SOV/21-59-6-23/27

30 (1)

AUTHOR: Zhuravel', P. O. (Zhuravel', P.A.)

TITLE: The Hydroid Cordilophora Caspia Pallas (Coelenterata) in the System of the Dneper Reservoir (Lake Lenin)

PERIODICAL: Dopovidi Akademii Nauk Ukrains'koi RSR, 1959, Nr 6, pp 672 - 674 (USSR)

ABSTRACT: The author deals with a find of the hydroid polyp Cordylophora caspia Pallas (Coelenterata) in the upper part of the Samara arm of the Dneper reservoir, where it had not been known before. The find was made by the author and members of the Dnepropetrovskiy institut gidrobiologii (Dnepropetrovskiy Institute of Hydrobiology) V. L. Bulakhov, V. D. Bulay and P. Ya. Lavrinenko, in Sep 1958. The polyp was transplanted therein with the overgrowth on the underwater sides of barges from the Dneper-Bug estuary. In late 1958, the author and members of the Dnepropetrovskiy Institute of Hydrobiology, V. L. Bulakhov and V. Ya. Mamontov, transplanted a number of this polyp from the Samara arm to the water-filled and abandoned Tarapakovskiy and Simferopol'skiy open pits, for

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The Hydroid Cordilophora Caspia Pallas (Coelenterata) in the System of the Dneper Reservoir (Lake Lenin)

a study of the conditions of acclimatization therein. The above named polyp was previously studied by a number of authors mentioned in the reference block, whom the author briefly refers to in the text, and by V. M. Kruglova, Ts. I. Iofe and Ye. M. Aptekar.
There are 11 Soviet references.

ASSOCIATION: Dnepropetrovskiy n. - i. institut gidrobiologii Gosudarstvennogo universiteta (Dnepropetrovsk s. - r. Institute of Hydrobiology, of State University)

PRESENTED: By O. P. Markevich (A.P. Markevich) Member, AS UkrSSR

SUBMITTED: February 9, 1959

Card 2/2

ZHURAVEL', P.A.

New species in the fauna of Bakhchisaray Reservoir, Crimea. Zool. zhur. 39 no.3:458-459 '60. (MIRA 13:6)

1. Dnepropetrovsk Institute of Hydrobiology, Dnepropetrovsk State University.
(Bakhchisaray Reservoir--Fresh-water fauna)

ZHURAVEL', P.A.

The mysid Hemimysis anomala Sars (Crustacea, Malacostraca) in Dnieper Reservoir and its importance as food of fishes.
Zool. zhur. 39 no. 10:1571-1573 O '60. (MIRA 13:11)

1. Dnepropetrovsk Research Institute of Hydrobiology of the Dnepropetrovsk State University.
(Dnieper reservoir--Schizopoda)
(Fishes--Food)

ZHURAVEL', P.A.

Significance of canals and reservoirs of the South of the U.S.S.R. in the distribution of the representatives of the relict fauna from the Caspian liman region. Trudy Gidrobiol. ob-va 14:263-268 '63. (MIRA 17:6)

1. Nauchno-issledovatel'skiy institut gidrobiologii Dnepropetrovskogo gosudarstvennogo universiteta imeni 300-letiya vossoyedineniya Ukrainy s Rossiyey.

ZHURAVEL', P.A.

New species in the fauna of freshwater bodies of the Crimea.
Zool. zhur. 43 no. [illegible] 64 (MIRA 17:7)

1. Zoopark Askaniya-Nova.

ZHURAVEL', P.A.

Acclimatization of the fauna of the Aral-Caspian type in reservoirs of the Ukraine. Gidrobiol. zhur. 1 no.3:59-65 '65. (MIRA 18:6)

1. Institut gidrobiologii Dnepropetrovskogo gosudarstvennogo universiteta.

ZHURAVEL', F.A.; IL'YENKOV, A.I.; TKHORIK, Yu.A.

Evaluation of the pulse characteristics of semiconductor diodes. Trudy Inst. avtom. i elektrometr. SO AN SSSR no.10:68-85 '65. (MIRA 18:8)

ZHURAVEL', P.A., prof. (Dnepropetrovsk)

Clupeonella made its way to the Baltic Sea. Priroda 52 no.9: 116-117 '63. (MIRA 16:11)

ZHURAVEL', P.A.

Ecology, distribution and importance of representatives of the estuarine fauna in reservoirs of the steppe zone of the Ukraine and the Crimea foothills. Vop. ekol. 5:65-67 '62. (MIRA 16:6)

1. Nauchno-issledovatel'skiy institut gidrobiologii Dnepropetrovskogo universiteta.
(Ukraine—Freshwater fauna)

JURAVEL, P.A. [Zhuravel', P.A.]

Some data on the biology and ecology of mysids experimentally introduced into basins of accumulation and other Ukrainian waters to enrich the nutritive bases of fishes. Analele biol 14 no.1:145-148 Ja-Mr '60.

ZHURAVEL', P.A., prof. (Dnepropetrovsk); ROMANETS, Yu.N. (Dnepropetrovsk); TEKUCHEV, Yu.B. (Rostov-na-Donu); DOSKACH, A.G. (Moskva)

News, events, facts. Priroda 51 no.10:109-117 O '62. (MIRA 15:10)

1. Institut geografii AN SSSR (for Doskach).
(Science news)

ZHURAVEL', P.A.

Theoretical premises and practical measures for increasing natural feed supply for fishes as exemplified by the bodies of water of Dnepropetrovsk Province. Trudy sov. Ikht. kom. no.14:21-23 '62. (MIRA 15:12)

1. Nauchno-issledovatel'skiy institut gidrobiologii Dnepropetrovskogo gosudarstvennogo universiteta.
(Dnepropetrovsk Province--Fishes--Food)

ZHURAVEL', P.A.

Population of Nikolayev and Yuzhnoye Reservoirs of the Ukraine by the estuarial fauna through the canals. Zool. zhur. 42 no.1:28-31 '63. (MIRA 16:5)

1. Institute of Hydrobiology, State University of Dniepropetrovsk.
(Nikolayev Reservoir—Freshwater fauna)
(Yuzhnoye Reservoir—Freshwater fauna)

ZHURAVLEV, P.A.; ZAKHAREVICH, A.F.

Stress distribution in a massif of rock with a horizontal working of circular cross section. Zap. LGI 36 no.3:101-105 '58. (MIRA 16:5)

(Geology) (Strains and stresses)

ZHURAVEL', P.A., prof.

Enrichment of fauna in reservoirs. Priroda 51 no.10:69-71 O '62. (MIRA 15:10)

1. Dnepropetrovskiy gosudarstvennyy universitet im. 300-letiya vossoyedineniya Ukrainy s Rossiyey.
(Freshwater fauna) (Reservoirs)

ZHURAVEL', P.A., prof.

Experiments in improving the food supply of fishes in the middle Dnieper system. Vest. Dnep. nauch.-issl. inst. gidrobiol. 12:14-151 '60. (MIRA 14:12)
(Dnieper River - Crustacea)
(Animal introduction)

ZHURAVEL', P.A.

