

ZHURBITSKIY, Z.I., doktor biolog. nauk; SHTRAUSBERG, D.V., kand. biolog. nauk

Theoretical basis of the control of mineral nutrition of plants;
conference in Moscow. Vent. AN SSSR 35 no.4:102-104 Ap '65.
(MIRA 18:6)

ZHURBITSKIY, Z.I.

Physiological characteristics of mineral nutrition of plants.
Zemljiste biljka II no.1/3:387-404 '62.

1. Institut fiziologii rasteniy im. K.A. Timiryazeva A.N.
SSSR.

VAKHMISTROV, D.B.; ZHURBITSKIY, Z.I.

Extent of the selective absorption capacity of plants for the
elements of mineral nutrition. Dokl. AN SSSR 151 no.5:1228-1231
Ag '63. (MIRA 16:9)

1. Institut fiziologii rasteniy im. K.A.Timiryazeva AN SSSR.
Predstavleno akademikom A.L.Kursanovym.
(Plants--Nutrition) (Minerals in plants)

ZHURBITSKIY, Z.I., otv. red.; GENKEL', P.A., red.; GUNAR, I.I.,
red.; POTAPOV, N.G., red.; KRASIL'NIKOVA, G.V., red. izd-va;
GUS'KOVA, O.M., tekhn. red.

[Physiological basis for the plant nutrition system] Fizio-
logicheskoe obosnovanie sistemy pitaniia rastenii. Moskva,
Izd-vo "Nauka," 1964. 339 p. (MIRA 17:3)

1. Akademiya nauk SSSR. Institut fiziologii rasteniy.

ZHURBITSKIY, Zenon Iosifovich, doktor biol. nauk; LEONOVA, T.S.,
red.; RAKITIN, I.T., tekhn.red.

[Tagged atoms and plant growing] Mechenye atomy i rastenievodstvo. Moskva, Izd-vo "Znanie," 1963. 31 p. (Novoe v zhizni, nauke, tekhnike. V Seria: Sel'skoe khoziaistvo, no.23) (MIRA 17:1)
(Plants--Nutrition) (Radioactive tracers)

ZHURBITSKIY, Z.I.

Scientific and practical recommendations for the cultivation of
field crops in the Far North. Probl. Sev. no.6:172-177 '62.
(MIRA 16:8)

1. Institut fiziologii rasteniy imeni Timiryazeva AN SSSR.
(Russia, Northern--Field crops)

ZHURBITSKIY, Z.I.; SHTRAUSEBERG, D.V.

Foliar diagnosis of nitrogen and potassium requirements in the tea plant. Fiziol. rast. 10 no.3:377-382 My-Je '63. (MIRA 16:6)

1. K.A. Timiriazev Institute of Plant Physiology, U.S.S.R. Academy of Sciences, Moscow.

(Tea--Fertilizers and manures) (Plants--Chemical analysis)

ZHURBITSKIY, Z.I.; SOKOLOVA, L.A.

Growing cucumbers in water cultures. Fiziol. rast. 9 no.5:639-648
'62. (MIRA 15:10)

1. K.A.Timiriazev Institute of Plant Physiology, U.S.S.R.Academy
of Sciences, Moscow.
(Cucumbers) (Hydroponics)

ZHURBITSKIY, Z.I., prof.; PETERBURGSKIY, A.V., prof.

Immediate tasks in the field of agricultural chemistry.

Vest. AN SSSR 32 no.11:76-79 N '62.

(MIRA 15:11)

(Agricultural chemistry--Research)

ZHURBITSKIY, Z.I.

Theoretical basis of the use of nitrogen fertilizers. Izv.AN
SSSR.Ser.biol. no.5:660-667 S-0 '62. (MIRA 15:10)

1. Institut fiziologii rasteniy imeni K.A.Timiryazeva AN SSSR.
(NITROGEN FERTILIZERS)

ZHURBITSKIY, Z.I.

Physiological characteristics of mineral nutrition in plants.
Izv. AN SSSR, Ser.biol. no.6:835-847 N-D '61. (MIRA 14:11)

1. Institute of Plant Physiology, Academy of Sciences of the
U.S.S.R., Moscow.

(PLANTS---NUTRITION)

ZHURBITSKIY, Z.I.

Conference on ~~the~~ problem "Root nutrition in the metabolism and
productivity of plants." Izv. AN SSSR. Ser. biol. 26 no.5:821-823
S-0 '61. (MIRA 14:9)

(PLANT PHYSIOLOGY--CONGRESSES)

ZHURBITSKIY, Z.I., doktor biolog.nauk

Soilless cultures for vegetable growing. Vest. AN SSSR 32
no.5:70-74 My '62. (MIRA 15:5)
(Plants--Soilless culture)

ZHURBITSKIY, Z.I.; KHUAN, V.N.

Effect of the concentration of nutrient solutions on the absorption
of mineral nutrients by plants. Fiziol.rast. 8 no.5:587-595 '61.
(MIRA 14:10)

1. Timiriazev Institute of Plant Physiology, U.S.S.R. Academy
of Sciences, Moscow.

(Plants—Assimilation)

ZHURBITSKIY, Z.I.

Root feeding of plants. Vest. AN SSSR 31 no. 6:95-97 Je '61.
(MIRA 14:6)

(Plants--Nutrition)

ZHURBITSKIY, Zenon Iosifovich, doktor biolog.nauk; GLAZUNOVA, N.I., red.;
NAZAROVA, A.S., tekhn.red.

[Plant nutrition] Pitanie rastenii. Moskva, Izd-vo "Znanie,"
1961. 29 p. (Narodnyi universitet kul'tury: Fakul'tet sel'sko-
khosiaistvennyi, no.15)
(Plants--Nutrition)

(MIRA 14:12)

LEBEDYANTSEV, Aleksandr Nikandrovich, prof., doktor biolog.nauk, zaslu-
zhennyy dayatel' nauki i tekhniki [1878-1941]; ASKINAZI, D.L.;
~~ZHURBITSKIY, Z.I.~~; REMIZOV, S.A.; SAMOYLOVA, A.Ya.;
LEBEDYANTSEVA, O.N., red.; DOLGOPOLOV, M.I., red.; BALLOD, A.I.,
tekhn.red.

