

GUBERNSKAYA, L.T., red.

[New equipment for the manufacture of paperboard] Novoe
oborudovanie dlia proizvodstva kartona. Moskva, 1963.
47 p. (MIRA 17:9)

1. Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut
informatsii i tekhniko-ekonomicheskikh issledovaniy po les-
noy, tsellyulozno-bumazhnoy, derevoobrabatyvayushchey pro-
myshlennosti i lesnomu khozyaystvu.

YEVSTRATOVA, N.M., student; GUBERNSKAYA, T.N., student; CHURINOVA, L.G., student; BARAMBOIM, N.K., doktor khimicheskikh nauk, prof.

Ion exchanging compositions containing thiol groups.
Nauch. trudy MTILP no.26:35-37 '62. (MIRA 17:5)

1. Kafedra fizicheskoy i kolloidnoy khimii Moskovskogo
tekhnologicheskogo instituta legkoy promyshlennosti.

GUBERNSKIY, YU. D.

AID P - 2457

Subject : USSR/Medicine

Card 1/1 Pub. 37 - 4/18

Authors : Vetoshkin, S. L., Prof., Corr. Mem., Acad. of Med. Sci.,
USSR, Gubernskiy, Yu. D., Sanitary Inspector

Title : Hygienic evaluation of prefabricated dwellings in
regions of virgin and waste land.

Periodical : Gig. 1 san., 6, 15-22, Je 1955

Abstract : Deals with house building on state farms ("sovkhoz")
organized in the Altay Territory in 1954. The authors
consider the prefabricated framework and the boarding
up of these dwellings unsatisfactory in the cold climate
of Altay steppes. A study of room temperatures and of
the effect of temperature conditions on the organism is
presented. On its basis recommendations are made for
the improvement of house structures, as well as for the
better planning of apartments. Diagr.

Institution: Institute of General and Municipal Hygiene, Acad. of Med.
Sci., USSR, and Altay Territorial Medical and Epidemi-
ological Station.

Submitted : March 26, 1955

GUBERUSKIY, Yu. D., aspirant

Hygienic evaluation of operating rooms of surgical sections of
urban hospitals. Gig. i san. 23 no.11:17-22 N '58. (MIRA 12:8)

1. Iz Instituta obshchey i kommunal'noy gigiyeny imeni A.N. Syrina
AMN SSSR.

(HOSPITALS--CONSTRUCTION)

GUBERNSKIY, Yu.D.

Air conditioning in operating rooms. Gig. i san. 24 no.6:
55-58 Je '59. (MIRA 12:8)

1. Iz Instituta obshchey i kommunal'noy gigiyeny imeni A.N.
Sygina AMN SSSR.

(OPERATING ROOMS

air conditioning in operating rooms (Rus))

(VENTILATION

same)

ZOL'NIKOVA, N.I.; SILIVANIK, K.Ye.; GUBERNSKIY, Yu.D.

Organization of the surgical departments of representative hospitals.
Khirurgiia 35 no.8:124-130 Ag '59. (MIRA 13:12)
(SURGERY, OPERATIVE) (HOSPITALS—ADMINISTRATION)

GUBERNSKIY, Yu.D., mladshiy nauchnyy sotrudnik

Hygienic standards for air conditioning in operating theaters.

Gig. i san. 25 no. 6:20-25 Je '60.

(MIRA 14:2)

1. Iz Instituta obshchey i kommunal'noy gigiyeny imeni A.N. Sysina
AMN SSSR.

(HOSPITALS—HEATING AND VENTILATION)

GUBERNSKIY, Yu. D.

Cand Med Sci - (diss) "Materials on the hygienic foundation of standards in air conditioning in operative rooms." Moscow, 1961. 16 pp; (Academy of Medical Sciences USSR); 250 copies; price not given; (KL, 10-61 sup, 224)

GUBERNSKIY, Yu.D.; LAMPERT, F.F.; CHERNAYENKO, T.D.

Conference and seminar on problems of hygienic study of model housing
and hospital construction. Gig.i san. 28 no.1:115-116 Ja'63.

(MIRA 16:7)

(ARCHITECTURE, DOMESTIC—HYGIENIC ASPECTS)

(HOSPITALS—HYGIENE)

GUBERSHIN, P.P.

[Methods of irrigating cotton plants in checkrows] Tekhnika poliva
khlopchatnika pri kvadratno-gnezdom sposobe vospelyvaniia.
Moskva, Gos.izd-vo selkhoz lit-ry, 1957. 108 p. (MIRA 10:11)
(Irrigation farming) (Cotton growing)

POLAND

GUBERSKA, Jadwiga, mgr; GWIAZDA, Zygmunt, mgr inz.

Institute of Organic Industry (Instytut Przemysłu Organicznego),
Warsaw - (for both).

Warsaw, Chemia analityczna, No 6, November-December 1965, pp 1253-
1259.

"Infrared spectrophotometric analysis of aldrin and dieldrin in a
technical product."

GOBERT, Kleopatra Dem'yanovna; RYSS, Mirra Grigor'yevna; TUR, Aleksandr Fedorovich, red.

[Callisthenics and massage for children] Gimnastika i massazh v rannem vozraste. Pod red. A.F.Tura. Medgiz, 1958. 141 p.
(CALLISTHENICS) (MASSAGE)

GUBERT, K.D.

Extensive use of gymnastics and massage for infants. *Pediatrics*
38 no. 7:55-58 J '60. (MIRA 14:1)
(PHYSICAL THERAPY)

GUBERT, Kleopatra Dem'yanovna; RYSS, Mirra Grigor'yevna; TUR, A.F.,
prof.; LUR'YE, N.A., red.; LEEDEVA, G.T., tekhn. red.

[Gymnastics and massage at an early age] Gimnastika i mas-
sazh v rannem vozraste. Pod red. A.F.Tura. Izd.2., Lenin-
grad, Medgis, 1963. 158 p. (MIRA 16:7)

1. Deystvitel'nyy chlen AMN SSSR (for Tur).
(INFANTS--CARE AND HYGIENE) (EXERCISE THERAPY)

RYABOKON', N.K., inzhener; GUBERT, S.V., inzhener; VINOKUROV, I.Ya.,
inzhener; FEYGIN, G.D., inzhener.

Rolling of reduced-weight I-beams. Stal' 15 no.11:1000-1003
N '55. (MLBA 9:1)

1. Novo-Tagil'skiy metallurgicheskiy zavod.
(Rolling (Metal work)) (Steel, Structural)

SMIRNOV, V.D., inzhener; GABSKON', A.B., inzhener; GUBENK, S.V., inzhener;
VINOKUROV, I.Ya., inzhener; REYGIN, G.D., inzhener.

Experience in rolling lightweight sections. Stal' 16 no.12:1086-1089
D '56. (MLRA 10:9)

1. Novo-Tagil'skiy metallurgicheskiy zavod.
(Rolling (Metalwork))

NARUTSKAYA, L.A., inzhener; GUBERT, S.V., inzhener; RABINOVICH, D.M., inzhener.