Some considerations on the introduction of new species of food fauna into Crimean reservoirs. Trudy Gidrobiol. ob-va 11:338-344 '61. (MIRA 15:1)

1. Nauchno-issledovatel'skiy institut gidrobiologii Dnepropetrovskogo gosudarstvennogo universiteta, Dnepropetrovsk.
(Crimea--Fishes--Food) (Animal introduction)

ZHURAVEL, P.A.

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Among the titles and authors of papers and other expected participants at the 15th International Congress of Limnology in Madison, Wisconsin, 20-25 Aug 62, are the following:

USSR

GAYEVSKAYA, N. S., Kaliningrad College of Fishery,
Kaliningrad - "The role of high aquatic plants
in trophic cycles of fresh water bodies"
GORBUNOV, K. V., Astrakhan State Reservation,
Astrakhan - "The role of cellulose bacteria
in biological productivity of water bodies"
IVLEV, V. S., Sevastopol Biological Station
Ivlev A. O. Kovalevsky, Sevastopol - "The
transformation of energy on the highest trophic
levels of a production process" and "Energetics of fish
production" /Review Paper, Session IV/
KORDE, Nina Vital'yevna, Laboratory of Forestry,
Academy of Sciences USSR - "The trophic of
water bodies on different stages of their
historical development"
KROGIUS, F. V., Kamchatka Department, Pacific
Institute of Marine Fishery and Oceanography -
"On the connection of flowing down of young
fish of red salmon with the condition in a
lake"
KRUGIUS, Yevgeniy Mikhaylovich, Kamchatka
Department, Pacific Institute of Marine Fishery
and Oceanography - "The influence of a diversion
of addition of red salmon producers on the
phosphate regime of spawning lakes" Hydrobiology Station,
KUZNETSOV, Sergey Ivanovich, Institute of Micro-
Biology, Academy of Sciences USSR - "The role
of microorganisms in the destruction of organic
substances in a water body" and, "Decomposition-
Processes, results and limnological significance,
microbiological" /Plenary Session IV/
MESHKOVA, Tat'yana, Yu., Has accepted invitation.
Baku, Armenian SSR -
but has not submitted Paper/
PASECHNOVA, V. Ya., Zoological Institute, Academy
of Sciences USSR - "On the evolution of tardigrads
larvae (Chironomidae) in connection with the
conditions of existence"
RASPOPOV, I. M., Laboratory of Limnology, Academy
of Sciences USSR - "On the main concepts and
directions of hydrobotany in the Soviet Union"
ROMISH, A. G., Zoological Institute, Academy of
Sciences, USSR - "Microbiology of the detritus
of lakes"
ROSOLOVO, L. L., Institute of Geography, Academy
of Sciences USSR, and GLAGIY, Grigoriy I.,
Siberian Department of the Academy of Sciences
USSR - "The Lake Baykal"
SKUCHIK, Nikolay Nikolayevich, Institute of Biology
of Water Reservoirs, Academy of Sciences USSR -
"Ecology of the Hydrophytic Phylopods in
connection with the estimation of the role of
the littoral zone of the life of Volga water
reservoirs"
SOKOLOVSKIY, O. N., Limnological Institute, Siberian
Department of the Academy of Sciences USSR -
"The Ice Regime of the Baykal Lake"
STROGANOV, N. S., Biological Faculty, Moscow
University, Moscow - "Influences of small
concentrations of poisonous matter on hydro-
organisms", and "On the question of the
influence of sewage waters"
VORONOV, A. K., Limnological Institute, Siberian
Department, Academy of Sciences USSR - "Turn -
over of the organic matter and some biogenic
elements in the Baykal Lake"
YABLONOVSKAYA, Aleksandra Ivanova, Zoological Institute,
Academy of Sciences USSR - "The Fauna of high
mountain water bodies of Middle Asia"
ZHADIN, V. I., Zoological Institute, Academy of
Sciences USSR - "Migration of the radioactive
phosphorus at fertilizing a water body"
ZHURAVEL, P. A., Dnepropetrovsk Scientific Institute
of Hydrobiology of the State University, Ukrainian
SSR - "Acclimatization of fishes' food organisms
from the fauna of estuary complex (or the
'Caspian relict type') in water reservoirs of
the Ukraine and the Crimea"

ZHURAVEL', P.A.; BULAKHOV, V.L.; MYASOYEDOVA, O.M.

Vasilii Vasil'evich Stakhovskii, 1883- ; on his 80th birthday.
Ornitologiia no.7:505-506 '65. (MIRA 18:10)

ZHURAVEL', P.V.

Soil protecting crop rotations in Pavlodar Province. Zemledelie 7 no.9:70-72 S '59. (MIRA 12:11)

1. Zamestitel' nachal'nika Pavlodarskogo oblastnogo upravleniya sel'skogo khozyaystva.
(Pavlodar Province--Rotation of crops)

SHCHEGOLEV, Anatoliy Vasil'yevich; BERLINER, M.S., inzh., retsenzent; ZHURAVLEV, S.A., dotsent, kand.tekhn.nauk, red.; BORODULINA, I.A., red.izd-va; VARKOVETSKAYA, A.I., red.izd-va; SPERANSKAYA, O.V., tekhn.red.

[Design and construction of broaches] Konstruirovanie protiazhek. Izd.2., ispr. i dop. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1960. 351 p. (MIRA 13:12)
(Broaching machinery)

POPUTNIKOV, F.A., inzh.; ZHURAVEL', R.D., inzh.; MURZINA, Z.A., inzh.; NUZHDIN, A.I., inzh.

Ways to make use of Kuznetsk Basin low coking and noncoking coals in the charge for coking. Obog.i brik.ugl. no.30:82-89 '63. (MIRA 17:4)

YEVSIOVICH, S.G., kand.tekhn.nauk; ZHURAVLEV, S.I., gornyy inzh.

Krivoy Rog mining and ore-dressing combines should produce high quality concentrates. Gor.zhur. no.7:66-69 Jl '60. (MIRA 13:7)

1. Institut Mekhanobr, Leningrad.
(Krivoy Rog—Ore dressing)

ZHURAVEL', Sh. I., aspirant.

Effect of the new types of traction on the cost structure of railroad transportation. Trudy MTBI no.7:98-116 '57. (MIRA 11:5)
(Railroads--Cost of operation)

ZHURAVEL', Sh.I., inzh.-ekonomist

Statistical and analytical method of finding regularity of changes in independent operational costs of railroads. Trudy MIIT no.10:119-143 '58. (MIRA 12:2)
(Railroads--Cost of operation)

ZHURAVEL', Sh.I., inzh.

