Cr_2O_7$ or $KClO_3$. Raddle acts as an auxiliary catalyst to MnO_2, and because of its high dispersability acts as a stabilizer preventing stratification of the batch, and accelerates the drying of matches. In its place can be used red ocher, calcined ocher, ground coal cinders, etc. Ground glass is replaceable by any similar substance, e. g., fine quartz sand or emery dust. ZnO can be replaced by any substance that will neutralize the batch, e. g., chalk, CaO or MgO. Animal and bone glue can be replaced up to 30% by dogwood or larch gum. M. Hosch

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Borisenko G.V.
C.A

24

Chemicotechnological applications in the automatic sections of match factories. G. Borisenko. *Lesnaya Prom.* 6, No. 11/12, 29-32(1946).—Prepn. of the ignition mass, foaminess in the mass, deformation of the match head, strength of fastening of the head and brittleness of the head, equality of length of match heads, the automatic process of drying matches, and conditions for drying are discussed. Marshall Sittig

BORISENKO, I.

Radar control of flights. Kryl. rod. 14 no.11:32-34 N '63.
(MIRA 16:11)

1. Nachal'nik sluzhby svyazi Upravleniya aviatsionnoy podgotovki i aviatsionnogo sporta TSentral'nogo komiteta Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu SSSR.

BORISENKO, I.

Teaching the Morse code. Kryl.rod. 11 no.5:26 My '60.
(MIRA 13:7)

1. Nachal'nik sluzhby svyazi Upravleniya aviatsionnoy podgotovki i aviatsionnogo sporta TSentral'nogo komiteta Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu SSSR.
(Morse code--Study and teaching)

BORISENKO, I., sportivnyy komissar

At the start and the finish. Kryl. rod. 15 no.12:2-3 D '64.
(MIRA 18:3)

1. BALANDIN, V.; BORISENKO, I.

2. USSR (600)

4. Moving-Picture Projection

7. Advanced group. Kinomekhanik No. 3, 1953.

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

BORISENKO, I.

Adding cement to speed up the drying process. Stroi. mat. izdel. i konstr. 1 no.3:17 Mr'55. (MLRA 8:10)

1. Nachal'nik Rovenskoy oblastnoy laboratorii po ispytaniyu stroymaterialov.

(Brickmaking)

BRATUKHIN, A., kand.tekhn.nauk; SENATORSKIY, B., kand.tekhn.nauk;
BORISENKO, I., kand.tekhn.nauk.

Possibilities of using pneumatic transportation in conditioning grain and milling products. Muk.-elev.prom. 25 no.1:23-25 Ja '59.
(MIRA 12:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov yego pererabotki.
(Pneumatic-tube transportation)
(Grain-handling machinery)

BORISENKO, I., sportivnyy komissar

Legalization of space records. Kryl. rod. 14 no.2:10-11 F '63. (MIRA 16:4)

(Space flight)

BORISENKO, I.

Earth-space-earth. Kryl. rod. 14 no.8:7-9 Ag '63.
(MIRA 16:8)

(Space flight)

BORISENKO, I. E.

Nomogramma dlia opredeleniia tsehtra tiazhesti samoleta ot pribavleniia, sniatiia i peremeshcheniia gruzov. (Tekhnika vozdushnogo flota, 1940, no. 8, p. 59-63, diagrs.)

Title tr.: A nomogram for determining the center of gravity of an airplane with relation to the increasing, shifting, and moving of loads.

TL504.T4 1940

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

BORISENKO, I. G.

BORISENKO, I. G.: "Virorous apple- and pear-tree stock in Moldavia (agrobiological characteristics and the selection of the better forms)." Min Higher Education USSR. Kishinev Agricultural Inst imeni M. V. Frunze. Kishinev, 1956.
(Dissertation for the Degree of Candidate in Agricultural Sciences).

SO: Knizhnaya letopis', No 23, 1956

L 06193-67 EWT(m)/EWP(t)/ETI/EWP(k) IJP(c) JD/HW/JG

ACC NR: AP6032200 SOURCE CODE: UR/0133/66/000/010/0947/0947

AUTHOR: Yudovich, S. Z.; Abramov, V. V.; Sypko, A. V.; Frantsov, V. P.; Travinin, V. I.; Borisenko, I. G.