[Selected works] Izbrannye trudy. Moskva, Gos.isd-vo sel'khoz.
lit-ry, 1960. 567 p. (MIRA 14:1)
(Fertilizers and manures)

ZHURBITSKIY, Z.I.; KHUAN VEY-NAN' [Huang Wei-nan]

Influence of aerial plant organs on P^{32} absorption by the root system.
Fiziol. rast. 6 no.5:522-526 S-O '59. (MIRA 13:2)

I.K.A. Timiryazev Institute of Plant Physiology, U.S.S.R. Academy of
Sciences, Moscow.

(Plants--Assimilation)
(Phosphorus--Isotopes)

ZHURBITSKIY, N.I.

Physiological principles of growing plants in soilless cultures
(hydroponics). Izv. AN SSSR, Ser. Biol. no.4:561-576 J1-Ag '64.
(MIRA 17:10)

1. Institut fiziologii rasteniy im. Timiryazeva AN SSSR.

ZHURDEN, Anri [Jourdain, H.].

For cooperation with all trade unions. Vsem.prof.dvish. no.9:
22 S '56. (MLRA 9:11)

(Trade unions)

Electrical production of aluminum-silicon alloys. K. P. Natarhev and A. I. Zhuridin. *Moscow 1933*, No. 2, 66-77. — Mixts. of bauxite with quartz sand or with kaolin were electrolyzed in a cryolite bath to produce Al-Si alloys of any desired content. up to 27% Si by varying the SiO_2 content in the bath. Micrographs showed the modified structure in every case. The authors suggest the use of kaolin to partially replace bauxite in the manuf. of these alloys. Diagrams of the $\text{NaAlF}_6\text{-SiO}_2$ and $\text{NaAlF}_6\text{-Al}_2\text{O}_3\text{-SiO}_2$ systems indicate a soly. of SiO_2 of about 3% in these systems. H. W. K.

ZHURDO, YE. N.

Anatomy- Study and Teaching

First lesson on the anatomy and physiology of man (grade 8) Ye. N. Zhudro. Est. v shkole
No. 3, 1952

Monthly List of Russian Accessions, Library of Congress September, 1952 Unclassified

ZHUREK, V.

Commenting on T.A. Frolova's work "Structural unevenness of cotton yarn and roving." Izv.vys.ucheb.zav.; tekhn.tekst.prom. no.3:158-159
1960. (MIRA 13:7)

1. Lodzinskiy politekhnicheskiy institut.
(Cotton yarn)

ZHUREK, Witold [Zurek, Witold], dots. (Polsha)

Classification of Sudan cotton. Tekstilna prom 11 no.2:6-8 '62.

ZHUREK, V.

Nonuniformity of thinness in fibers and yarns and their mechanical properties. Izv.vys.ucheb.zav.; tekhn.tekst.prom. no.6:26-34 '60.
(MIRA 14:1)

1. Lodzinskiy politekhnicheskii institut.
(Textile fibers--Testing)

MEYSTER, V.A., kand.tekhn.nauk; ZHUREK, Ya., inzh.

Fixing the height of the dumping of rock for the arrangement
of rock fill. Trudy Lab.gidr.sooruzh. VODGEO no. 4:55-58 '63.
(MIRA 17:6)

ZHUREK, Ya., inzh.

Compression properties of gravelly soils and problems of
the deformability of rock fill under great stress. Trudy
Lab. gidr.sooruzh. VODGEO no. 4s41-54 '63. (MIFA 17:6)

ZHUREK, Yanush

Deformability of large-rubble ground under great loads. Trudy
VODGEO no. 11:10-17 '65 (MIRA 19:1)

ZHURENKO, A.N.

Comparison of barometric pressure differences with the course and
outcome of cardiovascular diseases in Kiev. Vrach. delo no.1:18-26
Ja 162. (MIRA 15:2)

1. Kafedra nervnykh bolezney (zav. - zasluzhennyy deyatel' nauk,
prof. D.I.Panchenko) Kiyevskogo instituta usovershenstvovaniya vrachey.
(ATMOSPHERIC PRESSURE__PHYSIOLOGICAL EFFECT)
(KIEV__CARDIOVASCULAR SYSTEM__DISEASES)

ITIN, L.M., inzh.; ZHURENKOVA, N.P., inzh.; KRIVITSKIY, Z.M., inzh.

Use of clay mixers for the preparation of pulp at a keramsit
plant. Stroi. mat. no.11:12-14 N '65. (MIRA 18:12)

ZHURENKO, Yu. Ye.

Surface karst in the southern cis-Ural region within the borders of
the Obshchiy Syrt. Vop. geomorf. i geol. Bashk. no.1:33-37 '57.
(Obshchiy Syrt--Karst) (MIRA 11:4)

ROZHDESTVENSKIY, A.P.; ZHURENKO, Yu.Ye.

Division of the southwestern part of Bashkiria into geomorphological
regions. Vop.geol.vost.okr.Rus.platf. i Uzh. Urala no.1:119-123 '58.
(MIRA 12:4)

(Bashkiria--Geology, Structural)

ZHURENKO, Yu.Ye.

Methods for compiling maps of river-bed gradients for the study
of recent tectonic movements. Vop. geomorf. i geol. Bashk.
no. 2:63-68 '59. (MIRA 14:4)

(Rivers--Maps) (Geology, Structural)

ZHURENKO, Yu.Ye.

Results of geological and geomorphological studies of crustal
Holocene movements in central Bashkiria. Vop. geomorf. i
geol. Bashk. no. 2:54-57 '59. (MIRA 14:4)
(Bashkiria—Geology, Structural)

ROZHDDESTVENSKIY, A.P., otv.red.; VAKHRUSHEV, G.V., red.; ZHURENKO, Yu.Ye., red;
OLLI, A.I., prof., red.; SEMCHENKO, G.S., red.; POROYKOV, Yu.D.,
red.; KOBYAKOV, I.A., tekhn.red.

[Geomorphology and recent tectonics of the Volga-Ural region and
the Southern Urals] Geomorfologiya i noveishaya tektonika Volgo-
Ural'skoi oblasti i Yuzhnogo Urala; trudy. Ufa. Akad.nauk SSSR,
Bashkirskii filial. Gorno-geol.in-t, 1960. 347 p.