New types of traction and transportation costs. Zhel. dor. transp. 40 no.5:32-37 My '58. (MIRA 11:6)
(Railroads--Cost of operation)

TRUBNIKOV, I.Ye., inzh.; ZHURAVEL', Sh.I., kand. ekon. nauk

What experience has shown in the organizational and economic strengthening of railroad sections. Zhel. dor. transp. 41 no.5:15-20 My '59. (MIRA 12:7)

1.Nachal'nik Novosibirskogo otdeleniya Tomskoy dorogi (for Trubnikov)
(Railroads--Management)

KUPRIYANOV, A.P., inzh., ZHURAVEL', Sh.I., kand.ekon.nauk

Economic results of the adoption of new traction types; from practices of the Tomsk Railroad. Zhel.dor.transp. 42 no.12:21-26 D '60. (MIRA 13:12)

1. Nachal'nik planovo-ekonomicheskogo otdela Tomskoy dorogi (for Kupriyanov).

(Locomotives) (Railroads--Cost of operation)

ZHURAVEL', Sh.I., kand.ekon.nauk

Dependence of railroad operational costs on the volume of traffic for the prospective period. Trudy MIIT no.115:92-127 '59. (MIRA 13:1)

(Railroads--Cost of operation)

ZHURAVLENKO, V., inzh.; BALITSKIY, S. [Balyts'kyi, S.], inzh.

The power of "blue coal". Znan. ta pratsia no.8:7-8 Ag '59.
(MIRA 13:2)

(Tidal power)

ZHURAVEL', V.

Rely on the active members for all. Radio no.10:10-11 O '57.
(MIRA 10:10)

1. Predsedatel' respublikanskogo komiteta Dobrovol'nogo obshchestva sodeystviya armii, aviatsii i flotu Checheno-Ingushskoy ASSR.

(Radio clubs)

ACC NR: AP6021473 SOURCE CODE: UR/0413/66/000/011/0094/0094

INVENTOR: Zhuravel', V. I.; Minakov, V. I.; Bobrov, V. T.; Dimitraki, P. N.; Nikiforenko, Zh. G.; Budenkov, G. A.; Gitis, M. B.

ORG: None

TITLE: An ultrasonic pulse-shadow immersion flaw detector. Class 42, No. 182390 [announced by the All-Union Scientific Research Institute of Nondestructive Methods for Material Quality Control (Vsesoyuznyy nauchno-issledovatel'skiy institut nerazrushayushchikh metodov kontrolya kachestva materialov)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 94

TOPIC TAGS: flaw detection, ultrasonic flaw detector, quality control

ABSTRACT: This Author's Certificate introduces: 1. An ultrasonic pulse-shadow immersion flaw detector which contains an ultrasonic probe unit, line scanning mechanism, oscillator and ultrasonic amplifier. The unit is designed for increased productivity in checking parts of complex shape. The installation incorporates an electronic unit which generates a control signal after the ultrasonic probe unit passes beyond the outline of the part being checked. This signal controls the line scanning mechanism and temporarily disconnects the receiving head from the amplifier. 2. A modification of this flaw detector in which the electronic unit is made in such a

Card 1/2 UDC: 620:179.16.08

ACC NR: AP6021473

way that when there is a single pair of ultrasonic probes in the installation the receiver head is disconnected from the amplifier during the period when the probe unit is returning to the article being checked. 3. A modification of this flaw detector in which the electronic unit is made in such a way that when there are two pairs of ultrasonic probes located one behind the other along their line of motion in the installation, the receiver head disconnected from the amplifier is the one which first passes beyond the outline of the part being checked. This receiver head is connected when the second pair of probes passes beyond the outline of the part on the return travel of the probe unit.

SUB CODE: 09, 13/ SUBM DATE: 07Dec64

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ZHURAVEL', Z.S.

"Description of and Instructions for Operation of Portable Selenium Rectifier Charging Unit" (Opisaniye i instruktsiya po ekploatatsii perenosnogo selenovogo vypryamitel' no-zaryadnogo ustroystva). Voyennoye Izdatel'stvo, 32 pp., 1947

ZHURAVETSKIY, V.V.

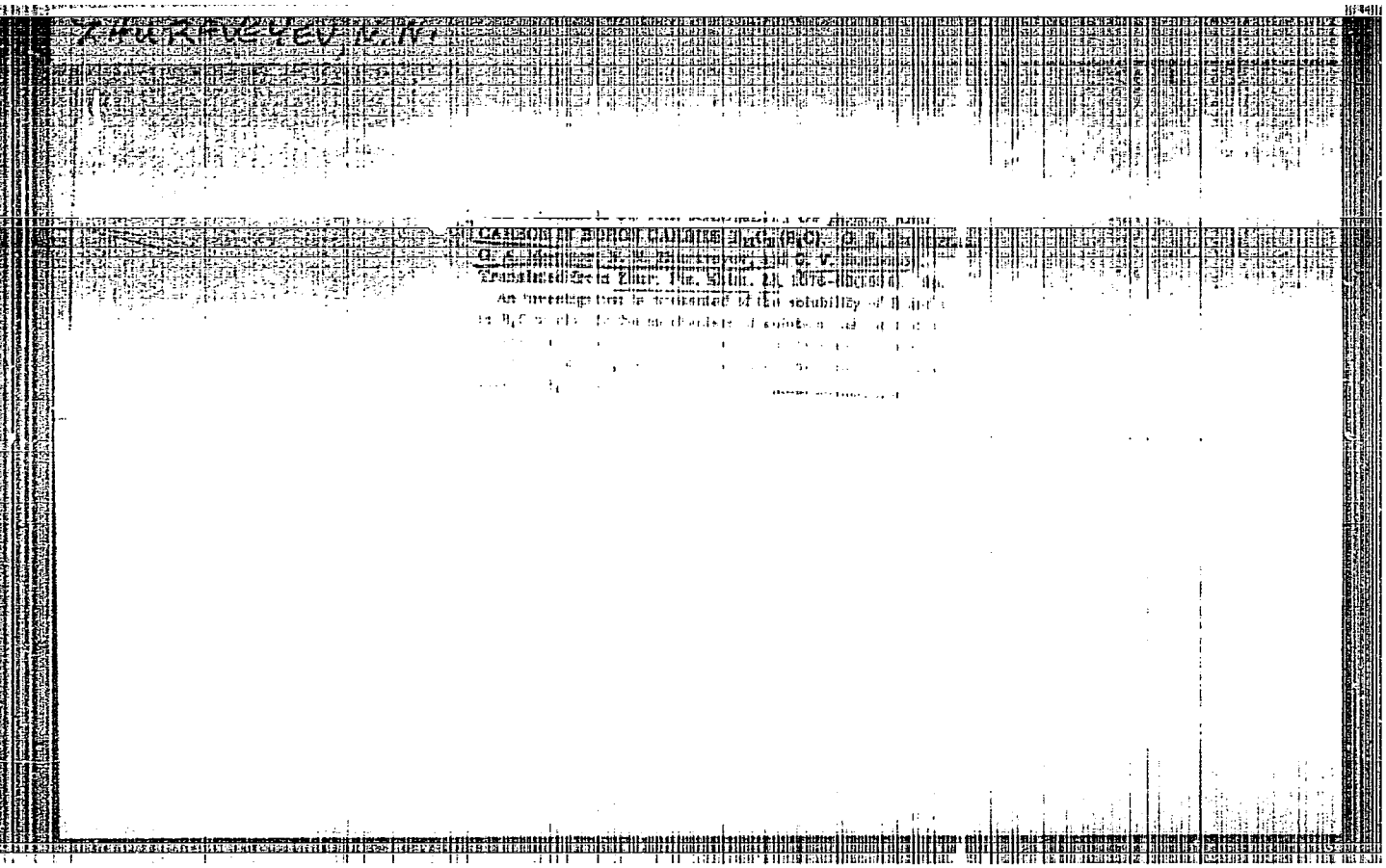
Remote control of gauging and recording the time of filling test tanks with slurry. TSement 22 no.6:25-27 N-D '56. (MLRA 10:2)