ORG: none

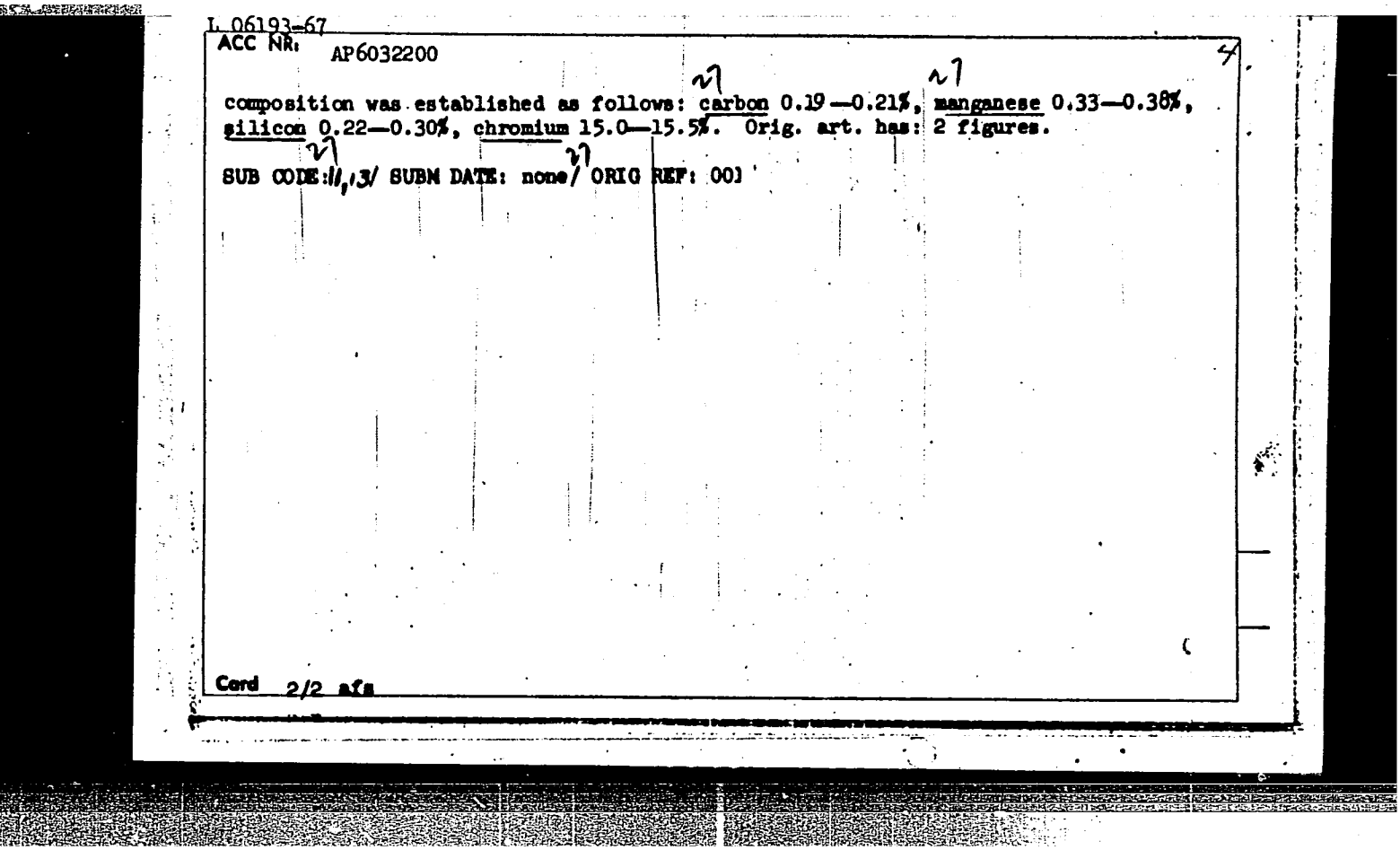
TITLE: Forgeability of heat-resistant DI-1 stainless steel

SOURCE: Stal', no. 10, 1966, 947

TOPIC TAGS: heat resistant steel, stainless steel, martensitic steel, chromium nickel molybdenum steel, steel forging /DI-1 stainless steel