(MIRA 14:1)

1. Soveshchaniye po geomorfologii i neotektonike Volg-Ural'skoy
oblasti i Yuzhnogo Urala, Ufa, 1959. 2. Direktor Gorno-geologi-
cheskogo instituta Bashkirskogo filiala Akademii nauk SSSR (for
OLLI).

(Volga Valley--Geology, Structural)
(Ural Mountain region--Geology, Structural)

ZHURENKO, Yu. Ye.

Studying tectonic movements of the Holocene in western Bashkiria.
Dokl. AN SSSR 136 no.4:889-891 F '61. (MIRA 14:1)

1. Gorno-geologicheskii institut Bashkirskogo filiala AN SSSR.
Predstavleno akademikom I.P. Gerasimovym.
(Bashkiria—Geology, Structural)
(Terraces (Geology))

ROZHDESTVENSKIY, A.P.; ZHURENKO, Yu.Ye.

Main morphostructures of the central part of the Volga Valley
and Ural Mountain Region. Izv. AN SSSR. Ser. geog no.1:17-
23 Ja-F '62. (MIRA 15:2)

1. Gorno-geologicheskoy institut Bashkirskogo filiala AN
SSSR.

(Volga Valley--Geomorphology)
(Ural Mountain Region--Geomorphology)

ZHURENKOV, F.V.

New method of setting disks for chamfering the edges. Sel'khozmasbina
no.4:31 Ap '54. (MLRA 7:5)

(Metal cutting)

ZHURENKOV, F.V.

Reducing waste from the stamping of disks to scrap of the maximum
permissible size. Sel'khozmaschina no.2:30 F '54. (MIRA 7:2)
(Scrap metal.)

ZHURENKOV, P.V.

Reconditioning of cutting dies for disks. Sel'khozmaschina no.2:
30 P '54. (MLRA 7:2)

(Dies (Metal working))

ZHURENKOV, F.V.

Special mechanical chain hoist. Sel'khoz mashina no.9:3 of cover
(MIRA 7:9)

S '54.

(Hoisting machinery)

ZHURENKOV, F.V.

Utilizing the tolerance on the dimension of the article in reconditioning the blanking tool. Sel'khoz mashina no. 4:31 4p '54.
(MLEA 7:5)

(Punching machinery)

1. ZHURENKOV, F. V.

2. USSR (600)

4. Wrenches

7. Special brace wrench for assembling of machines. Sel'khoz mashina no. 11, 1952.

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

KOVCHIN, M.A.; BOBROVSKIY, N.M.; ZHURENKOV, F.V.

Zigzag corrugated joint fasteners for strengthening boards. Sel'khozmaschina
(MLRA 6:11)
no.11:30 N '53. (Nails and spikes)

ZHURENKOV, F.V., inshener.

~~GT-2 tractor~~ ridging plow. Sel'khozmaschina no. 5:15-16 My '56.
(MLRA 9:8)

(Flows)

ZHURENKOV, F.V.

ZKK-6A triple gang tube roller. Sel'khozmaschina no.2:9-10 F '57.
(Rollers (Earthwork)) (MLRA 10:4)

KUKUSHKIN, A.G.; ZHURENKOV, F.V.

Automatic machinery for making zigzag joint fasteners. Sel'khozmaschina no.
11:30-31 N '53. (MLHA 6:11)
(Coiffing machines)

ACCESSION NR: AP4012430

AUTHORS: Zhurenkov, P.M.; Yegorshina, T.V.; Golikov, I.N.

TITLE: Dendritic segregation in 35KhGSA steel

SOURCE: Metalloved. 1 term. obrab. metallov, no. 2, 1964, 25-28

TOPIC TAGS: 35KhGSA steel, chromium, manganese, silicon, dendritic segregation, coring, microsegregation

ABSTRACT: The present work is devoted to determining the quantitative characteristics of coring chromium, manganese and silicon, using an electron microscope. In order to avoid the absorptive effect of characteristic rays and the secondary fluorescent emission in the specimen, a control sample, prepared from the same steel, was used for standardization purposes. Uniformity as to composition was attained by welding the ingot (diameter 150 mm.) to a bar (8 mm. diameter), by diffusion annealing at 1250C for 24 hrs., and subsequent normalizing at 860C. Results of some determinations of

Card 1/3

ACCESSION NR: AP4012430

chromium and manganese content in one control were compared with a calculation of content of these elements in pure metal, introducing a correction in fluorescent excitation of chromium and manganese atoms by iron atoms. Results of determining the content of components of alloys in dendrite areas by microanalysis are provided which indicate that there is not a substantial variation in degree of vertical coring in the ingot. With respect to the ingot cross section, the degree of coring is not constant. A great difference in the cooling rate of the investment and center zones of the ingot causes an increased degree of heterogeneous distribution of all components of the steel in approaching the ingot center. Chromium and manganese content at the axis of dendrites approach their average content in steel and change little in the ingot cross section. Silicon in the dendrite center is significantly depleted. This depletion increases in the axial zone of the ingot. A maximum degree of coring in the center zone of a 3.5 ton ingot of 35KhGSA steel is 1.90 for chromium, 1.85 for silicon and 1.75 for manganese. Tendency to coring was previously compared in certain elements of the

Card 2/3

ACCESSION NR: AP4012430

Fe-C-X ternary alloys (where X is the component) and in steel, alloyed with several elements in common. The order of decrease in degree of liquation in the series of elements Mo, Cr, Si, Mn, Ni from left to right in ternary alloys is maintained during joint alloying, although the amount of degree of coring changes. Orig. art. has: 4 figs. 1 table.

ASSOCIATION: TsNIICbM

SUBMITTED: 00

DATE ACQ: 03Mar64

ENCL: 00

SUB CODE: ML

NO REF SOV: 007

OTHER: 004

Card 3/3

ZHURENKOV, P.M.; YEGORSHINA, T.V.; GOLIKOV, I.N.

Investigating dendritic liquation in alloy steels by the method
of local X-ray spectral analysis. Lit. proizv. no.11:21-22
N '64. (MIRA 18:8)

GROMOVA, G.P.; ZHURENKOV, P.M.; LIKHNOVA, I.V.