1. Noril'skiy metallurgicheskiy kombinat.
(Cement industries) (Automatic control)

ZHURAVEL'-YAKOBSON, R.U. (Kiyev)

Study of morbidity among in rural population. Sov. zdrav. 19 no.3:12-16 '60. (MIRA 14:6)

1. Iz otdela organizatsii zdravookhraneniya Ukrainskogo nauchno-issledovatel'skogo instituta kommunal'noy gigiyeny.
(BYSHEV DISTRICT--DISEASES--REPORTING)



DESYATOV, V.P.; ZHURAVLEV, V.S.

Microelements in the bones as indicators of the type of death. Sud.-med. ekspert. 6 no.4:28-30 O-D'63
(MIRA 16:12)

1. Kafedra sudebnoy meditsiny (zav. - dotsent V.F.Desyatov) i kafedra fiziki (zav. - dotsent V.D.Gol'tsev) Tomskogo meditsinskogo instituta.

POLONSKIY, M.S.; ZHURAVIN, M.A.; LADYZHENSKIY, Ye.B.; PINSKER, B.I.; ZUBOV, V.O.; SHESTERIKOV, A.A.; YAKUN', F.V.; KRYNITSA, M.N.; AREF'YEV, B.A.; YEVZIKOV, L.I., starshiy stroitel' sudov; PAVLENKO, I.F.; YEKOVLEV, B.M., inzh.; MARKOV, A.P., inzh.

Readers' response to the article by engineer M.A. Daikhes entitled "Method of mounting the main engines with minor deformations of the foundation frame and the crankshaft". Sudostroenie 30 no.10:57-66 O '64.

(MIRA 17:12)

1. Gruppovoy inzh.-mekhanik SSKh parokhodstva "Kaspar" (for Zubov). 2. Inzh.-inspektor Registra SSSR (for Yakun'). 3. Glavnyy inzh.-inspektor inspektsii Registra SSSR Baltiyskogo basseyna (for Aref'yev). 4. Starshiy mekhanik teplokhoda "Tadzhikistan" (for Pavlenko).

ZHURAVIN, Yu.; MIGULEVA, R.

Conference of the readers of "Promyshlennaia energetika". Prom.-energ. 17 no.10:48 O '62. (MIRA 15:9)
(Power engineering--Periodicals)

ZHURAVIN, Yu.I., KIDYAYEVA, A.

Conference of the readers of "Promyshlennaia energetika."
Prom. energ. 20 no.7:52 Jl '65.
(MIRA 18:12)

ZHURAVINA, A.F., inzhener.

Improving production processes at the Radishchev factory.
Leg.prom. 14 no.8:47-48 Ag '54. (MLRA 7:8)
(Leningrad--Leather industry) (Leather industry--Leningrad)

YELEN, B.L. [IElen, B.L.], inzh.; MERZON, A.G. [Merzon, A.H.], inzh.; ZHURAVITSKAYA, Sh.M. [Zhuravyts'ka, Sh.M.], inzh.; VOL'VICH, R.M., inzh.; RYBAL'CHENKO, L.K.

Potentialities for improving the economy characteristics of shoe upper styles by designing matching pattern contours. Leh.prom. no.1:73-75 Ja-Mr '62. (MIRA 15:9)

1. Ukrainskiy nauchno-issledovatel'skiy institut kozhevennoy promyshlennosti.
(Ukraine--Shoe manufacture)

YELEN, B.L. [IElen, B.L.]; ZHURAVITSKAYA, Sh.M. [Zhuravyts'ka, Sh.M.]; VOL'VICH, R.M. [Vol'vych, R.M.]

Efficiency of centralizing the cutting of Russian leather in the factories of the Kiev Economic Region. Leh.prom. no.4:73-77 O-D '62. (MIRA 16:5)

1. Ukrainskiy nauchno-issledovatel'skiy institut kozhevenno-obuvnoy promyshlennosti.

(Kiev Province—Shoe manufacture)

SHAMOVSKIY, E.Kh.; ZYKOV, A.D.; KAFTANOVA, Z.K.; KRAVCHENKO, L.Ya.; FROLOV, N.P.; ZHURAVKIN, Ye.A.; GORBATYUK, V.L.

Mechanizing the flame scarfing of blooms. Metallurg 7 no.8:24-27 Ag '62. (MIRA 15:9)

1. Sibirskiy metallurgicheskiy institut i Kuznetskiy metallurgicheskiy kombinat.
(Steel ingots) (Metal cleaning)

ZHURAVITSKIY, Yu.I., inzh.

Hot arc welding-up of cast iron. Svar. proizv. no.6:13-15 Je '63. (MIRA 16:12)

1. Moskovskiy zavod "Stankolit."

IVANOV, B.G., inzh.; ZHURAVITSKIY, Yu.I., inzh.

Electrode and filler materials for the welding of cast iron.
Svar. proizv. no.6:17-19 Je '63. (MIRA 16:12)

1. Moskovskiy zavod "Stankolit."

AKSYUCHITS, N.I.; GOLOVANCHIKOV, I.Ya., inzh.; ZHURAVKOV, A.A.

Comparison of the economy characteristics of the various types of fuel in the White Russian S.S.R. Torf. prom. 39 no.5:1-4 '62. (MIRA 16:8)

1. Gosplan BSSR (for Aksyuchits). 2. Institut ekonomiki AN BSSR (for Zhuravkov).

ZHURAVKOV, G.

Electric heat indicator of oil pressure. Avt.transp. 34 no.4: 31 Ap '56. (MLRA 9:8)
(Automobiles--Apparatus and supplies)

KOTLYAREVSKIY, Georgiy Pavlovich; ZHURAVKOV, M.V., otv.red.; SABITOV, A., tekhn.red.

[Raising the durability of shafts of hoists and compressors] Povyshenie dolgovechnosti valov pod"emnykh mashin i kompressorov. Moskva, Ugletekhizdat, 1957. 29 p. (MIRA 12:9)
(Strength of materials)

ZHUKOVA, A.P., rukovoditel'; POPOV, I.A., rukovoditel'; RYKOVA, Z.L., rukovoditel'; ARKHIPOV, N.A., starshiy nauchnyy sotrudnik; DZHIMSHELEYSHVILI, Sh.P., starshiy nauchnyy sotrudnik; DMITRIYEV, G.V., starshiy nauchnyy sotrudnik; ZHURAVKOV, M.V., starshiy nauchnyy sotrudnik; ISTOMIN, P.S., starshiy nauchnyy sotrudnik; KURBATOV, A.K., starshiy nauchnyy sotrudnik; METLINA, T.I., starshiy nauchnyy sotrudnik; PUGINA, N.I., starshiy nauchnyy sotrudnik; BOYKOV, M.A., otvetstvennyy red.; BEL'KE, G.V., otvetstvennyy red.; KLEYMENOV, F.N., otvetstvennyy red.; SMOLDYREV, A.Ye., otvetstvennyy red.; SHARAYEV, A.N., otvetstvennyy red.; BUTAZOV, V.V., tekhn.red.; SABBITOV, A., tekhn.red.