ABSTRACT: The forgeability of heat-resistant DI-1 stainless steel is affected by the following factors: chemical composition, amount of impurities, microstructure, surface condition of the ingot and phase composition. The decisive factor, however, was found to be the alpha-phase content. The amount of α-phase at 1200C varies between 3 and 8% (depending on the holding time) and between 9—20% at 1250C. The α-phase content affects negatively the elongation and reduction of area. To improve forgeability, the heating of ingots from 900C to 1200C should be done as fast as possible, the holding time at 1200C should not be less than 3 min per cm of cross section, and the absolute reduction should not be more than 25—30 mm per pass. The best chemical

Card 1/2 UDC: 669.14.018.45



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ACC NR: AP6032200

composition was established as follows: carbon 0.19—0.21%, manganese 0.33—0.38%, silicon 0.22—0.30%, chromium 15.0—15.5%. Orig. art. has: 2 figures.

SUB CODE: 11,13/ SUBM DATE: none/ ORIG REF: 001

Card 2/2 afs

BORISENKO, I.G.; VASIL'YEV, A.A., red.; MUKHINA, Ye.S., tekhn. red.

[Use of radio in the training of aviation sportsmen] Ispol'zovanie radio v podgotovke aviatsionnykh sportsmenov. Moskva, Izd-vo DOSAAF, 1961. 85 p. (MIRA 15:4)
(Radio in aeronautics) (Aerial sports)

BORISENKO, I.

World records of IUrii Gagarin. Radio no.7:3 Jl '61. (MIRA 14:10)

(Radio)

BORISENKO, I.G.

First space records. Kryl.rod. 12 no.5:6-7 My '61. (MIRA 14:7)

1. Sportivnyy komissar TSentral'nogo aerokluba SSSR.
(Astronautics)

BORISENKO, I. G.

New space records. Kryl. rod. 13 no.9:8-9 S '62. (MIRA 15:10)

1. Sportivnyy komissar TSentral'nogo aerokluba SSSR.

(Space flight)
(Popovich, Pavel Romanovich, 1930-)
(Nikolaev, Andriian Grigor'evich, 1929-)

L 62530-65 EWA(h)/EWT(m)/EWP(z)/EWA(c)/T/EWP(b)/EWA(d)/EWP(t)/EWP(w) MJW/JD

ACCESSION NR: AP5012656 UR/0369/65/001/002/0221/0224

AUTHOR: Abramov, V. V.; Yudovich, S. Z.; Borisenko, I. G.; Teterin, G. V.

TITLE: Mechanical properties of DI-1 steel at high temperatures

SOURCE: Fiziko-khimicheskaya mekhanika materialov, v. 1, no. 2, 1965, 221-224

TOPIC TAGS: metal mechanical property, steel, metallographic analysis

ABSTRACT: The mechanical properties of DI-1 steel are studied in the 20-900°C interval using hot tensile and compression tests of short duration. The chemical compositions of the two melts studied are given in table 1 of the Enclosure. The formula for evaluating the mechanical properties of the material in the complex stressed state is:

$$\alpha_2 = \frac{(\sigma_{33}-\sigma_3)\cdot\sqrt{2}}{\sigma_{33}+\sigma_3}.$$

where σ_{88} is the compression yield stress and σ_8 is the tensile yield stress. The coefficient α_2 varies over the range $-1 \leq \alpha_2 \leq +1$. The resistance of the material to plastic deformation increases with an (algebraic) increase in α_2. The ratio of σ_{88}

Card 1/3

L 62530-65

ACCESSION NR: AP5012656

2

to σ_B : $a_1 = \frac{\sigma_{ss}}{\sigma_s}$, is used as an index of the structural perfection and contamination of the metal. The experimental values of these indices are tabulated along with the basic mechanical properties of the metal. It was found that these formulas may be successfully used for evaluating the degree of contamination and structural imperfection of the metal, and the effect which these factors have on the strength characteristics. For materials in which the ratio of compression to tensile yield stress is not equal to unity, the formula

$$\tau_{eo} = \frac{\sqrt{2} + a_2}{3} \cdot \sigma_B$$

should be used, where τ_{eo} is the effective octahedral shearing stress. Orig. art. has: 2 figures, 2 tables.