Methods of preventing flaking in rolled metal. Stal' 16 no.12:1097-1098
D '56. (MLRA 10:9)

1. Novo-Tagil'skiy metallurgicheskiy zavod.
(Rolling (Metalwork)) (Steel--Defects)

GOBERT, S.V., inzhener; GURFINKEL, G.M.

Adjusting track shoes on roll straightening machines. Stal' 16
no.12:1133-1134 D '56. (MIRA 10:9)

1. Novo-Tagil'skiy metallurgicheskiy zavod.
(Rolling mills)

SOV/123-59-15-59363

Translation from; Referativnyy zhurnal. Mashinostroyeniya, 1959, Nr 15, p 72 (USSR)

AUTHORS; Brazhnikov, N.V., Gubert, S.V., Bondarenko, V.I.

TITLE; Automation Experience of a Rail-Structural Mill

PERIODICAL; Sb. statey. Ural'skiy z-d tyazh. mashinostr. im. S. Ordzhonikidze, 1958, Nr 1, pp 185 - 204

ABSTRACT; The experience of automating the milling machines for the finishing of rails, the mechanisms of the sawing section of the branding machine, the tables in front of the 800 planishing stand and the main drive of this stand as well as the tables, transporting the cold rails from the isothermic soaking pits to the central cooler of the rail mill 800, was examined. Besides, the operation of the fixing device of the cogging mill 900 was automated.

M.G.N.

Card 1/1

AUTHOR: Gubert, S.V.

SOV/130-58-7-14/35

TITLE: Automation of the First Soviet Rail-structural Mill
(Avtomatizatsiya pervogo sovetskogo rel'sobalochnogo stana)

PERIODICAL: Metallurg, 1958, nr 7, pp 29 - 30 (USSR)

ABSTRACT: The author states that in the rolling shop in which the rail-structural mill at the Nizhne-Tagil'skiy Metallurgical Combine is situated, all processes from charging the metal into the reheating furnaces to loading the finished product into wagons are automated and mechanized with the aid of methods unique in rail rolling practice both in the USSR and abroad. He points out that most effort was devoted to the rail finishing line where a high-productivity automatic milling machine (Figure 1) and completely re-designed rail-end heating chambers have been installed. The productivity of the hot-saw installation, previously, a bottleneck, in overall productivity was improved. The productivity of the 2-high finishing stand was raised by automating roller-table working, the main drive and descaling, the presence of the metal in the table being detected with the aid of a photoelectric relay 25 000 mm from the stand. Another photoelectric relay 9 500 mm from the stand serves to slow the rolls by the time the metal leaves them (Figure 2), the initial acceleration

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SCV/130-58-7-14/35

Automation of the First Soviet Rail-structural Mill

being effected in response to a signal from a relay measuring roll static load. Operation of the roller tables conveying rails to the cooler has also been automated as has the screw-down of the 900 two-high reversing billet mill. For the latter, an electronic digital computer (Figure 3) is used. The author states that the works' automation laboratory has made important contributions to the automation of the rail-section mill and names its head (A.S. Bondarenko) as well as others (N.V. Brazhnikov and B.Z. Mordukhovich) as specially helpful. There are 3 figures.

ASSOCIATION: Nizhne-Tagil'skiy metallurgicheskiy kombinat
(Nizhne-Tagil'skiy **Metallurgical Combine**)

Card 2/2 1. Rolling mills--Automation 2. Rails--Production 3. Mathematical computers--Applications

SOV/133-59-1-12/23

AUTHORS: ~~Gubert, S.V.~~, Merekin, B.V. and Feygin, G.D., Engineers

TITLE: An Experience in Rolling with Minus Tolerances (Opyt prokatki na minus)

PERIODICAL: Stal', 1959, Nr 1, pp 54 - 58 (USSR)

ABSTRACT: Measures taken at the above works to roll only with minus tolerances are described. It is pointed out that rolling with minus tolerances leads to an increase in the consumption of power ^{and} rolls and requires special attention from the rolling personnel. Therefore, to stimulate this type of rolling a bonus system for the economy of metal attained should be introduced.
There are 4 figures, 2 tables and 3 Soviet references.

ASSOCIATION: Nizhne-Tagil'skiy metallurgicheskiy kombinat
(Nizhniy Tagil Metallurgical Combine)

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S/133/61/000/002/008/014
A054/A033

AUTHORS: Makayev, S.V., Engineer, Gubert, S.V., Engineer, and Rabinovich,
D.M., Engineer

TITLE: Volumetric Hardening of Rails in an Industrial Pilot Installation

PERIODICAL: Stal', 1961, No. 2, pp. 156-159

TEXT: Under the present operational conditions the service life of rails made of M75 type steels produced without heat treatment is insufficient. The strength of the rails should be increased to 100-120 kg/sq mm and their yield point to 80 kg/ sq mm and up, without deterioration of the plastic properties. This can be obtained either by alloying the rail steels or by a heat treatment consisting of volumetric hardening. Tests carried out at the Nizhne-Tagil Metallurgical Combine gave the following results: The properties of rails made of low-alloy steels without heat treatment were improved only slightly while the production became much more expensive. When the rails were made of alloy steels with a higher chromium and nickel content, their properties improved but the technological difficulties involved also

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S/133/61/000/002/008/014

AO54/A033

Volumetric Hardening of Rails in an Industrial..

raised the cost considerably. Rails made of vanadium steel, (0.30% V) - produced in 380-ton furnaces with top pouring, adding ferro-vanadium into the ladle show better properties than the conventional M75 steel rails:

	σ_s kg/sq mm	σ_B kg/sq mm	δ %	ψ %	a_K kg/sq cm
Vanadium steel	53-64	90-102	5-12	8-26	2.5-4.0
Conventional M75 type steel	48-55	82-95	7-9	15-22	2.0-2.5

Partly due to isothermal treatment of the rails, with small vanadium additions at 600-650°C, the cost of these steel rails is 1.5 times higher than that of M75 steel rails. Tests were also carried out with chrome-vanadium steels (Cr: 2.5-3.2%; V; 0.1-0.2%). For the rails of this alloy - without heat treatment - the following values were obtained:

σ_B kg/sq mm	σ_s kg/sq mm	δ %	ψ %
115-130	70-95	7-10.5	20-55

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Volumetric Hardening of Rails in an Industrial... A054/A033