[Progressive practices and new equipment] Peredovoi opyt i novaia tekhnika. Moskva, Ugletekhizdat, 1957. 386 p. (MIRA 11:4)

1. Russia (1923- U.S.S.R.) Ministerstvo ugol'noy promyshlennosti. TSentral'nyy institut tekhnicheskoy informatsii. 2. TSentral'nyy institut tekhnicheskoy informatsii Ministerstva ugol'noy promyshlennosti SSSR (for Zhukova, Popov, Rykova, Arkhipov, Dzhimsheleyshvili, Dmitriyev, Zhurakov, Istomin Kurbatov, Metlina, Pugina)
(Coal mines and mining)

IL'IN, Yerofey Vasil'yevich; ZHURAVKOV, M.V., nauchn. red.

[Assembly of mercury-arc rectifiers] Montazh rtutnykh vypriamitelei. Moskva, Stroiizdat, 1965. 110 p. (MIRA 18:12)

AVERCHUK, S., vitse-admiral; ZHURAVKOV, N., kapitan 1-go ranga

Let's talk about the style of the political administration's work. Komm. Vooruzh. Sil 46 no.4:24-32 F '65.
(MIRA 18:5)

KOZLOV, B.I., mashinist-instruktor (g.Leningrad); ZHURAVKOV, N.S., mashinist (g.Leningrad)

Increase the reliability of the two-wire electropneumatic brake. Elek. i tepl. tiaga 4 no. 12:7-8 D '60. (MIRA 14:1)
(Railroads--Brakes)

ZHURAVKOV, Nikolay

Beginning of an important undertaking. Sov.profsoiuzy 4 no.8: 41-43 Ag '56. (MLRA 9:10)

1.Gruppovoy organizator professional'nogo soyuza avtomatno-tokarnogo tsekha 4-go Gosudarstvennogo podzhipnikovogo zavoda.
(Kuybyshev Province--Labor productivity)

ZHURAVKOV, S.

AUTHOR: Morgunov, S. and Zhuravkov, S. 99-6-7/9

TITLE: A Useful Book (Poleznaya kniga)

PERIODICAL: "Gidrotekhnika i Melioratsiya", 1957, Nr. 6, pp 52-53,(USSR)

ABSTRACT: The book "Exploitation of Hydro-Melioration Systems" (Explua-tatsiya gidromelioprativnikh sistem), published by USSR government publishers of agricultural literature (authors: S.R. Offengenden, A.D. Panadiadi, S.P. Trombachev, M.I. Yarushin, N.D. Kremenetskiy, G.S. Kagan, I.G. Nikolayev, and Ye.G. Trubacheva) is a most valuable manual for students of technical schools and all persons engaged in melioration work. The book contains 3 parts: Introduction, Operation of Irrigation Systems, and Operation of Drainage Systems. In spite of several shortcomings, the manual may be considered a valuable aid for specialists and workers of irrigation and drainage systems.

AVAILABLE: Library of Congress

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DANILOVA, G.V.; ZHURAVKOV, S.A., inzh.

Water management at the Exhibition of the Achievements of the National Economy of the U.S.S.R. in 1960. Gidr. i mel. 12 no. 12:48-55 D '60. (MIRA 14:1)

1. Direktor pavil'ona Vodnogo khozyaystva (for Danilova).
(Water-supply engineering--Exhibitions)
(Drainage--Exhibitions)

VORON, Ya.M.; ZHURAVKOV, S.A., inzhener.

Improving water utilization by collective farm sections. Gidr. i mel. 8 no.6:48-49 Je '56. (MLRA 9:9)

1. Upravleniye Tersko-Kumskoy obvodnitel'no-orositel'noy sistemy (for Voron). 2. Ministerstvo vodnogo khozyaystva RSFSR (for Zhuravkov).

(Water supply, Rural)

YUDKOVSKIY, P.A.; BULANOV, V.Ya.; ZHURAVKOV, Yu.N.; SHEVEL', A.P.

Effect of heat treatment on the strength of drills. Stan. i instr. 34 no.12:27-28 D '63.

(MIRA 17:11)

ZHURAVKOVA, G.N.

New gas turbine; a note. Energomashinostroenie 3 no.10:5 O '57.
(Leningrad--Gas turbines) (MIRA 10:12)

ZHURAVLENKO, B.Y.; SHELIMANOV, V.A.

Cooling the air in walls of mines deeper than 1200 m. Trudy Sem.po gor.teplotekh. no.3:83-90 '61. (MIRA 15:4)

1. Institut teploenergetiki AN USSR.
(Donets Basin--Mine ventilation)

ZHURAVLENKO, V., nauchnyy sotrudnik

Artificial climate in mines. Znan. ta pratsia no. 4:16-17 Ap '61.
(MIRA 14:5)

1. Institut teploenergetiki AN USSR.
(Ukraine—Mines—Air conditioning)

ZHURAVLENKO, V.Ya., inzh.; SHELIMANOV, V.A., inzh.

Predicting the heat conditions in tunneling for purposes of supplying Yalta with water. Trudy Sem.po gor.teplotekh. no.4:141-145 '62. (MIRA 15:8)

1. Institut teploenergetiki AN UkrSSR.
(Ay-Petri--Tunnels--Ventilation)

SHCHERBAN', Aleksandr Nazar'yevich; KREMNEV, Oleg Aleksandrovich; ZHURAVLENKO, Viktor Yakovlevich; CHERNOBYL'SKIY, I.I., otv.red.; RATNIKOVA, A.P., red.izd-va; BERESLAVSKAYA, L., tekhn.red.; SHKLYAR, S.Ya., tekhn.red.

[Handbook for calculating mine heat and designing air-conditioning equipment] Spravochnoe rukovodstvo po teplovym raschetam shakht i proektirovaniiu ustanovok dlia okhlazhdeniia rudnichnogo vozdukha. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1960. 407 p. (MIRA 14:4)

(Mine ventilation)

SHCHERBAN', Aleksandr Nazar'yevich; KRENNEV, Oleg Aleksandrovich; ZHURAVLENKO, Viktor Yakovlevich;

[Handbook on mine heating calculations and the design of equipment for mine air conditioning] Spravochnoe rukovodstvo po teplovym raschetam shakht i proektirovaniiu ustanovok dlia okhlazhdeniia rudnichnogo vozdukha. Izd.2., perer. i dop. Moskva, Nedra, 1964. 507 p. (MIRA 18:2)

ZHURAVLEV, A. (Moskva); RABINOVICH, V. (Moskva)

How the housing problem is solved in the U.S.S.R. Zhil.-kommun. khoz. 13 no.2:10-11 '63. (MIRA 16:3)

(Labor and laboring classes--Dwellings)

ZHURAVLEV, A. (L'vov)

Let's have a greater number of well-organized collective farm markets. Sov. torg. 36 no.11:58 N '62. (MIRA 16:1)
(Markets)

ZHURAVLEV, A.