Revealing the primary structure of steel by the color metallography
method. Sbor. trud. TSNIICM no.32:100-102 '63. (MIRA 16:12)

ZHURENKOV, P.M.; YEGORSHINA, T.V.; GOLIKOV, I.N.

Dendritic segregation in 35KhGSA steel. Metalloved. i term.
obr. met. no.2:25-28 F*64 (MIRA 17:7)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy
metallurgii imeni Bardina.

ZHURENKOV, P.M. (Moskva); YEGORSHINA, T.V. (Moskva)

Dendritic heterogeneity and chemical composition of carbides
in cast EI481 steel. Izv. AN SSSR Met. i gor. delo no.2:
105-109 Mr-ap'64. (MIRA 17:8)

ZHURENKOV, P.M.; GOLIKOV, I.N.

Dendritic segregation of alloying elements in structural steel. Metalloved. i term. obr. met. no.5:38-40 My '64.
(MIRA 17:6)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.

ZHURENKOV, P.M.; GOLIKOV, I.N.

Using microspectral and local X-ray spectrum analyses for the
investigation of dendritic liquation. Sbor. trud. TSNIICM
no.38:22-28 '64. (MIRA 18:3)

ACCESSION NR: AP4029834

8/0279/64/000/002/0105/0109

AUTHOR: Zhurenkov, P. M. (Moscow); Yegorshina, T. V. (Moscow)

TITLE: On the dendrite inhomogeneity and chemical composition of the carbides of EI-481 cast steel

SOURCE: AN SSSR. Izv. Metallurgiya i gornoye delo, no. 2, 1964, 105-109

TOPIC TAGS: x-ray analysis, EI-481 steel, carbide, dendrite, liquation

ABSTRACT: The authors state that the application of x-ray microanalysis in the study of steels and alloys in the cast state makes it possible to obtain valuable information on the micro-inhomogeneities of the distribution of alloying elements. The authors provided graduated graphs for determining the quantitative amount of vanadium, chromium, molybdenum, manganese and nickel in the subject steel. Micro-photographs of the dendrite structure were presented. The chemical composition of the carbides in cast steel EI-481 is presented in a table. The presence of a large amount of primary carbides, rich in chromium, vanadium, and molybdenum in the interaxial sectors, masks the true tendency toward dendrite inhomogeneity of these elements. The degree of liquation determined by the ratio of the maximum and minimum solid state concentrations is less than the true tendency of these elements to

Card 1/2

ACCESSION NR: AP4029834

liquates which has led to the formation of the carbides. Orig. art. has: 4 tables and 3 figures.

ASSOCIATION: none

SUBMITTED: 22Apr63

DATE ACQ: 30Apr64

ENCL: 00

SUB CODE: ML

NO REF SOV: 005

OTHER: 004

Card 2/2

BULAT, N.L.; KOROTKOV, V.F.; FAYVILEVICH, G.A.; ZHURENKOV, P.M.

Microspectral analysis. Sbor.trud. TSNIICHM no.31:34-40 '63.
(MIRA 16:7)

(Steel--Metallography) (Steel--Spectra)

LOMONOSOV, Ivan Grigor'yevich, starshiy nauchnyy sotrudnik; ARYKIN,
Ivan Grigor'yevich; VASIL'KOVA, Regina Yevgen'yevich; ZHURENKOV,
Yevgeniy Aleksandrovich; LEBEDEV, Mikhail Petrovich; OVCHINNI-
KOVA, Dina Mikhaylovna; YUZVUK, Vladimir Yefimovich. Prinimali
uchastiye: ARYKIN, I.G., starshiy nauchnyy sotrudnik; YUZVUK, Y.Ye.,
starshiy nauchnyy sotrudnik; LEBEDEV, M.P., starshiy nauchnyy sotrudnik;
OVCHINNIKOVA, D.M., mladshiy nauchnyy sotrudnik; VASIL'KOVA, R.Ye.,
mladshiy nauchnyy sotrudnik; ZHURENKOV, Ye.A., mladshiy nauchnyy sotrud-
nik. ZHURAVLEV, B.A., red.izd-va; PARAKHINA, N.L., tekhn.red.

[Album of designs of dams to be built on timber floating rivers]
Al'bom konstruktsei lesosplavnykh plotin. Moskva, Goslesbumizdat,
1959. 212 p. (MIRA 13:7)

1. TSentral'nyy nauchno-issledovatel'skiy institut lesosplava (for
all, except Zhuravlev, Parakhina).
(Lumber--Transportation) (Dams)

GVOZDOV, S.P.[deceased]; ZHURENKOVA, A.A.

System titanium-hydrogen. Izv. vys. ucheb. av.; chern. met. no.9:
8-13 '60. (MIRA 13:11)

1. Leningradskiy politekhnicheskii institut.
(Titanium--Hydrogen content)

AUTHORS: Gvozdev, S. P., Zhurenkova, A. A. SOV/163-58-3-6/49

TITLE: The Interaction Between Titanium and Hydrogen, Oxygen and Nitrogen (Vzaimodeystviye titana s vodorodom, kislorodom i azotom)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallugiya, 1958, Nr 3, pp 32 - 38 (USSR)

ABSTRACT: The interaction of titanium metal powder with hydrogen, oxygen and nitrogen, as well as the conditions of the maximum absorption of these three gases were investigated. Three types of titanium powder were used:
Sample A 98,58% Ti, 0,3% Fe, 1,12% of insoluble residue.
Sample B 98,73% Ti, 0,26% Fe, 1,07% of insoluble residue.
Sample C 99,03% Ti, 0,03% Fe, 1% of insoluble residue.
The absorption isothermal lines for hydrogen, oxygen and nitrogen were recorded. The interaction between titanium and hydrogen is a complicated process which is accompanied by the formation of solid solutions of hydrogen in titanium:
A = solid solution with 25-35 atom% of H₂ in titanium.