This steel costs 31 rubles more than the M75 type and the rails made of it are twice as expensive as the conventional ones. However, tests carried out at the NTMK, in 1957-60, proved that rails with the required properties can be obtained from carbon-steel by volumetric hardening in oil with subsequent annealing. For this process a semi-industrial pilot installation has been designed, consisting of a 10-compartment, 50-ton furnace for rapid heating and a unit for oil-hardening. The furnace-compartments are arranged in one line, 1.600 mm apart. The spaces between the compartments are covered with drums under which water-cooled rolls for delivering the rails are mounted. Each compartment has eight two-conduit, short-flame turbulence burners of VNIIMT -design for coke-gas burning. The most uniform heat distribution in the furnace can be obtained by a chess-board arrangement of the burners on the upper and the lower level of each compartment, the thermal load being distributed between the upper and the lower burners at a 88-12% ratio. The furnace is provided with shelves and guiding mechanisms for feeding the rails to and discharging them from the furnace, moreover with control and measuring apparatus, sound and flashlight indicators. Uniform heating of the rails over their whole length can be obtained by continuously moving them forward and backward at a rate of 4 m/min. The hardening container of 30-ton capacity

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Volumetric Hardening of Rails in an Industrial... A054/A033

ity is equipped with oil conduits, air piping for the mixing of oil, supports for the rails, steam pipes for producing a vapour curtain when the oil is combusted. Above the container a welded metal beam construction is suspended. It is supplied with a roller runway and drive for lowering and lifting the beam. On the beam a cover is loosely fitted, which covers the container when the beam is lowered. After hardening the rail is removed by a winch from the beam structure onto a shelf provided with equipment for the removal of oil vapours. A bridge crane then carries it into the furnace for annealing. The uniformity of heating was checked by electronic potentiometers, indicating that the heating of the rails in the furnace is constant. The temperature differential along the rail does not exceed 80°C (50°C on an average), above $900-950^{\circ}\text{C}$ it even decreases to 30°C . The temperature drop can further be reduced by discharging the rails more quickly and making the furnace longer. Fairly uniform properties of the metal can be obtained by hardening the rail head at temperatures above A_3 . The heat treatment is carried out under the following conditions:

Temperature of heating the rail
in the compartment furnace, $^{\circ}\text{C}$

900-920

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S/133/61/000/002/008/014

Volumetric Hardening of Rails in an Industrial... A054/A033

Duration of heating, min	9-11
Holding time in air, sec	30-70
Hardening temperature, in oil, °C	830-850
Oil temperature, during hardening the rail, °C	< 110
Duration of hardening, min	5-6
Annealing temperature, °C	450-480
Holding time for annealing, hours	2

The heat treatment installation ensures such a straightness of the rails which cannot be obtained by any other equipment. Flat bending in vertical and horizontal planes does not exceed 80 mm and no torsion around the longitudinal axis was observed. The rails can be heated at a rate of 2°/sec between 20 and 900°C, despite the presence of screw holes. Cracks formed only after hardening in oil containing much water and when annealing was delayed after hardening. The comparison of characteristics of heat-treated and non-heat-treated rails show that the former are superior, attaining the values found in chrome-vanadium steel rails: ✓

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Volumetric Hardening of Rails in an Industrial... S/133/61/000/002/008/014
A054/A033 ✓

	σ_s kg/sq mm	σ_B kg/sq mm	$\delta\%$	$\psi\%$	a_K kgm/sq cm	d_B mm
volumetric-hardened rails	79.5-97.0	126-131	11-8.3	41.5-33.5	3.7-4.5	3.2-3.3
rails without heat treatment	44.0-45.4	83.5-87	11.7-9.5	15.8-19.2	2.0-2.2	3.9-4.0

The test rails were laid on the Sverdlovsk track, in heavy-duty sectors, in curves, and show great resistance to wear. Equipment for the heat treatment of the total Soviet rail production (1.2-1.5 million tons a year) for rails 25 m long, will be designed. The heat treatment costs about 10 rubles/ton, so that it is much cheaper than using alloyed steels. There are 5 figures and 2 Soviet references.

ASSOCIATION: Nizhne-Tagil'ski'y metallurgicheskiy combine (The Nizhne-Tagil Metallurgical Combine)

Card 6/8

FITILEV, B.V.; GUBERT, S.V.; OSIPOV, A.I.

Prospects for expanding the continuous casting of steel. Stal'
23 no.10:889-892 0 '63. (MIRA 16:11)

1. Gosudarstvennyy komitet po chernoy i tsvetnoy metallurgii pri
Gosplane SSSR, Gosudarstvennyy soyuznyy institut po proyektiro-
vaniyu metallurgicheskikh zavodov i Tsentral'nyy nauchno-issledo-
vatel'skiy institut chernoy metallurgii.

MANTSEV, R.M.; GUBERT, S.V.; CHARIKHOV, L.A.; VOSKOBOYNIKOV, V.G.; STOSHA,
Ye.A.

For an overall mechanization and a widespread automation in metallurgy.
Metallurg 9 no.6:1-3 Je '64. (MIRA 17:9)

1. Direktor Gosudarstvennogo soyuznogo instituta po proyektirovaniyu agregatov staleliteynogo i prokatnogo proizvodstva dlya chernoy metallurgii (for Mantsev).
2. Direktor Gosudarstvennogo soyuznogo instituta po proyektirovaniyu metallurgicheskikh zavodov (for Gubert).
3. Glavnyy inzh. Tsentral'noy laboratorii avtomatiki (for Charikhov).
4. Zamestitel' direktora Instituta novoy metallurgicheskoy tekhniki Tsentral'nogo nauchno-issledovatel'skogo instituta chernoy metallurgii im. I.P. Bardina (for Voskoboynikov).
5. Zamestitel' direktora Vsesoyuznogo nauchno-issledovatel'skogo i projektirovokonstruktorskogo instituta metallurgicheskogo mashinostroyeniya (for Stosha).

GRITSUK, N.F.; FEDIN, V.P.; GUBERT, S.V., inzh.; RUTUS, M.V., inzh.

Bock reviews. Stal' 25 no.6:551-552; 565 Je '65.

(MIRA 18:6)

1. Gosudarstvennyy soyuznyy institut po proyektirovaniyu metallurgicheskikh zavodov (for Gubert, Rutus).

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 10,
pp 144-145 (USSR) 15-57-10-14278

AUTHOR: Gubert, Zh. K.

TITLE: Iron Ores in the Union of South Africa and in South-
western Africa (Zheleznyye rudy Yuzhno-Afrikanskogo
Soyuza i Yugo-Zapadnoy Afriki)

PERIODICAL: V sb: Zhelezorud. mestorozhdeniya mira. Vol 1, Moscow
Izd-vo in. lit. 1955, pp 165-200

ABSTRACT: The ores of all the larger deposits consist of limonite,
siderite, hematite and magnetite. From the point of
view of iron production, large reserves of chromium
and manganese are of interest. They are characterized
by their high iron content as compared with chromium
and manganese, the latter being found in braunite and
jacobsite. The possibility of extracting titanium
from the iron ore rich in this element was investigated

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15-57-10-14278

Iron Ores in the Union of South Africa (Cont.)