Objectives of trade-union organizations of civil aviation in the concluding year of the five-year plan. Grazhd.av. 12 no.2:6-7 F '55. (MIRA 16:1)

1. Predsedatel' TSentral'nogo komiteta professional'nogo soyuza aviarabotnikov.
(Trade unions)

ZHURAVLEV, A., arkhitektor; FEDOROV, M., kand.arkhitektury

House built from prefabricated apartments. Nauka i zhizn' 28 no.1:60-61 Ja '61. (MIRA 14:1)
(Buildings, Prefabricated)

ZHURAVLEV, A. (Nal'chik)

"Gorianka" factory. Mest.prom.i khud.promys. 2 no.2:36 F '61.
(MIRA 14:4)

(Nalchik--Rugs)

ZHURAVLEV, A., inzhener-fizik (g.Dubna)

Dueling of charged particles. IUn.tekh. 5 no.1:25-29 Ja '61.
(MIRA 14:5)
(Particle accelerators)

ZHURAVLEV, A., arkhitektor; KOSTIKOV, L. kand.tekhn.nauk

Books about experimental planning and construction. Na stroi. Ros. no.5:34-35 My '61. (MIRA 14:7)
(Bibliography—Construction industry)

ZHURAVLEV, A.

For the improvement of the administrative apparatus. Sots. trud 6 no.8:128-129 Ag '61. (MIRA 14:8)

1. Rostovskaya gruppa kontrolerov Komissii sovetskogo kontrolya Soveta Ministrov RSFSR.
(Rostov—Industrial management)

ZHURAVLEV, A.

Innovators promote technical progress. Sov. profsoiuzy 7 no.14:22-23 Jl '59. (MIRA 12:10)

1.Sekretar' Khabarovskogo krayevogo soveta profsoyuzov.
(Khabarovsk Territory--Inventions, Employees)

ZHURAVLEV, A.A., KOMAR, E.G., MOSALEVSKIY, I.A., NONOSOV, N.A.,
PETUCHOV, V.A., STOLOV, A.M. (U.S.S.R.)

The magnetic characteristics of the 10 GeV machine and methods of correction

CERN-Symposium on High Energy Accelerators and Pion Physics

Geneva 11-23 June 56
In Branch #5

ZHURAVLEV, A. A., KOMAR, E. G., MOZALEVSKIY, I. A., MONOSZON, N. A., STOLOV, A. M.

"Magnetic Characteristics of the 10 GeV Proton Synchrotron," paper presented at CERN Symposium, 1956, appearing in Nuclear Instruments, No. 1, pp. 21-30, 1957

ZHURAVLEV, A.A.

ZHURAVLEV, A.A.; KOMAR, Ye.G.; MOZALEVSKIY, I.A.; MONOSZON, N.A.; STOLOV, A.M.

Magnetic characteristics of the 10 Bev proton synchrotron operated by the United Institute of Nuclear Research. Atom.energ.supplement no.4:15-26 '57. (MIRA 10:10)

(Synchrotron)

S/089/60/009/006/007/011
B102/B212

21.2000 also 1538

AUTHORS: Petukhov, V. A., Gabanets, I., Zhuravlev, A. A., Karmasin, M., Kotov, V. I., Myae, E. A., Obukhov, Yu. L., Sokhor, V., Tsirak, Yu., Benda, F., Dobiash, I., Marek, M., Fukatko, T., Svetov, L. V.

TITLE: The model of the ring proton synchrotron

PERIODICAL: Atomnaya energiya, v. 9, no. 6, 1960, 491-493

TEXT: The ring proton synchrotron which is a powerful focusing accelerator with a magnetic field constant with respect to time, has been suggested in 1953 by A. A. Kolomenskiy, V. A. Petukhov, and M.S.Rabinovich and, independently of them, in 1955 by Symon (Phys.Rev. 98, 1152 (1955)). The new device seems to be able to produce very intensive accelerated-particle beams. A model of this ring synchrotron (with radial sectors) has been constructed in the Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research). The electromagnet consists of eight elements arranged periodically, each of which has a direct and an inverse sector; it also has two straight sections. The azimuthal

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S/089/60/009/006/007/011
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The model of the ring...

dimension of the direct sector, which focuses the beam in radial direction, is $22^{\circ}30'$, and that of the inverse sector, which brings about the vertical focusing, is $7^{\circ}30'$. The inverse sectors cause the orbital perimeter of the ring synchrotron to be bigger than that of a standard strongly focusing accelerator. The ratio of the maximum radius of the orbit to the minimum radius of curvature is approximately equal to 3. The coils generating the field are arranged such that the magnetic field increases with the radius of the orbit according to $H = H_0(R/R_0)^4$, i.e., it increases from 42 oe at R = 35 cm to 340 oe at R = 59 cm. The magnet exhibits the characteristic that the gap between its poles increases in proportion to the gap radius. Therefore, the vertical dimensions of the working area will also change from 2 to 4 cm. The increase of all geometrical dimensions of the sectors and the constancy of the field index k (the field index of the model is equal to 4) bring about a dynamic similarity of the orbits, and the frequency of the free oscillations will also be constant. The number of betatron oscillations per circulation may be varied from 1 to 3 in the vertical direction, and from 2.5 to 3.5 in the radial direction. The model is especially suited for

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The model of the ring...

electron acceleration; the injection (of 20-40 kev electrons) may be done continuously or in a pulsed manner. The acceleration is done with an electric rotational field having a voltage of 10 to 20 v per circulation and a frequency of 450-500 cps. The first test results obtained from this unit showed that it is very sensitive with regard to the accuracy of collection and the stability of the principal magnetic characteristics. There are 2 figures and 7 references: 5 Soviet-bloc and 2 non-Soviet-bloc. The two references to English-language publications read as follows: K. Symon. Phys.Rev. 98, 1152 (1955); T. Ohkawa. Rev.Scient.Instrum., 29, 108 (1958).

SUBMITTED: May 28, 1960

Card 3/3

ZHURAVLEV, A.A.; IVANOV, I.N.; KARMASIN, M.; KOTOV, V.I.; MYAE, E.A; OBOZNYY, V.A.; OBUKHOV, Yu.L.; PETUKHOV, V.A.

[Motion of particles in an annular synchro-cyclotron] Issledovanie dvizheniia chastits v kol'tsevom fazotrone. Dubna, Ob"edinennyi in-t iadernykh issl., 1961. 24 p. (MIRA 14:12)

(Synchrotron)

26850
Z/038/61/000/004/005/005
D238/D305

21.3100 also 2406, 2606

AUTHORS: Petukhov, V.A., Habanec, J., Zhuravlev, A.A., Karmasin, M., Kotov, V.J., Myae, E.A., Obukhov, J.L., Sochor, V., Cirák, J., Benda, F., Dobiáš, J., Marek, M., Fukátko, T., Svetov, L. V.