Card 1/4

The Interaction Between Titanium and Hydrogen, Oxygen
and Nitrogen

SOV/163-58-3-6/49

B= solid solution with 32,3 - 65,4 atom% of H_2 in titanium.
Also titanium hydride with the composition $TiH_{1,95}$
was found. The formation of titanium hydride depends
on temperature; at above $500^{\circ}C$ the decomposition of
the hydride begins. In the interaction between titanium
and oxygen it turned out that at room temperature the
absorbed amount of oxygen is 3-10 ml/1 g Ti. When there
is an increase in temperature the absorption of oxygen
increases, and at $800^{\circ}C$ 440 ml of oxygen are absorbed
by 1 g of titanium. The rate of absorption decreases in
dependence on time. The interaction between titanium
and oxygen includes the formation of solutions, the
chemical interaction and the absorption. At a low con-
centration of oxygen and at a low pressure a solution
of oxygen in titanium occurs. At a pressure exceeding
 $1 \cdot 10^{-4}$ torr and at a higher concentration of oxygen a
chemical interaction between titanium and oxygen takes
place. The interaction of titanium and oxygen mainly
takes place at the surface. In investigating the interaction

Card 2/4

The Interaction Between Titanium and Hydrogen, Oxygen
and Nitrogen

SOV/163-58-3-6/49

between titanium and nitrogen it may be seen that at lower temperature nitrogen does not react with titanium. When the temperature is increased from 500 to 800°C the absorption increases under the formation of titanium nitride. The interaction between titanium and nitrogen is a reversible process. Nitrogen diffuses slowly in solid titanium and is distributed unequally among the titanium grains. The surface layer is richer in nitrogen than are the inner layers. The influence of oxygen and nitrogen on the absorption of hydrogen by titanium was investigated. Nitrogen has a greater effect on the absorption of hydrogen in titanium than oxygen; e.g. 1% of oxygen decreases the hydrogen absorbed from 430 ml to 338 ml/1 g Ti. 1% of nitrogen decreases the amount of hydrogen absorbed from 430 ml to 315 ml H₂ of 1 g Ti. The absorption of oxygen and nitrogen is not reversible; oxides and nitrides are formed on this occasion. There are 6 figures.

Card 3/4

The Interaction Between Titanium and Hydrogen, Oxygen
and Nitrogen

SOV/163-58-3-6/49

ASSOCIATION: Leningradskiy politekhnicheskii institut (Leningrad Poly-
technical Institute)

SUBMITTED: December 11, 1957

Card 4/4

20273

18.7530

1145, 1043, 1273

S/148/60/000/009/001/025
A161/A030

AUTHORS: Gvozдов, S.P. (Deceased), and Zhurenkova, A.A.

TITLE: The titanium-hydrogen system

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no. 9, 1960, 8-13

TEXT: The first part of this work had been published in "Nauchnyye doklady vysshey shkoly. Metallurgiya", No.3, 1958; the interaction of titanium with gases was investigated and the experiment equipment and method were described. A more detailed investigation of the system titanium-hydrogen has been done in this part. Data of four works are studied and compared beginning with the work of Z.Kirschfeld and A.Sieverts who in 1929 were among the first who studied the system and obtained a hydride with 407.4 ml in 1 g titanium, with 3.912 density and metallic gloss. G.Hägg found that the homogeneous α phase in hydrides of titanium, zirconium, vanadium and tantalum exists to 33% (at.) H_2 , two phases in the range between 33 and 50% (at.) H_2 , and only one phase, β , at higher hydrogen content up to 62.4% (at.) H_2 . Gibb and Kruschwitz and later Gibb, Sharpy and Bragdon had stud-

Card 1/5

20273

The titanium-hydrogen system

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led the system titanium-hydrogen under low and high pressure and obtained a titanium hydride corresponding TiH_2 with metallic lustre and hardness, and conducting electric current and heat well. The authors used three titanium powder samples: A with 98.58% Ti; E with 98.73% Ti, and B with 99.03%, and stated that "A" and "E" did not absorb hydrogen in perceptible quantity at below $300^\circ C$ and did not form stable compounds, but "B" grade absorbed hydrogen rapidly, particularly at $400-500^\circ C$. Above $700^\circ C$ sorption was smooth and convertible in all Ti grades and it is obvious that dissolved hydrogen is contained in titanium in atomic state. Data from the four works quoted are compared in the diagrams. The following conclusions are made: The process of hydrogen absorption by titanium is dissolution of gas in metal with transition of hydrogen into the crystal lattice in the form of atoms, with a solid penetration solution formation in the result. Chemically pure titanium powder can absorb 465.5 ml hydrogen into 1 g titanium, which corresponds to the formula TiH_2 . Titanium hydride with the formula TiH_2 forms at $400^\circ C$ and 10 mm mercury column hydrogen pressure. Impurities in powder titanium inhibit the formation of the hydride. Small quantities of nitrogen and oxygen make titanium hydride unstable in temperatures above

Card 2/5

The titanium-hydrogen system

20273

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A161/A030

5000. The isotherms of hydrogen absorption and evacuation reveal a hysteresis. The hysteresis loop increases with increasing content of impurities. There are 6 figures and 5 references: 1 Soviet-bloc and 4 non-Soviet-bloc.

ASSOCIATION: Leningradskiy politekhnicheskii institut (Leningrad Polytechnical Institute)

SUBMITTED: 28 March 1960

Card 3/5

The titanium-hydrogen system

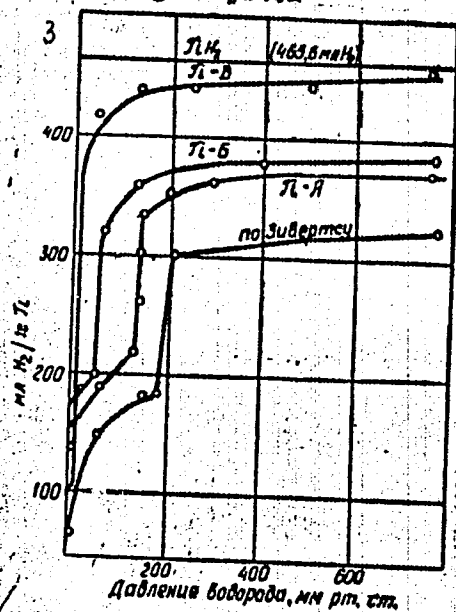


Fig. 3 - The effect of pressure on the absorption of hydrogen by three titanium grades "A", "B" and "C", compared with Sieverts data (the bottom curve). Hydrogen pressure in mm mercury column; absorption in milli-liter per 1 g Ti .