The following genetic classification of iron locations was adopted: magmatogenic (magmatic segregations, contact-metosomatic deposits and vein occurrences), depositional occurrences of replacements and secondary concentration (Upper Lake type) and, finally, laterites, iron caps and other surface formations. The article subdivides the ores into iron ores proper containing SiO_2 , P, S, Ti, Mn, and CaO, and into chrome-iron ores, manganese-iron ores and titanium-iron ores. The industrial and economic aspect of the iron occurrence is briefly described. Of economic significance are the concentrations of rich hematite-magnetite ores, titanium-bearing ores, banded iron deposits, itabirites, gray iron ores, iron bearing sandstones, ochres, limonites, iron spar and cemented black sands. The main occurrences (in descending order of importance) are: **Thabazimbi** (under operation), Pretoria-Townlands (extraction temporarily suspended), Zishen (ready for exploitation), Prestwick (in operation), Early, Malalane, **Koekoveld** (southwestern Africa), Postmasburg (large reserves of iron and manganese ores) and Bushveld (giant or

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15-57-10-14278

Iron Ores in the Union of South Africa (Cont.)

large reserves of titanium-bearing iron and chrome ores). Genetic types of these sources are briefly described. Ore fields of Tabazimbi and Postmasburg are associated with the Upper Lake type. According to the author, the Postmasburg complex originated as a result of hydrothermal metamorphism of deposits. The question is posed of the nature of regional hydrothermal activity which is not related to the active magmas. Iron-manganese ores of Otzhonsundu and itabirites of Windhoek and Wolfish-Bay are of the metamorphosed sedimentary type. Sedimentary deposits originated as a result of two processes--the chemical and the mechanical concentration. Titanium-bearing iron and chromite ores of the Bushveld complex are associated with the type of magmatic segregations. Not a single one of the genetic concepts has been proven. Geological and structural features of the individual occurrences and of their industrial-economic value are presented in three appendixes, each of which represents an independent article. The exploited deposits of ~~Tabazimbi~~ are the banded iron ores and hornblendes of the Precambrian dolomites of the Transvaal series, which are penetrated by gabbro and granites

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15-57-10-14278

Iron Ores in the Union of South Africa (Cont.)

of the Bushveld magmatic complex. Some of the extracted hematite ores contain no less than 57 percent of iron and no more than 15 percent of SiO_2 . Potential reserves of such ores in Thabazimbi comprise approximately 14 million tons, while the total reserves of the entire ore-bearing areas reach 72 million tons. The Zishen location is related to the Criquestown series, which consists (from bottom upward) of banded iron deposits, yashmas and tillites. The series is represented by siliceous breccias containing manganese, and by dolomites which are stratigraphically correlated with the dolomites of the Transvaal series. Rocks of the Criquestown series occur in flat brachianticlinal and brachisynclinal folds. Intrusive rocks are represented by dolerite. The deposits were produced as a result of the secondary enrichment of iron-bearing sediments from which silica and alumina were removed. Three types of hematite ores are: common-banded iron ores, iron-bearing conglomerates, and iron-bearing basic shales. Proven resources of ore comprise 160 million tons, while proven and suspected ones total 300 million tons.

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Iron Ores in the Union of South Africa (Cont.)

15-57-10-14278

tons. Geologically, the ores of the Postmasburg are similar to those of Zishen. Total resources of this locality are estimated at 1,000 tons. Iron producing localities of southwestern Africa are sedimentary (Kawas, Okava, Gagapye, Kookoveld, Gazeneirab, southwestern Windhook, Wolfish-Bay, Otzhosondou, in the Ketmanskhon region) and the metasomatic (Kalfeld and Okopusu). Geological aspects and qualitative description of the ore are briefly presented, as are the estimates of ore reserves in each locality; these estimates ranging from the tens to the hundreds of millions of tons

Card 5/5

Z.A. Makayeva

VERBEV, P.E.; GUBEV, B.; KARACHOLEV, I., & MONEV, V.N.

Some problems concerning the incidence of epidemic hepatitis in Bulgaria. Nauch. tr. vissh. med. inst. Sofia 41 no.8:23-34 '62.

1. Predstavena ot prof. P. Verbev, rukovod. na Katedrata po epidemiologiya i infektsiozni bolesti pri VMI [Vissh meditsinski institut] - Sofia.
(HEPATITIS, EPIDEMIC)

GUBEV, E., KHADZHIDINOVA, D.

"The Problems of Serum Disease In The Quarantine Ward in Sofia. p. 31" (ZDRAVNO DELO)
Vol. 6, No. 6, Dec. 1952, Sofiya, Bulgaria.

SO: Monthly List of East European Accession L.C. Vol. 2, No. 11, Nov. 1953, Uncl.

VESELINOV, V.; GUBEV, E.

Synanthropic flies as an epidemiologic factor in intestinal infections. Nauch. tr. Vissh. med. inst. Chervenkov, Sofia 2 no.4:29-44 1956.

1. Predstavena ot prof. P. Verbev, zavezhdashch Katedrata po epidemiologia i infekts. bolesti.

(GASTROINTESTINAL DISEASES, transmission,
by flies (Bul))

(FLIES,
transm. of intestinal infect. (Bul))

VERBEV, P.; GUBEV, E.

Experiences with insecticidal practice. Nauch. tr. Vissh. med.
inst. Chervenkov, Sofia 2 no.4:45-69 1956.

1. Predstavena ot prof. P. Verbev, zavezhdashch Katedrata po
epidem. i infektsiozni bolesti.

(INSECTS,

cockroaches eradication with DDT (Bul))

(DDT, effects,

cockroaches eradication (Bul))

GUBEV, E.

"Some studies of the disinfection of the air."

IZVESTIIA, Sofia, Bulgaria, No. 3, 1957.

Monthly list of East Europe Accessions (EEAI), LC, Vol. 8, No. 6, ^{Sept}~~Jun~~ 59
Unclas

VERBEV, P.; ZHELIAZKOV, S.; GUBEV, E.; MONEV, V.; PETROV, G.;
KHADZHIKOLEVA, Khr.

Influenza in Sofia during 1959. Suvrem med., Sofia no.2:31-36 '61.

1. Katedra po epidemiologija i infektsiozni bolesti pri Visshia
meditsinski institut, Sofia. (Rukov. na katedrata prof. P. Verbev.)

(INFLUENZA statist)

FOR THE, RELEASING, Vol. 4, No 5, November 62

- [illegible]

- 2/2 -

code. is

VERBEV, P.; ZHELIAZKOV, S.; GUBEV, E.; MONEV, V.; PETROV, G.; KHADZHIKOLEVA, Khr.

Influenza in Sofia in 1959. Nauch. tr. vissh. med. inst. Sofia 40
no.2:55-77 '61.

1. Predstavena ot prof. P. Verbev, rukovoditel na Katedrata po epidemiologia i infektsiozni bolesti.

(INFLUENZA epidemiol)

TANEV, Iv.; TODOROV, M.; EFREMOVA, A.; GUBEV, E.; SIMEONOV, N.;
TSAKOVA, Zh.