TITLE: A model of an annular cyclotron

PERIODICAL: Jaderná energie, no. 4, 1961, 136 - 137

TEXT: This is a translation of an Russian article entitled "Model' kol'tsevogo fazotrona" (Model of an Annular Cyclotron) originally published in the Soviet periodical "Atomnaya energiya", 9, (1960), no. 12, pp 491-493. It deals with the model of an annular cyclotron which is a fixed-field, alternating-gradient accelerator, built by Soviet and Czechoslovak physicists at the United Institute of Nuclear Research in Dubna. The proposal for an annular cyclotron was made for the first time in 1953 by A.A. Kolomenskiy, V.A. Petukhov and M.S. Rabinovich (Ref 1: Nekotoryye voprosy teoriyi tsiklicheskikh uskoriteley(Some Problems of the Theory of Cyclic Accelerators), AN SSSR, 1955; Pribory i technika experimenta (1956), no. 2, p. 26). The elec-

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A model of an annular cyclotron

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D238/D305

tromagnet of the accelerator consists of eight similar, alternately reserved parts, each of which has two sectors with opposite orientation of the magnetic field, and two straight sections. The accelerator is used for electron acceleration. Electrons with energies of 20-40 kev can be injected either continuously or in pulses. Using a combination of eddy and radio-frequency fields, a beam energy up to 2MEV can be obtained with this model. Preliminary results obtained during test runs have shown the high accuracy of the machine and the great stability of its principal magnetic characteristics. Also, in agreement with the theory, a number of various resonances was observed which have a substantial influence on the intensity of the accelerated beam. There are 2 figures and 7 references: 4 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: K. Symon, Phys. Rev. 98 (1952), 1152; T. Okhawa, Rev. Scient. Instrum. 29, (1958), 108.

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28780
S/057/61/031/010/013/015
B111/B112

24.6730

AUTHORS: Benda, F., Gabanets, I., Dobiash, I., Zhuravlev, A. A., Karmasin, M., Kotov, V. I., Marek, M., Myae, E. A., Obukhov, Yu. L., Petukhov, V. A., Svetov, L. V., Sokhor, V., Fukatko, T., and Tsirak, Yu.

TITLE: Annular proton synchrotron with radial sectors

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 10, 1961, 1253-1261

TEXT: This article describes the model of an annular proton synchrotron with radial sectors, built and put into operation at the Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research).

Technical data:

Number of periodicity elements	8
Azimuthal dimensions of a direct sector	22°30'
Azimuthal dimensions of an inverse sector	7°30'
Azimuthal dimensions of the gap	7°30'
amplification factor	~3
Initial radius	35 cm

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Annular proton synchrotron with ...

Final radius	59 cm
Vertical dimension of the chamber for the initial radius	2 cm
Coefficient k for which $H = H_0 (r/r_0)^k f(\theta)$	4
Field strength in the initial radius	~ 42 oe
Field strength in the final radius	~ 340 oe
Injection energy	20 - 40 kev
Critical energy (total)	1.12 Mev
Final energy (total)	~ 2 Mev

The frequencies of free particle oscillations were found to be $\nu_x \simeq 3.1$ and $\nu_z \simeq 1.8$, which are lower than the theoretical value. The machine can also be used for studying the behavior of the particle beam and its accumulation. A cross-sectional view of the electromagnet is shown in Fig. 1. A pressure of $1 - 2 \cdot 10^{-6}$ mm Hg prevailed in the vacuum chamber. The injection system is designed both for pulsed and continuous operation. Acceleration is effected by an electric rotating field of 500 cps and 10 - 25 v per revolution. A special "speed up" system (rotating field of 600 v per revolution) serves for improving the electron-capture efficiency.

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Annular proton synchrotron with ...

The pulse, which is excessively increased by the "speed up" process, is reduced by a thyratron circuit. A constant value of k could be attained with a theoretically calculated arrangement of the field coils along the ideal orbit. In addition to the principal coils, a coil was placed at the yoke of each sector, by which the influence of the iron resistance was eliminated. k and the azimuthal field distribution were measured with induction coils and a ballistic galvanometer. With a few exceptions, the values of k agreed with theoretical values to within $\pm 1\%$. The azimuthal inhomogeneity of the field was never greater than $\pm 1\%$. The position of the magnetic surfaces was determined with Permalloy feelers with an error of 0.2 mm. The deviation from the theoretical values was never greater than 0.5 mm. The indication of the beam during the first revolutions (without acceleration) was carried out with screens and coordinate nets in the chamber, and later (with acceleration) with photomultipliers equipped with radially adjustable sets of targets. The measurements showed that the field is strongly affected by the induction and "speed-up" core (e.g., azimuthal inhomogeneity). It was found that under optimum conditions, the upward deviation of the beam from the center of the chamber did not exceed ± 4 mm, and that the deviation of the equilibrium

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Annular proton synchrotron with ...

orbits at one and the same point of the magnetic field was ±5 mm per revolution. It is noted that this model can be used to study resonances with free oscillations, electron capture into a betatron system, and accumulation of accelerated particles. Yu. A. Chernyshov, A. Grachev and R. N. Fedorov are thanked for assistance. There are 6 figures, 1 table, 9 references: 4 Soviet and 5 non-Soviet. The three most recent references to English-language publications read as follows: Ref. 7: T. Ohkawa, Rev. Sci. Instr., 29, 108, 1958. Ref. 8: F. T. Cole et al., Rev. Sci. Instr., 28, 403, 1957. Ref. 9: K. M. Terwilliger et al., Rev. Sci. Instr., 28, 987, 1957.

SUBMITTED: December 6, 1960

Fig. 1: Cross-sectional view of electromagnet and vacuum chamber. Legend: (1) magnet; (2) chamber; (3) principal coils of magnet; (4) yoke coils.

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ZHURAVLEV, A.A.; KOTOV, V.I.; MYAE, E.A.; OBOZNYY, V.A.; SARANTSEVA, V.K., tekhn. red.

[Method for electron acceleration in a circular synchro-cyclotron] Ob odnom metode uskoreniia elektronov v kol'tsevom fazotrone. Dubna, Ob"edinennyi in-t iadernykh issl., 1962. 11 p. (MIRA 15:4)

(Synchrotron)

ZHURAVLEV, Anatoliy Andreyevich; MAZEL', Klimentiy Borisovich; POPOV, P.A., red.

[Transistorized d.c. voltage converters] Preobrazovateli postoiannogo napriazheniia na tranzistorakh. Izd.2., perer. Moskva, Energiia, 1964. 93 p. (Massovaia radiobiblioteka, no.547) (MIRA 18:2)

ZHURAVLEV, A.

Efficient kind of communications. NTO 7 no.3:48-49 Mr '65.
(MIRA 18:5)

1. Predsedatel' byuro sektsii obrabotki metallov davleniyem Rostovskogo oblastnogo pravleniya Nauchno-tekhnicheskogo obshchestva mashinostroitel'noy promyshlennosti.