ASSOCIATION: Mashinostroitel'nyy institut im. V. Ya. Chubarya, Zaporozhe (Machine Building Institute)

SUBMITTED: 15May64 ENCL: 01 SUB CODE: MM

NO REF SOV: 002 OTHER: 001

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ENCLOSURE: 01

TABLE 1

Chemical composition of melts A and B

Melt	C	Mn	Si	P	S	Cr	Ni	Mo	W
A	0.18	0.28	0.32	0.018	0.010	15.45	2.64	0.46	0.35
B	0.18	0.22	0.28	0.016	0.011	15.07	2.66	0.42	0.12

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L 3876-66 FSS-2/EWT(1)/FS(v)-3/EEC(k)-2/EWA(d) TT/DD/RD/GW

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Borisenko, Ivan Grigor'yevich

46
B+1

First records in space (Pervyy rekordy v kosmose). Moscow, Izd-vo "Mashinostroyeniye," 1965. 120 p. illus. (part col.) 9500 copies printed.

TOPIC TAGS: manned space flight, manned space flight records

PURPOSE: This book is intended for the general reader.

COVERAGE: The book deals with Soviet space records and how these records were established and recorded. Soviet rockets and spaceships and the activity of the FAI and the USSR Aviation Sport Federation are briefly described.

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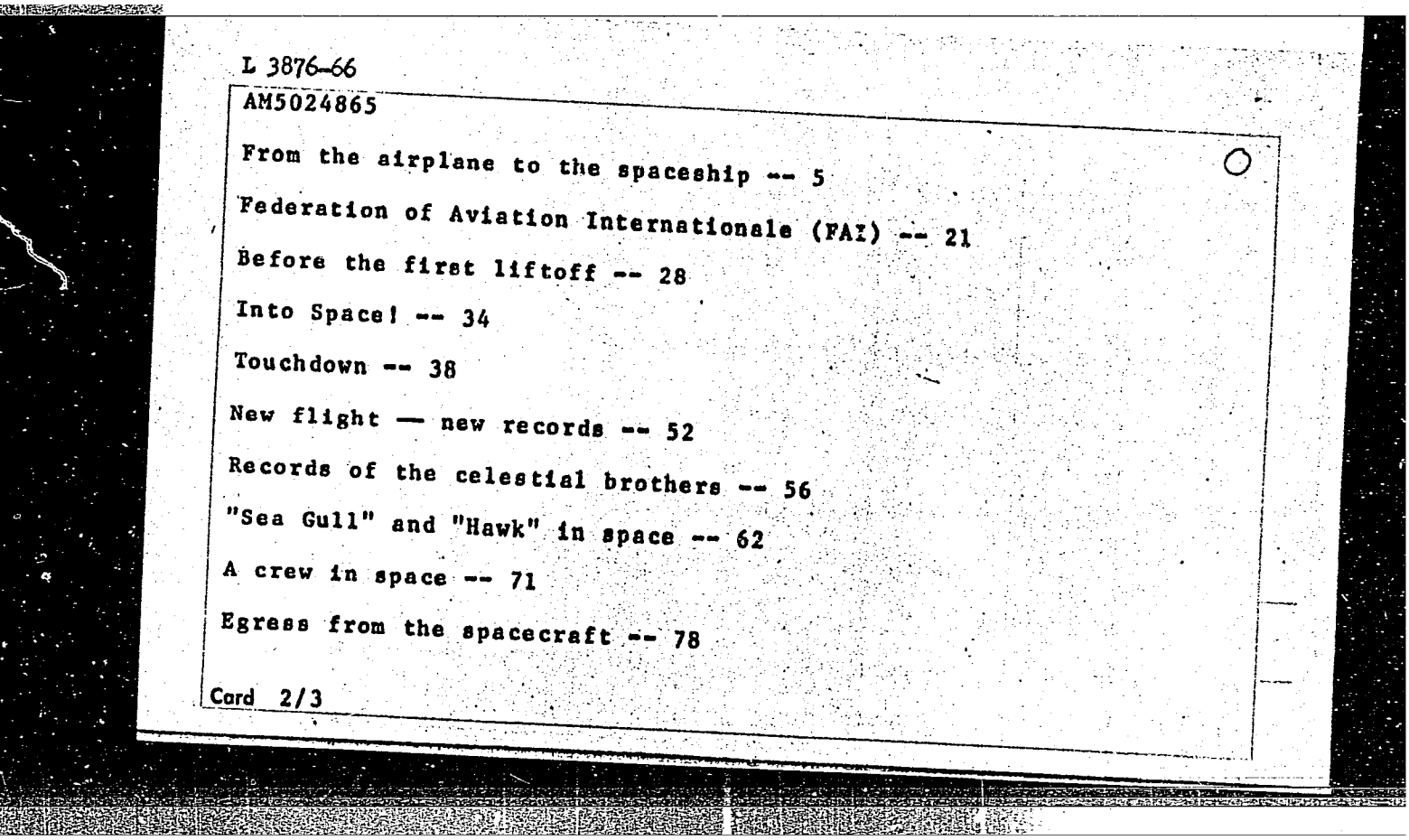