The course of measles in Sofia in 1958. (According to data of the 1st
Infectious Clinic). Nauch. tr. vissh. med. inst. Sofia 40 no.2:155-170
'61.

1. Predstavena ot prof. Verbev, rukovoditel na Katedrata po epidemio-
logiia i infektsiozni bolesti.

(MEASLES epidemiol)

VERBEV, P.; RANGILOVA, St.; IVANOV, N.; GUBEV, E.

Considerations on the epidemiology of infantile paralysis in Bulgaria.
Nauch. tr. vissh. med. inst. Sofia 40 no.3:107-128 '61.

1. Predstavena ot prof. P. Verbev, rukovoditel na Katedrata po epidemiologia i infeksiozni bolesti.

(POLIOMYELITIS epidemiol)

VERBEV, P.; GUBEV, E.; MANOLOVA, N.; ZHELIAZKOV, S.; MONEV, V.

Considerations on the epidemiology of influenza in Bulgaria. Nauch.
tr. vissh. med. inst. Sofia 40 no.2:29-53 '61.

1. Predstavena ot prof. P. Verbev, rukovoditel na Katedrata po epi-
demiologia i infeksiozni bolesti.

(INFLUENZA epidemiol)

VERBEV, P.; ZHELIAZKOV, S.; GUBEV, E.; SELEKTAR, A.

Influenza in Sofia in 1957. Nauch. tr. vissh. med. inst. Sofia 40 no.2:
121-138 '61.

1. Predstavena ot prof. P. Verbev, rukovoditel na Katedrata po epidemiologia i infeksiozni bolesti.

(INFLUENZA epidemiol)

GUBEV, E.

Air disinfection with chlorine disinfectants. Laboratory tests
in an aerosol box. Nauch. tr. vissh. med. inst. Sofia 41 no.5:
115-131 '62.

1. Predstavena ot prof. P. Verbev.
(AIR MICROBIOLOGY) (CHLORINE)

VERBEV, P.; GUBEV, E.

Studies on hemorrhagic nephroso-nephritis in Bulgaria. Nauch
tr. vissh. med. inst. Sofia 42 no.2:1-14 '63.

1. Predstavena ot prof. P. Verbev, rukovoditel na Katedrata
po epidemiologiya i infeksiozni bolesti.

(EPIDEMIC HEMORRHAGIC FEVER)

(EPIDEMIOLOGY) (NEPHROTIC SYNDROME)

VERBEV, P.; GUBEV, E.; MONEV, V.

Studies on the distribution of epidemic hepatitis in Bulgaria.
Nauch tr. vissh. med. inst. Sofia 42 no.2:29-45 '63.

1. Predstavena ot prof. P. Verbev, rukovoditel na Katedrata
po epidemiologiya i infektsiozni bolesti.
(HEPATITIS, INFECTIOUS) (EPIDEMIOLOGY)

VERBEV, P.; GUBEV, E.

On the epidemiology of epidemic hepatitis. Nauch tr. vissh. med. inst. Sofia 42 no.2:47-58 '63.

1. Predstavena ot prof. P. Verbev, rukovoditel na Katedrata po epidemiologia i infektsiozni bolesti.
(HEPATITIS, INFECTIOUS) (EPIDEMIOLOGY)

L 1000-66

ACCESSION NR: AP5026082

BU/0016/65/000/005/0274/0281

AUTHOR: Verbev, P.; Gaber, E.; Donchev, D.; Ivanov, N. (Deceased)

9
8

TITLE: Distribution of endemic nephropathy in Bulgaria

SOURCE: Suvremenna medicina, no. 5, 1965, 274-281

TOPIC TAGS: epidemiology, disease incidence

Abstract [Authors' Russian and English summaries, modified]:
The frequency of endemic nephropathy in Bulgaria for the period 1961-1963 is reported. The main epidemiological characteristics of geographic distribution, incidence, prevalence, mortality, sex and age distribution, family prevalence, etc, are presented. The role of epidemiological investigation in chronic diseases of unestablished etiology is discussed.

Orig. art. has 5 figures and 5 tables.

ASSOCIATION: none

SUBMITTED: 000Oct64

ENCL: 00

SUB CODE: LS

NO REF SOV: 00

OTHER: 005

JPRS

Card 1/1 *ny*

Epidemiology

BULGARIA

Verbev, P., Gubev, E., Chair of Epidemiology (Head Docent E. Gubev), Higher Medical Institute, Sofia

"Some Epidemiological Characteristics of Hemorrhagic Nephroso-Nephritis in Bulgaria"

Sofia, Suvremenna Meditsina, Vol 17, No. 10, 1966, pp. 870-873.

Abstract: Hemorrhagic fever of the Crimean type and hemorrhagic nephroso-nephritis occur in Bulgaria. The reporting of both diseases as hemorrhagic fever makes a study of the epidemiology of these diseases in the period under consideration somewhat difficult. In 1953-1964 there were 723 cases of "hemorrhagic fever" in Bulgaria with a mortality of 24.6%. Of these, according to the authors' data, 127 were cases of hemorrhagic nephroso-nephritis with a mortality of 22.8%. Hemorrhagic nephroso-nephritis occurred in nine regions (okruzi) of Bulgaria in 1954-1964. The Pazardzhik region with 76 cases was affected to the greatest extent. The greatest incidence during a year was in July. The age group 20-29 showed the greatest frequency of infections (45 cases out of the total of 127), followed by the age group 30-39 (36 cases). Of the 127 persons who had the disease, only 3 were women. The highest incidence was among forest workers, followed by construction workers in mountainous areas, farm workers, and geologists and miners. Tables, 2 references (both Bulgarian). Manuscript received Apr 66.

1/1

GUBEV, Ev.

Disinfection with residual effect. Nauch tr. vissh. med. inst.
Sofia 42 no.2:145-152 '63.

1. Predstavena ot prof. P. Verbev, rukovoditel na Katedrata
po epidemiologia i infektsiozni bolesti.
(PHENOLS) (DISINFECTION)
(STAPHYLOCOCCUS) (BIPHENYL COMPOUNDS)

VERBREV, P.E.; GUBEV, B.B.

Investigations on hemorrhagic nephroso-nephritis in the
Pazardzhishk district. Nauch. tr. vissh. med. inst. Sofia 41
no.5:1-15 '62.

1. Predstavena ot prof. P.E. Verbev.
(EPIDEMIC HEMORRHAGIC FEVER)

BULGARIA

P.E. VERBEV and E.B. GUBEV, Department of Epidemiology and Infectious Diseases, Medical School (Katedrata po epidemiologiya i infektivni bolesti pri VMI) Head (Rukovoditel) Prof P. E. VERBEV, Sofia.

"Study of an Outbreak of Hemorrhagic Nephroso-Nephritis in Bulgaria."

Sofia, Suvremenna Meditsina, Vol 13, No 10, 1962; pp 15-19.