ZHURAVLEV, A.

Trying to make perfect steel. Metallurg 10 no.5:24 My '65.
(MIRA 18:6)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat.

VOSHCHININ, P.A., kand. sel'khoz.nauk; GRINCHUK, I.M., inzh.; ZHURAVLEV, A.A., kand. sel'khoz. nauk; KARAVYANSKIY, N.S., kand. sel'khoz. nauk; SHAIN, S.S., doktor sel'-khoz. nauk, prof.[deceased]; YATSUK, Ye.P., kand. tekhn. nauk; ANTONOVA, M.M., red.; GINZBURG, A.S., tekhn.red. KOBYAKOVA, G.N., tekhn. red.

[Seed production of meadow grasses] Semenovodstvo lugovykh trav. [By] P.A.Voshchinin i dr. Moskva, Sel'khozizdat, 1963. 151 p. (MIRA 17:4)

ZHURAVLEV, A.A.; IVANOV, I.N.; KARMASIN, M.; KOTOV, V.I.; MYAE, E.A.; OBOZNYY, V.A.; OBUKHOV, Yu.L.; PETUKHOV, V.A

Study of particle motion in a circular synchrocyclotron. Zhur. tekh.fiz. 32 no.8:905-913 Ag '62. (MIRA 15:8)
(Synchrotron)

BENDA, F.; GABANETS, I.; DOVIASH, I.; ZHURAVLEV, A.A.; KARMASIN, M.; KOTOV, V.I.; MAREK, M.; MYAE, E.A.; OBUKHOV, Yu.L.; PETUKHOV, V.A.; SVETOV, L.V.; SOKHOR, V.; FUKATKO, T.; TSIRAK, Yu.

Angular f-m cyclotron with radial sectors. Zhur. tekh. fiz. 31 no.10:1253-1261 O '61. (MIRA 14:9)

(Cyclotron)

44436

S/120/62/000/006/002/029
E032/E114

AUTHORS: Zhuravlev, A.A., Kotov, V.I., Myae, E.A., and Oboznyy, V.A.

TITLE: On a method of accelerating electrons in an annular synchrocyclotron

PERIODICAL: Pribory i tekhnika eksperimenta, no.6, 1962, 18-21

TEXT: In the annular synchrocyclotron of the Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute for Nuclear Research) (F. Benda, I. Gabanets, I. Dobiash, A.A. Zhuravlev et al., Zh. tekhn. fiz., v.31, 1961, 1253) the electrons are accelerated by a combination of an induced electric field and a high-frequency field of constant frequency. The induced electric field communicates about 9 eV per revolution to the electrons and is produced by changing the magnetic flux through the vacuum chamber at the rate of 500 c.p.s. The h.f. field is applied over a section of the vacuum chamber having an angular width of 30° and insulated from the remainder of the chamber. The h.f. field is produced by an oscillator described in detail by V.A. Petukhov, I. Gabanets, A.A. Zhuravlev, M. Karmasin et al. (Preprint 572,

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On a method of accelerating electrons... S/120/62/000/006/002/029
E032/E114

1960, OIYaI, Dubna). The function of the h.f. field is to maintain the electrons in the stable orbit and compensate the retarding effect of the electric field which is produced when the magnetic flux changes sign, so that the accelerated bunch remains at a constant radius. The h.f. field is switched on at the end of each cycle of the induced field and then switched off as soon as the next cycle begins. The h.f. pulse is switched off just before the beginning of injection, so as to exclude the effect of the h.f. field on the capture of electrons into the inductive acceleration regime. Experimental tests carried out on the machine have yielded results which are in agreement with theoretical calculations based on the work of K.R. Symon and A.M. Sessler (CERN, Symposium, v.1, 1956, 44).
There are 6 figures.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy
(Joint Institute for Nuclear Research)

SUBMITTED: February 20, 1962

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44437

S/120/62/000/006/003/029
E032/E114

24.6730

AUTHORS: Zhuravlev, A.A., Kotov, V.I., Myae, E.A., Oboznyy, V.A., Obukhov, Yu.L., and Fisher, E.

TITLE: The capture of electrons into the inductive acceleration regime in the annular synchrocyclotron

PERIODICAL: Pribory i tekhnika eksperimenta, no.6, 1962, 21-24

TEXT: The authors report a series of experimental results on the capture of electrons into the inductive acceleration regime in a new type of accelerator, namely, the annular synchrocyclotron. The conditions of capture of electrons in this accelerator differ from those in a betatron (time independent magnetic field, strong focusing). The experiments were carried out on the annular synchrocyclotron of the Ob'yedinennyy institut yadernykh issledovaniy (Joint Institute for Nuclear Research) which was described by P. Benda, I. Gabanets, I. Dobiash, A.A. Zhuravlev et al. (Zh. tekhn. fiz., v.31, 1961, 1253). In the first series of experiments a determination was made of the number of accelerated electrons as a function of the number of electrons completing the first orbit. The second series of experiments was

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concerned with the effect of the radial distance Δ from the centre of the cathode to the edge of the injector on the capture process. In all cases the measurements were carried out with and without "forcing", i.e. the presence of an additional induced electric field (c.f. the reference quoted above). The results were as follows: the electron capture coefficient in the single electron capture region was 0.5%, and in the collective capture region 2.5-3.5%. It was also found that the magnitude of Δ in the presence of "forcing" may be increased to 3.5, while in the absence of "forcing" the effect of Δ on the number of captured particles becomes significant at lower values of Δ. Finally, a plot was obtained of the number of captured particles as a function of the position of the "forcing" pulse relative to the centre of the injection pulse. It was concluded from the form of this curve that the optimum capture conditions correspond to the tail of the injection pulse. There are 5 figures.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute for Nuclear Research)

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SUBMITTED: February 20, 1962

39813
S/057/62/032/008/001/015
B104/B102

24.6730

AUTHORS: Zhuravlev, A. A., Ivanov, I. N., Karmasin, M., Kotov, V. I., Myae, E. A., Obozn[illegible], V. A., Obukhov, Yu. L., and Petukhov, V. A.

TITLE: Study of the particle motion in a ring synchrotron

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 32, no. 8, 1962, 905 - 913

TEXT: The perturbed equation of free particle oscillations in a synchrotron (ZhTF, no. 10, 1253, 1961) is derived in the following form:

$$\xi'' + (A_{0\xi} + A_{1\xi}\cos N\theta + A_{2\xi}\cos 2N\theta)\xi = \\ = (\delta F_{0\xi} + \delta F_{1\xi}\cos N\theta + \delta F_{2\xi}\cos 2N\theta)\Delta\chi. \quad (10).$$

ξ is the deviation of the particles from an orbit,

$$\delta F_x \simeq -\alpha r_1 [1 + (k+2) q_1 \cos N\theta]\Delta f(\theta),$$

and

$$\delta F_z \simeq (A_{0z} + A_{1z}\cos N\theta + A_{2z}\cos 2N\theta)\Delta z(\theta),$$

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