The titanium-hydrogen system

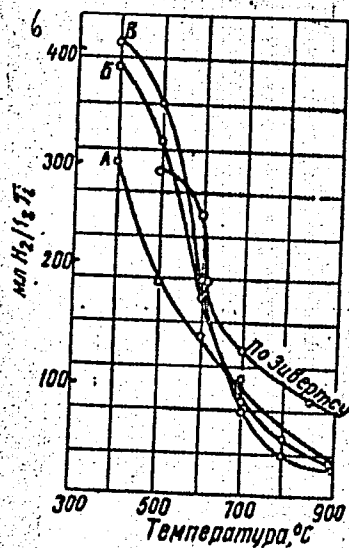


Fig. 6 - Hydrogen absorption isobars in the two-phase region ($\alpha + \beta$). The three titanium grades and Sieverts data.

Card 5/5

GVOZDEV, S.P.; ZHURENKOVA, A.A.

Interaction of titanium with hydrogen, oxygen, and nitrogen.
Nauch.dokl.vys.shkoly; met. no.3:32-38 '58. (MIRA 11:11)

1. Leningradskiy politekhnicheskii institut.
(Gases in metals) (Titanium)

ZHURENKOVA, N.P., inzh.

Advantage of wet preparation of material in the manufacture
of keramsit. Stroi. mat. 10 no.2:20 P '64. (MIRA 17:6)

ZHUREVSKAYA, A.P.

Increasing the smoothness of the motion of a caterpillar wheeled train. Nauch.dokl.vys.shkoly; mash. i prib. no.1:63-72 '59.
(MIRA 12:8)

1. Stat'ya predstavlena kafedroy "Teoreticheskaya mekhanika i teoriya mekhanizmov i mashin" Moskovskogo vechernego mashinostroitel'nogo instituta.

(Caterpillar tractors)

ZHUREVSKIY, D.P.

AUTHOR: ZUEV, M.I., ZHUREVSKIY, D.P., VINOGRAD, M.I., and LYUBINSKAYA, M.A. PA - 2378

TITLE: The Influence of Technological Factors on Contamination of ShKh 15 Steel). (Vliyaniye tekhnologicheskikh faktorov na zagryaznenost' stali ShKh 15, Russian).

PERIODICAL: Stal', 1957, Vol 17, Nr 1, pp 43 - 47 (U.S.S.R.)
Received: 5 / 1957 Reviewed: 5 / 1957

ABSTRACT: A number of factors which are of importance for the soiling of steel ShKh 15 are given without comparing statistical data with those of the investigations carried out for this purpose. (Steel ShKh 15 is a wear-resistant ball-bearing steel of the following chemical composition: 0,95 - 1,1 % C, 0,2 - 0,4 % Mn, 0,15 - 0,35 % Si, 1,3 - 1,65 % Cr, $\leq$ 0,30 % Ni.) A survey of the basic elements of the technology of steel production is given, viz. of the smelting method, of smelting with a fresh layer with boiling, and of the duplex process. The results obtained by current control and those of test melts, as well as the change of impurities in the course of pouring off and according to the height of the casting block are given. It was found that, in order to reduce impurities caused by the inclusion of oxides the following is necessary: 1) The furnace must be well lined and temperature of the metal in the ladle must be kept constant between 1530 and 1580°. 2) In the case of 500 kg blocks fill on an 8 point casting

Card 1/2

ISAKOV, A.A. (Kemerovskaya oblast'); ZHURGARAYEV, Amangal'dy (Dzhambul'skaya obl., KazSSR); VLADIMIROV, A. (Asbest); FRIMAN, L.I. (Yaroslavl'); KILIMNIK, Ya.Ye. (Vinnitsa); TEREKHOV, I.A. (Skopin); AKDAULETOV, N.A. (pos. Mertuk. KazSSR); ZAKHARKIN, V.Ye. (pos. Rudtsev, Tul'skaya oblast'); SHESTOPAL, G.A. (Moskva); KOTIY, O.A. (Yaroslavl'); GAUKHMAN, V.A. (Moskva); LOPSHITS, A.M. (Yaroslavl'); SERGUSHOV, S.A. (Yaroslavl'); GOTMAN, E.G. (Pechora); VETROV, K.V. (Putintsevo, Vostochno-Kazakhstanskoy obl.); MIKHELEVICH, Sh.Kh. (Daugavpils); SKOPETS, Z.A. (Yaroslavl'); RYBAKOV, L.M. (Yaroslavl'); CHEGODAYEV, A.I. (Gavrilov-Yam)

Problems. Mat.v shkole no.6:85-92 N-D '62. (MIRA 16:1)
(Mathematics—Problems, Exercises, etc.)

ZHURGENBAYEV, K.A.; USTIMENKO, B.F.

Calculating the laminar and turbulent heat transfer in hydrointegrator
tubes. Probl. teploenerg. i prikl. teplofiz. no.14230-245 '64.
(MIRA 1849)

111657
S/196/63/000/001/020/035
E073/E435

26.5200

AUTHORS:

Ustimenko, B.P., Zhurgembayev, K.A.

TITLE:

Application of a hydraulic integrator for calculating the convective heat exchange under conditions of the internal problem

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.1, 1963, 4, abstract 1 G21. (Izv. AN KazSSR. Ser. energ. no.1(21), 1962, 95-108, Kaz. summary)

TEXT: The results are described of work on applying the hydrodynamic integrator for calculating the convective heat exchange under conditions of the internal problem. Particular attention is paid to evolving the theory of the instrument. The solution is described of the problem of heat exchange in plane and circular channels for the case of a constant velocity profile ($w = w_{cp}$) and for the case of a laminar flow of the liquid. For boundary conditions were taken either $q_n = \text{const}$ or $\theta_n = \text{const}$ where $\theta_n = t = (t - t_n)/(t_o - t_n)$, t - temperature of the flow, t_w - wall temperature. The results of calculations on a hydro-integrator showed good agreement with the available analytical

Card 1/2

Application of a hydraulic ...

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E073/E435

solutions. It is shown that for the same boundary conditions the heat exchange intensifies on transition to a more blunt velocity profile. For a given value of the velocity profile larger Nu numbers will be obtained for the boundary condition $q_n = \text{const.}$. The results of solutions of the problems of heat exchange in channels of a complicated configuration as well as of the heat exchange under turbulent flow conditions will be published later. 9 references. X

[Abstractor's note: Complete translation]

Card 2/2

8/205/63/000/002/001/012
A052/1126

AUTHORS: Ustimenko, B.P., Zhurgembayev, K.A.