Abstract: Detailed description of severe epidemic in 17 out of the 120 workers at a dam construction site at Vrissa in the Western Rhodops Mountains between 22 June and 3 September 1959; 4 died. Transmission of agent from small rodents via contaminated food is considered proved. Sharp geographic localization; no cases at a neighboring site. List of 20 specimens of 5 species of wild small rodents (field mice etc.) caught in vicinity. Two tables; 4 Soviet and 2 Bulgarian references.

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BUYANOV, V. I.; KRYUKOVA, V. N.; GUBEYDULINA, A. V.

APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000617220005-8"

Contact reduction of tin from a chloride solution by pulverized zinc. Trudy Vost. Sib. fil. AN SSSR no.41:19-22 '62.

(MIRA 15:10)

1. Vostochno-Sibirskiy filial Sibirskogo otdeleniya AN SSSR.

(Tin—Electrometallurgy)
(Cementation(Metallurgy))

69435

S/139/60/000/01/009/041
E032/E414

24.6810

AUTHOR: Gubichev, V.A.

TITLE: On the Measurement of the Ionization of the Atmosphere

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika,
1960, Nr 1, pp 57-59 (USSR)

ABSTRACT: The study of the ionic state of the atmosphere is of major scientific and practical interest. It has become particularly important in recent years in connection with the continuous contamination of the air by radioactive substances emitted during nuclear explosions, which to some extent alter the ionic balance of the atmosphere. The most widely used instruments for studying the ionic composition of the atmosphere are specially designed ion counters through which a current of air is drawn and which essentially consist of a capacitor producing an electric field between its plates. The ions in the current of air are deflected by this electric field and are captured by one of the capacitor plates. By measuring the charge received by the condenser and the amount of air drawn through it, and

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On the Measurement of the Ionization of the Atmosphere

knowing the ionic charge, one can determine the number of ions per cc of air. The ions can be separated into a number of groups according to their mobility. In order to measure the density of ions having a given mobility, the capacitor must work under saturation conditions for that particular group. It can be shown (Ref 1, 3 and 4) that this condition is satisfied when the velocity of the gas flowing through the counter is less than a certain critical value, which is given by

$$W = 4\pi C\phi k$$

where C is the effective capacitance, ϕ is the potential difference between the electrodes and k is the limiting mobility of the ion group under investigation. In the case of low-mobility heavy ions, the saturation conditions are difficult to fulfill. In practice, portable instruments cannot work with potential differences greater than 300 to 400 volt.

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On the other hand, the capacitance can be increased by

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On the Measurement of the Ionization of the Atmosphere

increasing the length of the plates and reducing the distance between them. Accordingly, some workers (Ref 1 and 2) have employed instruments in which the capacitance is of the order of some hundreds of cm, while the length of the electrodes is of the order of one metre. Such instruments are rather heavy and inconvenient in field work. However, it can be shown that the limits of the increase in the capacitance must be deduced not independently, but in conjunction with the capacitance of the electrometer which measures the charge collected by one of the electrodes. In fact, the charge received by the electrode is given by $q = WNte$, where N is the number of ions of the given mobility per unit volume, t is the time during which the air is drawn through the instrument and e is the ionic charge. However, the change in the potential measured by the electrometer is given by

$$\Delta\varphi = \frac{q}{C + C_e}$$

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where C_e is the capacitance of the electrometer. Substituting for q and bearing the expression for W in mind, one finds that

$$\Delta\varphi = 4\pi keN\varphi t \frac{1}{1 + \frac{C_e}{C}}$$

Moreover, the sensitivity of the ion counter is proportional to the change in the potential per unit time. The change in the readings of the electrometer per unit time is proportional to the sensitivity of the electrometer γ expressed in scale division per volt and the change in the potential per unit working time, ie

$$\Delta\alpha = \frac{\gamma\Delta\varphi}{t}$$

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The sensitivity of the ion counter can then be defined by

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On the Measurement of the Ionization of the Atmosphere

$$\eta = \frac{\Delta\alpha}{N} = 4\pi k e \varphi \gamma \frac{1}{1 + \frac{C_e}{C}}$$

This formula shows that the sensitivity depends not on the capacitance of the counter itself but on the ratio of the capacitance of the electrometer to that of the instrument. Clearly, maximum sensitivity is obtained when C is much greater than C_e . It is also clear that as soon as the ratio of the capacitances is of the order of 0.1, the sensitivity will not be very dependent on C , so that there is no point in increasing the capacitance of the instrument any further. Thus, by choosing an electrometer having a small capacitance, it is possible to design an ion counter using a small capacitator, and a simple and portable instrument is achieved. The author has designed a number of ion counters which are based on the above considerations and their performance compares very

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⁶⁹⁴³⁵
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On the Measurement of the Ionization of the Atmosphere

favourably with other counters described so far, in spite of the fact that the latter counters have much greater capacitances. The various counters are compared in Table 1, in which the last line refers to the present paper. There are 1 table and 4 Soviet references.

ASSOCIATION: Novosibirskiy elektrotekhnicheskiy institut svyazi
(Novosibirsk Electrotechnical Communications Institute)

SUBMITTED: March 16, 1959

Card 6/6

4

GUBICHEV, V.A.

"Introduction to physics" by A.I.Kitaigorodskii. Reviewed by
V.A.Gubichev. Izv.vys.ucheb.zav.; fiz. no.4:177-178 '61.

(MIRA 14:10)

1. Donetskii politekhnicheskii institut.
(Physics) (Kitaigorodskii, A.I.)

GUBICHEVA, A. A.

Gubicheva, A. A. and Letov, A. S. "Factors Affecting the Germination of Microspores of *Verticillium dahliae* Kleb., Attacking Cotton, Rabot Vsesoiuznogo Instituta Zashchity Rastenii za 1936 Goda, part 2, 1937, pp. 294-296. 423.92 L541

SO: SIRA S. 90-53, 15 DEC 1953

GUBICHEVA, A.A.

We are fulfilling our assumed obligations. Zashch.rast.ot vred.i
bol. 4 no.6:6-8 N-D '59. (MIRA 15:11)
(Andizhan Province--Cotton--Diseases and pests)
(Andizhan Province--Spraying and dusting in agriculture)

PILIPUSHKO, I.Ye.; GUBICHEVA, A.A.; KOZLOVA, Ye.N., starshiy nauchnyy
sotrudnik

Comments on our articles. Zashch. rast. ot vred. i bol. 6 no.4:11-12
Ap '61. (MIRA 15:6)

1. Nachal'nik karantinnoy inspeksii po Sumskoy oblasti (for
Pilipushko). 2. Glavnyy agronom Andizhanskoy oblastnoy stantsii
zashchity rasteniy (for Gubicheva). 3. Vsesoyuznyy institut
zashchity rasteniy (for Kozlova).

(Plants, Protection of)

GUBICHEVA, A.A.