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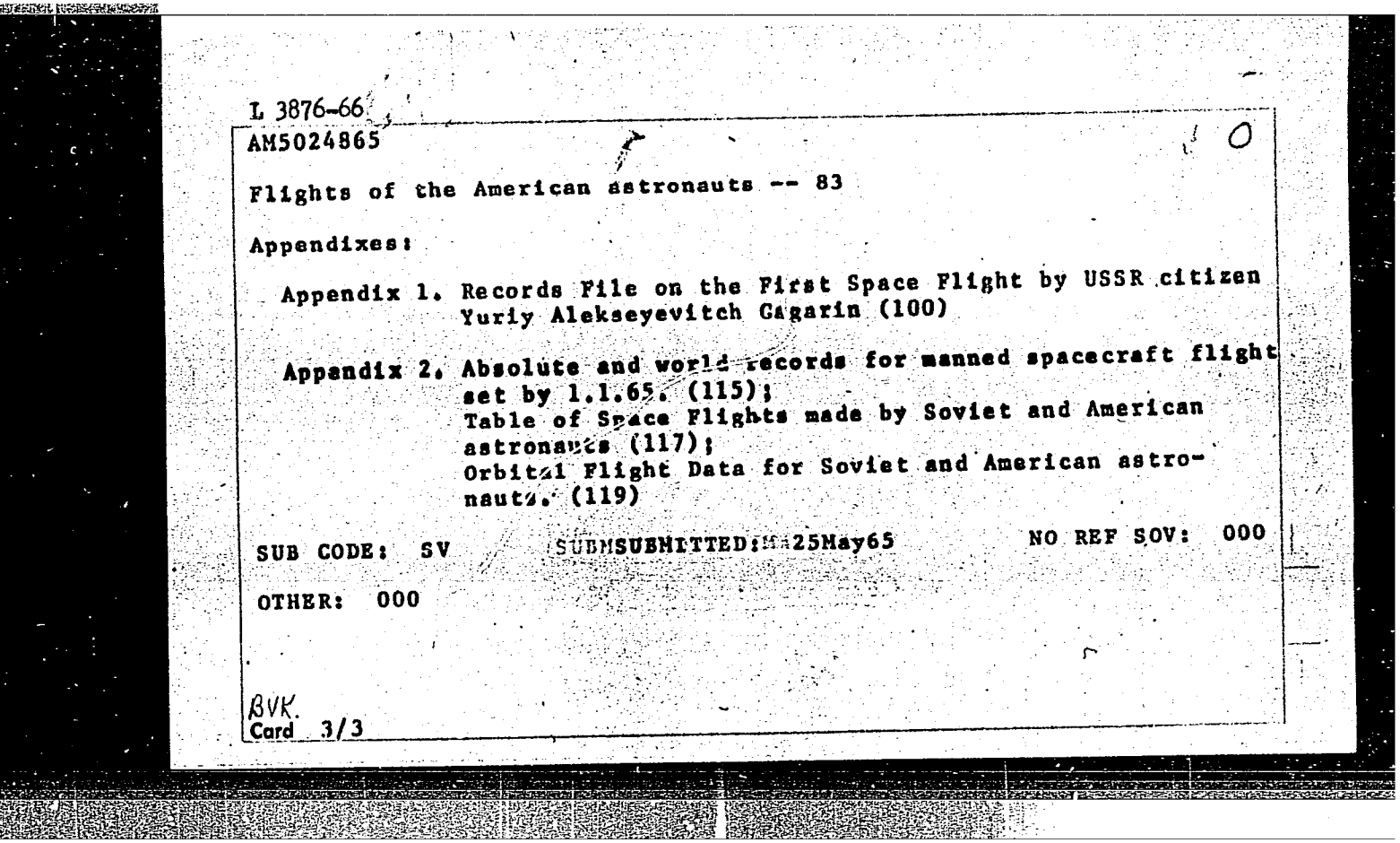