TITLE: Application of a hydraulic integrator to the convective heat exchange calculation under internal problem conditions

PERIODICAL: Referativnyy zhurnal. Otdel'nyy vypusk. 49. Turbostroyeniye, no. 2, 1963, 5, abstract 2.49.23. (Izv. AN KazSSR. Ser. energ. no. 1 (21), 1962, 95 - 108, summary in Kaz.)

TEXT: The solution of the heat exchange problem in a flattened and round channel is given at various velocity profiles and under different boundary conditions. The application of the methods worked out by the authors and of the hydraulic integrator developed by V.S. Luk'yanov gave results close to the known analytical solutions. The methods and the integrator are recommended for the solution of convective heat exchange theory problems involving complex and time-consuming calculations. There are 4 figures and 9 references.

[Abstracter's note: Complete translation]

Card 1/1

BARLYBAYEV, Kh.A.; BUKHMAN, S.V.; ZHURGEMBAYEV, K.A.; USTIMENKO, B.P.;
ATENKOV, S., tekhn. red.

[Some aspects of convective heat transfer in an incompressible fluid (internal problem); Conference on Heat and Mass Transfer, Minsk, January 23-27, 1961] Nekotorye voprosy konvektivnogo teploobmena v neszhimaemoi zhidkosti (vmutrennnaia zadacha); soveshchanie po teplo-i massoobmenu, g. Minsk, 23-27 ianvaria 1961 g. Minsk, 1961. 17 p. (MIRA 15:2)

(Heat-Convection)

(Hydrodynamics)

ZHURGENBAYEV, K. A., USTIMENKO, B. P., BARLYBAYEV, K. A., and BUKHMAN, S. V.

"Some Problems of Heat Transfer by Convection in an Incompressible
Liquid (internal Problem.):

Report submitted for the Conference on Heat and Mass Transfer,
Minsk, BSSR, June 1961.

ZHURGENBAYEV, K. A., BUKHMAN, S. V., BARLYVAYEV, KH. A. and USTIMENKO, B.P.

"Several problems of convective heat-exchange in non-compressed fluid (internal problem)."

Report presented at the 1st All-Union Conference on Heat- and Mass- Exchange, Minsk, BSSR, 5-9 June 1961

USTIMEIKO, B. P.; ZHURGENBAYEV, K. A.; NUSUPBEKOVA, D. A.

"The calculation of convective heat transfer of an incompressible liquid in complex-configuration channels."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Power Inst, AS KazSSR.

1. 13554-66 EMT(1)/ETC(F)/EPF(n)-2/ENG(m) WW/QS
ACC NR. AT6001358

SOURCE CODE: UR/0000/65/000/000/0116/0130

AUTHOR: Ustimenko, B. P.; Zhurgenbayev, K. A.; Nusupbekova, D. A.

ORG: Institute of power engineering, AN KazSSR (Institut energetiki, AN KazSSR)

TITLE: Calculation of the convective heat transfer of an incompressible liquid in intricate-shaped channels

SOURCE: Teplo- i massoperenos. t. 1: Konvektivnyy teploobmen v odnorodnoy sredе (Heat and mass transfer. v. 1: Convective heat exchange in a homogeneous medium). Minsk, Nauka i tekhnika, 1965, 116-130

TOPIC TAGS: heat transfer, turbulent heat transfer, convective heat transfer, thermodynamics

ABSTRACT: Results are presented of the calculations of the resistance and heat transfer in the laminar flow of an incompressible viscous liquid in plane rectilinear and curvilinear channels for various ratios of the heat fluxes on the channel walls. Approximate calculations are also given for turbulent convective heat transfer in channels using a hydrodynamic integrator. The results indicate that as the ratio of the heat fluxes on the walls increases, the maximum of the temperature profile shifts toward the wall having the smaller heat flux. In the case of the laminar circular flow, the dimensionless temperature maximum shifts toward the side of the interior wall as the curvature parameter m increases. Formulas for calculating the Nusselt num-

Card 1/2

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bar are given and curves showing the comparative results of the experimental and theoretical heat transfer calculations are also presented. These results compared quite favorably and thus confirm that a hydrointegrator may be used to compute turbulent convective heat transfer in various intricate-shaped channels. [TN]

SUB CODE: 20/ SUBM DATE: 31Aug65/ ORIG REF: 002/ OTH REF: 005/ ATD PRESS: 4/85

Card

2/2

CA

Filtration of last refinery by-product instead of char filtration of final molasses. A.I. Zhukh. *Nauk. Zapiski Tsvetovoi Prom.* 10, No. 34, 87-90 (1933).—Two expts. were made to establish a more advantageous method for boiling last-strike sugar and treating final molasses. The run-off was boiled directly for sugar and the final molasses was filtered through char filters. The yield of sugar was 20.3% on the wt. of massmucite, purity 89.1 and color 111 Stammer units. The purity of the final molasses was 69.2 and color 105 Stammer units. In the second expt. the run-off was filtered through char filters first and then boiled for last-strike sugar. The yield of sugar was 23.2%, the purity of sugar 89.3 and color 100 Stammer units. The final molasses was concentrated to 81.58 Brix; the purity was 64.88 and color 240 Stammer units. The original purity of the run-off in this case was 68.7 instead of 72.3 as in the first expt. Z. believes that if the purity of the original run-off should be higher an increased yield of sugar would result.
V. E. Baikow

2F

COMMON ELEMENTS
COMMON VARIABLE MOIS

OPEN
NATIONAL MAPS

ASR-SLA METALLURGICAL LITERATURE CLASSIFICATION

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Experiment to obtain hard refined sugar by pressing. G. I. ZHURIK AND S. I. BERMAN. <i>Nauk. Zapiski Tashkent Prom.</i> 13, 177 (1931). <i>copy</i> and hardness of refined sugars can be increased by washing the massculite in centrifugals with 2.4-3.1% of wash liquor (on the wt. of massculite) and by addn. of 1% of sugar powder before pressing the massculite into cubes or tablets. V. E. RAIKOV																																																			
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<i>cs</i> Norit installation at the Khutor-Mikhailovskii sugar refinery. G. I. ZACHNIK <i>Nauk. Zapiski Tsukrovsk Prom. 10, No. 102 (1930).—A description. V. B. BAIKOV</i> <i>28</i>																																																																													
ASIA-SEA METALLURGICAL LITERATURE CLASSIFICATION																																																																													

ZHURID, O.K.; GLADKIY, I.N.; KAL'NINA, I.G.; ZHUCHENKO, V.P.