Our experiments in controlling the cutworm *Agrotis segetum*.
Zashch. rast. ot vred. i bol. 9 no.3:14-15 '64. (MIRA 17:4)

1. Direktor Andizhanskoy oblastnoy stantsii zashchity rasteniy.

ORESHKOV, N. A., kand.tekhn.nauk, dotsent; GUBICHEVA, T. T., inzh.

Proline content in hydrolysates obtained from butts and flank
calf leather. Izv.vys.ucheb.zav.; tekhn.leg.prom. no.4:45-47
'61. (MIRA 14:10)

1. Novosibirskiy institut sovetskoy kooperativnoy trgovli.
Rekomendovana kafedroy tovarovedeniya promyshlennykh tovarov.
(Leather--Testing)
(Proline)

GRIGOR'YEV, G.; KHLISTUN, B.; BASHCHUK, S.; DANKE, V.; GUBIN, A.; BLINDER, L.

What should be the standard design for keramzit plants. Stroi.mat. 10
no.8:32-33 Ag '64. (MIRA 17:12)

1. Glavnyy inzhener Ul'yanovskogo kombinata stroitel'nykh materialov, Ul'yanovsk (for Grigor'yev). 2. Direktor zavoda keramzitovogo graviya, Khabarovsk (for Bashchuk). 3. Glavnyy inzhener zavoda krupnpanel'nogo domostroyeniya, Saratov (for Danke). 4. Glavnyy inzhener kombinata asbestotsementnykh konstruktsiy, Chimkent (for Gubin). 5. Nachal'nik Saranskogo domostroitel'nogo kombinata, Saransk (for Blinder).

GUBICZA, A.

Data on the cocoon and textile-mechanical characteristics of the various species and hybrids of Bombyx mori L. p.452.

MAGYAR TEXTILTECHNIKA. (Textilipari Muszaki es Tudomanyos Egresulet)
Budapest, Hungary. Vol. 11, no. 11, Nov. 1959.

Monthly List of East European Accessions. (EEAI) LC Vol. 9, no. 2,
Feb. 1960 Uncl.

GUBICZA, Andras

Data on the properties of *Bombyx mori* L. species and hydbrides bred
in Hungary. Annales biol Tihany 26:5-18 '59. (EEAI 10:1)
(Hungary--Silkworms)

GUBICZA, Andras

Silkworm breeding in China. Magy textil 13 no.2:85 F '61.

GUBICZA, Andras, tudomanyos kutato; LUKACSOVICS, Ferenc, tudomanyos kutato

Cultivation of the Chinese oak silkworms. Magy textil 13 no.6:233-235
Je '61.

LUKACSOVICS, Ferenc, tudományos kutató; GUBICZA, ~~Andras~~, tudományos kutató

Cocoon of the Chinese oak silkworm and its processing. Magyar textil
13 no.7:277-278 J1 '61.

LUKACSOVICS, Ferenc; GUBICZA, Andras

Respiration of different *Bombix mori* L. varieties. Annales biol
Tihany 27:29-39 '60.

GUBICZA, Andras; LUKACSOVICS, Ferenc

Study of biological and economic characteristics of the Bombyx mori
L. races from the Ukrainian Socialist Soviet Republic. Annales
biol Tihany 28:11-15 '61.

LUKACSOVICS, Ferenc; GUBICZA, Andras

Breathing of various races of Bombyx mori L.II. Annales biol
Tihany 28:17-27 '61.

MOLNAR, Istvan; BABOS, Lorant; GUBICZA, Andras; LUKACSOVICS, Ferenc

Investigations of cocoons killed by radioactive rays.
Magy textil 4 no.5:196-199 My '62.

GUBICZA, Andras

Effect of ecologic factors on the various races of Bombyx
mori L. Annales biol Tihany 30:15-25 '63.

LUKACSOVICS, Ferenc; GUBICZA, Andras

Effect of gamma rays on the "Varo" race of Bombyx mori L.
(Lepidoptera). Annales biol Tihany 30:67-72 '63.

GUBICZA, Andras, tudomanyos munkatars; MOLNAR, Istvan

The effect of gamma irradiation on the Varo race of Bombyx
mori L. Pt.2. Annales ~~de~~ Tihany 31:3-13 '64.

1. Research Institute of Biology of the Hungarian Academy of
Sciences, Tihany (for Gubicza). 2. Research Institute of Textile
Industry, Budapest (for Molnar). Submitted March 14, 1964.

GUBIOZA, Andras, tudomanyos munkatars; ZS.NAGY, Imre, tudomanyos munkatars

Comparative study of recognized (classic) and modified
impregnation methods on the ganglions of *Anodonta cygnea*
L. Annales biol Tihany 31:15-21 '64.

1. Research Institute of Biology of the Hungarian Academy of
Sciences, Tihany. Submitted March 17, 1964.

MOLNAR, Istvan, dr.; GUBICZA, Andras; BABOS, Lorant

Examination of the cocoons of the silkworms issuing from the eggs of Bombyx mori L. Irradiated with Co 60. Magyar textil 16 no.10:449-451 O '64.

1. Research Institute of Textile Industry, Budapest (for Molnar and Babos). 2. Biological Research Institute, Hungarian, Academy of Sciences (for Gubicza).

MOLNAR, Istvan, dr.; GUBICZA, Andras, dr.

Effect of gamma rays on the L.Varo race of Bombyx mori.
Magy textil 17 no.3:106-108 Mr '65.

1. Research Institute of Textile Industry, Budapest (for
Molnar). 2. Research Institute of Biology of the Hungarian
Academy of Sciences (for Gubioza).

BLAZHEK, I.Ya., magistr farmatsii; GUBIK, I., doktor i magistr farmatsii

Third Pharmaceutical Congress in Czechoslovakia. Apt.delo 6 no.6:81
N-D '57. (MIRA 10:12)

1. Iz Gosudarstvennogo instituta kontrolya lekarstvennykh preparatov
v Prage.

(PRAGUE--PHARMACY--CONGRESSES)

SOV/2-58-11-4/18

AUTHORS: Gubin, A., Municipal Inspector in Stalino; Goryusheva, Z.,
Senior Economist

TITLE: On the Preparations for the Census in Stalino (O podgotovke
k perepisi naseleniya v g. Stalino)

PERIODICAL: Vestnik statistiki, 1958, Nr 11, pp 21-24 (USSR)

ABSTRACT: Stalino is the political, industrial and cultural center of
the Donbass, it covers an area of 409 square km, the popula-
tion has risen from 462,000 in 1939 up to 625,000 in 1956;
in 1940, there were 3,180 thousand square meters of housing
space, but in 1957, already 4,700 thousand square meters.
Stalino is preparing at present for the All-Union census and
all preparatory work has been completed. A total of 1,888
persons have been selected and trained to carry out the cen-
sus taking, and since August the population has been per-

Card 1/2

On the Preparations for the Census in Stalino

SOV/2-58-11-4/18

manently informed about purpose and tasks of the forthcoming census.