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Flights of the American astronauts -- 83

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Appendix 2. Absolute and world records for manned spacecraft flight set by 1.1.65. (115);
Table of Space Flights made by Soviet and American astronauts (117);
Orbital Flight Data for Soviet and American astronauts. (119)

SUB CODE: SV SUBMSUBMITTED: 25May65 NO REF SOV: 000

OTHER: 000

BVK.
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ABRAMOV, V.V.; YUDOVICH, S.Z.; BORISENKO, I.G.; TETRIN, G.V.

Engineering properties of DI-1 steel at high temperatures.
Fiz.-khim. mekh. mat. 1 no.2:221-224 '65. (MIRA 18:6)

1. Mashinostroitel'nyy institut im. V.Ya. Chubarya, Zaporozh'ye.

Borisenko, I.I.
P.3

SOV/179-59-5-41/41

AUTHOR: None given

TITLE: Third All-Union United Conference on the Automation of Manufacturing Processes in Machine — Building and Automatic Electrical Drives in Industry

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Mekhanika i mashinostroyeniye, 1959, Nr 5, p 184 (USSR)

ABSTRACT: The Conference was called during 12-16th May 1959, in Moscow by the Soviet Academy of Sciences, the USSR State Planning Commission (Gosplan), the State Scientific-Technical Committee (Gosudarstvennyy nauchno-tekhnicheskiy komitet), the State Committee for Automation and Machine-Building (Gosudarstvennyy komitet po avtomatizatsii i mashinostroyeniyu) and the USSR National Committee for Automatic Control (Natsional'nyy komitet SSSR po avtomaticheskomu upravleniyu). 800 Delegates took part. Academician Bardin, I.P. in his opening address noted the official policy of a broad adoption of automation in all fields of the National Economy as the decisive condition of further technical progress. Academician Dikushin, V.I. read a paper on the problems of the development of

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automation in machine — building in the 1959-1965 period. The greatest significance is attributed to the complete automation of processes with a large labour content and heavy repetitive work and to the automation of production. Mechanisation and automation must spread into new fields of production. The integrated development of powerful machine — building will make it possible to increase the productivity of labour continuously and without limit. Advanced production processes must be more rapidly adopted. Renewal of production plant must be carried out by its replacement with better plant and more automatic plant and by economically beneficial modernisation. Special attention was paid by the lecturer to the press working of metals. Research into deformation processes, the stressed state and strength in the stamping of hot and cold metals, especially metals of low ductility and heat resistant metals must be accelerated. Concerning the problem of the continuity and automation of metal cutting

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processes, the lecturer pointed out that the creation of improved machine tools for metal cutting will demand more research into the stressed state, the deformation, and the forces in metal cutting, into the increased life of cutting tools, the development of methods of precise forming and improved accuracy of cutting, the development of automation schemes and automation equipment capable of rapid re-setting or re-tooling when changing the design of the components. Special attention was given by the lecturer to the drive and control of machine tools. The scientific and technical level of developments in the field of drive and control achieved in the USSR will make it possible to solve complex problems of the automation of the entire operating cycle of a machine tool. However, the lag in the manufacture of drive components and control components prevent the wider development of automation. Academician Bruyevich, N.G. read a paper on the safety and accuracy in automatic production. Borisenko, I.I., engineer, gave a paper on the manufacture of electrical

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equipment, instruments and electrical means of automation during the current 7-year plan.14 Solodovnikov, V.V., Doctor of technical sciences, presented a paper on the scientific foundations of integrated automation. Academician Strumilin, S.G. lectured on the economics of automation in industry. About 150 papers were devoted to the automation of manufacturing processes in machine building. They were divided into the following sections: the automation of foundry processes, of press working processes, of welding processes, of hard facing processes, of assembly processes, of inspection processes and the section on drives and controls in machine building. The conference also heard papers devoted to modern problems of automatically controlled electrical drives. (Reported in Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, seriya "Energetika i avtomatika," 1959, Nr 4).

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