Obtaini' g high-quality salt by recrystallization. Sbor. nauch.
trud. UkrNIISol' no.7:99-102 '64 (MIRA 18:1)

ZHURID, P. G., ed.

Kurilovich, Adam Petrovich.

The Soviet Tungus Evenki National Okrug Pod red. P. G. Zhurid, Moskva, Gos. izd-vo Standartizatsiia i ratsionalizatsiia, 1934. 178 p. maps. Sovet severa pri Gosplane SSR. Seria ekonomicheskogeopgraficheskikh ocherkov raionov severa SSR At head of title: A. Kurilovich i N. P. Naumov severa SSSR

1. Tungusy. 2. Russia, Asiatic, I. Naumov, N. P., jt. au. 11. Zhurid, P. G., ed.

ZHURIK, L. V.

USSR/Science - Soil Science Fauna, Soil

Oct 49

"Characteristics of Methods for Calculating the Numbers and Sizes of Fauna,"
Ye. I. Shilova, L. V. Zhurik, Chair of Experimental Soil Sci, Leningrad State
U, 7½ pp

"Pochvoved" No 10

Study of available methods for counting various groups of soil fauna--hand picking, washing the soil in sieves, extraction in "Tul'gren's" apparatus--shows sieve method permits fullest count. Hand method counts largest forms, but few of fine numerically predominant forms--Apterygota and Acarina. Extraction method counts Acarina and insect grubs, but not Enchytraeidae, Chironomidae larvae, and Apterygota. All the methods can be used to calculate.

PA 151T107

MART'YANOVA, K.L.; GUBANOVA, Z.P.; ZHURIKHIN, V.K.

Experimental hardening of tomatoes before seeding against droughts
under farm conditions. Fiziol.rast. 8 no.5:638-640 '61.

(MIRA 14:10)

1. Mishurinsk State Pedagogical Institute.

(Central Black Earth Region--Tomatoes)

(Plants, Effect of aridity on)

ZHURIKHIN, Yu., inzh.

The "Aist" glider must take off. Kryl. rod. 14 r.o. 5:8-9 My '63.
(MIRA 16:7)

(Gliders (Aeronautics))

TEREKHOV, B., inzh.-polkovnik; ZHURIKOV, B., mayor

Using machinery in the construction of dirt roads. Voen.-inzh.zhur.
96 no.9:18-25 S '52. (MIRA 12:3)
(Military roads)

117 AND 118 DUBS		PROCESSING AND PROTECTIVE AIDS		119 AND 120 DUBS	
Electrical conductivity of the potassium fluoride-aluminum fluoride and potassium aluminum fluoride-alumina systems. K. Batachev and A. Zhurin. <i>Metalur</i> 10, No. 12, 67-73 (1935).—The elec. cond. of the $KF-AlF_3$ system between 930° and 1050° decreases considerably as the AlF_3 content increases. The cond. of the $K_2AlF_6-Al_2O_3$ system between 900° and 1000° decreases rapidly as the Al_2O_3 content increases. The soly. of Al_2O_3 is slightly greater in K_2AlF_6 than in Na_2AlF_6. $K_2AlF_6-Al_2O_3$ mixes. fuse at a lower temp. than the corresponding $Na_2AlF_6-Al_2O_3$ mixes. H. W. Rathmann					
ASD-35A METALLURGICAL LITERATURE CLASSIFICATION					
117 AND 118 DUBS					

KAS'YANENKO, N., Geroy Sotsialisticheskogo Truda; ZHURIKOV, V., nauchnyy sotr.

Organisation of work of the machine-tractor rolling stock on a collective farm. MTS 18 no.8:11-15 Ag '58

(MIRA 11:9)

1. Brigadir traktornoy brigady kolchoza "Put' k kommunizmu," Kotovskogo rayona, Odesskoy oblasti. (for Kas'yanenko).
2. Institut ekonomiki sel'skogo khozyaystva (for Zhurikov).
(Repair and supply stations)

ZHURIKOV, V.N.

Cand. Econ Sci - (diss) "Reserves of improvement of use of the machine and tractor fleet in kolkhozes." (Moscow Order of Lenin Agricultural Academy imeni K.A. Timiryazev)

(IZvestiya Timiryazevskoy Selskokhozyaystvennoy Akademii - No. 2 (15)
1962, pp. 237-240)

ALFAYSKIY, Ivan Pavlovich; ZHURIKOV, Vladimir Nikolayevich; IVANOVA,
A.H., red.; GOR'KOVA, Z.D., tekhn.red.

[Organizing the use of machinery on collective farms] Organi-
zatsiia ispol'zovaniia tekhniki v kolkhosakh. Moskva, Gos.izd-vo
sel'khoz.lit-ry, 1960. 111 p. (MIRA 13:9)
(Agricultural machinery)

ZHURIKOV, V.N.; IL'IN, M.A.; KRASAVIN, N.N.; PISKUNOV, V.T.;
RUSINOV, I.V.; SUVOROVA, L.I.; TSIKOTO, I.A.;
KONOVALOV, L., red.; MUKHIN, Yu., tekhn. red.

[Reader in agricultural economics] Kniga dlia chteniia po
ekonomike sel'skogo khoziaistva. Moskva, Politizdat,
1963. 287 p. (MIRA 17:1)

ZHURIKOV, Vladimir Nikolayevich; AVETISYAN, Ye., red.; TROYANOVSKAYA, N.,
tekh. red.

[Overall mechanization is the way for agricultural development]
Kompleksnaia mekhanizatsiia - put' razvitiia sel'skogo khoziaistva,
Moskva, Gos.izd-vo polit. lit-ry, 1961. 62 p. (MIRA 15:3)

1. Ministerstvo sel'skogo khozyaystva SSSR (for Zhurikow).
(Farm mechanization)