ASSOCIATION: TsSU SSSR (The USSR Central Administration of Statistics);
Upravleniye po provedeniyu Vsesoyuznoy perepisi naseleniya,
TsSU SSSR (The USSR TsSU Administration Conducting the
All-Union Census)

Card 2/2

GUBIN, A.

Holder for sparkplugs and tools. Avt. transp. 34 no.7:34
Jl '56. (MLBA 9:10)

(Automobiles--Apparatus and supplies)

GUBIN, A. A.

AID P - 672

Subject : USSR/Electricity
Card 1/1 Pub. 29 - 7/24
Authors : Snegirev, M. M., Eng. and Gubin, A. A., Eng.
Title : Apparatus for testing windings of electrical machines
Periodical : Energetik, 7, 12-13, J1 1954
Abstract : A short description of a device containing a sound-frequency generator. 5 diagrams and 2 photos.
Institution : None
Submitted : No date

GUBIN, A. F.

DECEASED

Zoology

see ILC

GUBIN, Anatoliy Fedorovich; DASHKOVSKIY, David Samoylovich;
PROLOVA, M.P., red.; KAPRALOVA, A.A., tekhn. red.

[Problem in the journal-voucher accounting on state
farms] Zadacha po bukhgalterskomu uchetu v sovkhosakh po
zhurnal'no-ordernoi forme schetovodstva. Moskva, Gos-
statizdat, 1963. 67 p. (MIRA 16:10)
(State farms—Accounting—Problems, exercises, etc.)

GUBIN, A. I.: Master Tech Sci (diss) -- "Investigation of welding thin-walled turbine piping". Moscow, 1958. 12 pp (State Committee of the Council of Ministers USSR on Aviation Technology, All-Union Order of Lenin Sci Res Inst of Aviation Materials VIAM) (KL, No 12, 1959, 129)

GUBIN, A.I.

R
✓ Solder for stainless steel. A. I. Gubin, U.S.S.R.
110,010, Feb. 25, 1958. A compn. of Ni 27-30, Si 1.5-
2.0, Fe up to 1.5, B 0.2%, and the rest Cu is used for solder-
ing stainless steel contg. Ni, Si, Fe, B, and Cu. M. Hoshida

///
Distr: 4E2c *John*

SOV/122-58-12-21/32

AUTHOR: Gubin, A.I.

TITLE: Crack Formation when Brazing 1Kh18N9T Steel with L.62
Brazing Metal (Obrazovaniye treshchin pri payke stali
1Kh18N9T latun'yu L62)

PERIODICAL: Vestnik Mashinostroyeniya, 1958, Nr 12, pp 58-61 (USSR)

ABSTRACT: Cracks frequently form in components from this steel when brazed (1Kh18N9T is probably a chrome nickel stainless steel - trans.). The action of molten metal on steel is explained by two theories; by diffusion processes, or by adsorption. A liquid medium readily penetrates into microscopic cracks in the steel surface, and the wedging action so caused gives rise to massive crack formation. The influence of liquid brazing metal on tensile specimens is given in Table 1. The specimens were tested at temperatures from 925° to 1000°C after brazing metal had been applied to the specimens. These specimens were tested at 2.5 mm per minute rate of deformation. Fig 1 shows how extension to failure is greatly reduced for specimens tested with liquid brazing metal in contact with their surface - the top specimen in the figure is without brazing metal. Results of tensile tests at other rates of

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Crack Formation when Brazing ~~1018~~ 18N9T Steel with L.62 Brazing Metal

deformation are given in Table 2. At lower rates of deformation, or at higher test temperatures the loss in strength and plasticity of the test specimens in contact with liquid brazing metal was much more severe. At high rates of deformation the presence of liquid brazing metal has little or no effect - the speed of crack propagation through tensile stresses being greater than the rate of penetration of the liquid brazing metal. Contact with liquid brazing metal causes considerable reduction in creep strength as shown in Fig 2. The influence of different methods of heating during brazing operations was studied, using oven heating, high frequency heating and heating by gas flame. H.F. heating and heating in an acetylene flame set up variable thermal stresses at the metal surface, and the failing loads of test pieces heated in this way while in contact with liquid brazing metal was very low. Influence of work hardening before brazing was also studied. In some cases, work hardened specimens which were heated by H.F., or by gas flame, fractured without application of external load. The rapid heating by these methods does not stress relieve the work hardened

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Crack Formation when Brazing 1M18N9T Steel with L.62 Brazing Metal
material before it comes into contact with the liquid brazing metal. Similar tests on specimens in compression showed little influence through contact with liquid brazing metal. Tensile tests using various fluxes showed little influence of flux on reduction of strength, nor did preliminary plating with copper or nickel to a thickness of 3 to 5 microns prevent these effects. In order to minimize the crack forming effects of contact with liquid brazing metal, it is suggested that parts should be heated to a constant temperature in electric ovens with ordinary or with reducing atmospheres, or in salt baths. With H.F. heating or with gas flame heating, the time of contact of the liquid brazing metal should be kept to a minimum, and the metal should be applied after pre-heating the steel to an uniform temperature of 700 - 800°C, and repeated application of the brazing

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SOV/122-58-12-21/32

Crack Formation when Brazing 16L8N9T Steel with L.62 Brazing Metal

metal should be avoided. Rigid clamps and fixtures should be avoided. The problem cannot be completely solved without development of new brazing materials - a new solder, designated PZhL-500 is already being widely used.

There are 4 figures, 2 tables and 5 Soviet references.

Card 4/4

GUBIN, A. I.

PHASE I BOOK EXPLOITATION

SCW/5232

Brodskiy, A. Ya., ed.

Payka nerzhaveyushchikh staley i zharoprochnykh splavov (Brazing of Stainless Steels and Heat-Resistant Alloys) Moscow, 1959. 51 p. 5,000 copies printed. (Series: Moskovskiy Dom nauchno-tekhnicheskoy propagandy. Peredovoy opyt proizvodstva. Seriya: Progressivnaya tekhnologiya mashinostroyeniya, vyp. 18)

Sponsoring Agency: Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy RSFSR.

Resp. Reviewer for This Publication: L. M. Garmash; Tech.
Ed.: R. A. Sukhareva.

PURPOSE: This collection of articles is intended for brazers.

COVERAGE: The collection contains three articles discussing general problems encountered in brazing. The joining of thin-walled pipes and the importance of flame brazing are given special attention. No personalities are mentioned. There are no references.

Card 1/2

Brazing of Stainless Steels (Cont.)

SOV/5232

TABLE OF CONTENTS:

Gubin, A.I. Some General Problems in Brazing Stainless Steels and Heat-Resistant Alloys 3

Kitayev, A.M. Joining Thin-Walled Pipes of 1Kh18N9T Steel 15

Gorokhov, V.A. Flame Brazing With Heat-Resistant [Hard] Solders 40

AVAILABLE: Library of Congress

Card 2/2

VK/vrc/gap
6-15-61