PODVOYSKIY, L. N.

Properties of cast high-manganese steel. L. N. Podvoiskii and V. P. Tunkov. *Liteinoe Proizvodstvo* 1952, No. 9, 3-7.—Insufficient wear resistance and a high percentage of cracking in casting Hadfield steel lead to the study of individual factors bearing on structure, wear resistance, and on tendency towards cracking in casting. With cast 11-mm. and 90-mm. square specimens made from high-frequency and open-hearth steels it was found that there is no relation between the teeming temp. and the impact strength, that steels made in a high-frequency furnace have a better impact strength than those made in an open hearth; abrasion resistance after 778 hrs. drops from about 0.8% of the steel weight with 1.0% C to 0.3% when C is increased to 1.5%, though the impact strength is sharply lowered on C exceeding 1.3%; it is, however, entirely independent of the Mn:C ratio. Addn. of 0.15-1.8% Cr does not affect the impact strength, though Al and more than 1% Si lower it. Statistical study of 112 heats showed that the MnO concn. in the steel was the principal factor affecting its toughness and ductility. Cracking in casting was caused by a high content of P.

J. D. Gat

PODVOYSKIY, L. N.

"Heat Treatment of High Manganese Steel Castings." From the book, "Heat Treatment and Properties of Cast Steel." edited by N. S. Kreshchanovskiy, Mashgiz, Moscow 1955.

PODVOYSKIY, L. N.

PODVOYSKIY, L. N.: "Improving the magnetic properties of low-carbon electrical-engineering steel." Min Higher Education USSR. Moscow Inst of Steel imeni I. V. Stalin. Moscow, 1956.
(Dissertation For the Degree of Candidate in Technical Sciences)

So: Knizhnaya Letopis', No 18, 1956

KREVNEVICH, V., kand.pedagog.nauk; PODVOYSKIY, L., kand.tekhn.nauk

Large-scale chemistry should have qualified personnel. Prof.-tekh. obr. 20 no.3:3-5 Mr '63. (MIRA 16:3)
(Chemical workers--Education and training)

PODVOYSKIY, L.

What the eye of photography did not see at the factory. Sov.foto 17 no.2:28-30 F '57. (MLRA 10:7)

1. Inzhener zavoda "Serp i molot."
(Photography, Journalistic)

PODVOYSKIY, L., inzh.; KONTSEVAYA, Ye., inzh.

Engineers' notes. Sov. profsoiuzy 6 no. 9:26-27 Ag '58. (MIRA 11:8)

1. Zavod "Serp i molot."
(Metallurgical plants)
(Labor and laboring classes--Education)

PODVOYSKIY, L.

Soviet engineers. Sov. profsoiuzy 6 no.12:7-16 S '58. (MIRA 11:9)

1.Zavod "Serp i molot," Moskva.
(Engineers)

18(7); 25(1) PHASE I BOOK EXPLOITATION SOV/3133

Korroziya i zashchita staley; sbornik statey (Corrosion and Protection of Steel: Collection of Articles) Moscow, Mashgiz, 1959. 233 p. 7,000 copies printed.

Ed.: N.D. Tomashov, Doctor of Chemical Sciences, Professor; Reviewers: A.A. Zhukhovitskiy, Doctor of Chemical Sciences, Professor, and K.S. Ponomareva, Docent; Ed. of Publishing House: Ya.G. Alaverdov; Tech. Ed.: S.M. Popova; Managing Ed. for Literature on Machine and Instrument Construction: N.V. Pokrovskiy, Engineer.

PURPOSE: This book is intended for scientific and technical personnel concerned with questions of the corrosion and protection of metals.

COVERAGE: The articles in this collection deal with the corrosion of steels in corrosive environments, investigation of the effect of various factors on corrosion, and methods of protecting steels from gas and electrochemical corrosion. Special attention is given to new methods of investigation. A number of the articles give the results of studies made under operating conditions. New data, obtained by the Department of Metal Corrosion, Moskovskiy institut stali (Moscow Institute of Steel), are published here for the first time. Four articles are the result of work conducted jointly at the laboratories of the Moskovskiy metallurgicheskiy zavod "Serp i molot" (Moscow Metallurgical Plant "Serp i molot") and the Khimicheskiy zavod imeni M.I. Kalinina (Chemical Plant imeni M.I. Kalinin). Most of the articles contain practical recommendations on the protection of metals from corrosion. No personalities are mentioned. References follow each article.

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2/

KLEMENT'YEVA, A.I.; SKOROKHODOV, M.A.; Prinimali uchastiye: ALEKSANDROV, G.P.; BABUN, F.Ya.; BAYBARIN, P.P.; VAYNSHTEYN, TS.Z.; GUSEV, L.V.; ZHETVIN, N.P.; KONTSEVAYA, Ye.M.; LEVINA, M.M.; NOVLYANSKAYA, K.A.; POD-VOYSKIY, L.N.; TRUNTSEV, D.S.; FLEROV, N.G.; CHIKHACHEV, I.A.; YUROV, Yu.M.; GUDKOVA, N., red.; YEGOROVA, I., tekhn.red.

[Light over the gate] Svet nad zastavoi. Moskovskii rabochii, 1959. 422 p. (MIRA 12:4)
(Moscow--Metallurgical plants)

AUTHORS: Zhetvin, N.P. and Podvoyskiy, L.N. SOV/130-59-2-14/17

TITLE: The "Hammer and Sickle" Works are 75 Years Old (Zavodu „Serp i molot„ - 75 let)

PERIODICAL: Metallurg, 1959, Nr 2, pp 36-38 (USSR)

ABSTRACT: The authors outline the history of the Moscow "Serp i molot" works from the days of its foundation in 1884. After a difficult period before and shortly after the revolution (in which many of the workers participated) the works were reconstructed and expanded to become one of the main suppliers of quality steels. The authors name some distinguished workers and the honours and decorations which have been bestowed. The works have consistently over-fulfilled government plans for twenty years, including 1958. The expanded production of stainless steel sections with a 22-fold increase, in 1946-1956 was the major post-war development, followed by high-speed steel with a 6-fold increase. The authors state that the works is now entering a second radical reconstruction which will lead to a great increase in the range of products without much increase in volume. They show some decorative uses

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The "Hammer and Sickle" Works are 75 Years Old SOV/130-59-2-14/17

of "Serp i molot" stainless steels and pictures of works personnel and mention improvements in living conditions. There are 4 photographs and 1 drawing.

Card 2/2

18(2)

AUTHORS: Paisov, A. I., Podvoyskiy, L. N., Skakov, Yu. A. SOV/163-59-2-45/48

TITLE: Cold-shortness of Commercial Iron (O khladnolomkosti tekhnicheskogo zheleza)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1959, Nr 2, pp 245-249 (USSR)

ABSTRACT: The cold-shortness of commercial iron was investigated in samples after annealing. It was found that commercial iron with a higher oxygen content and low carbon- and manganese content is very much inclined towards shortness. The brittleness line runs along the grain boundary. Figure 3 shows the brittle fracture of an iron sample. The microscopically observed inclosures and separations at the grain boundaries do not cause shortness of commercial iron. The propagation of the fractures in brittle samples after the recrystallization process is given in figure 5. The grain boundary of iron samples in brittle and not brittle state was taken by electron-microphotography and is given in figure 4 (a - brittle, b - not brittle). The local shortness of the iron alloys depends on the thermal treatment of the steel samples.

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Cold-shortness of Commercial Iron SOV/163-59-2-45/48

There are 5 figures, 1 table, and 8 references, 4 of which are Soviet.

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED: May 28, 1958

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16 (2)

AUTHORS: Podvoyskiy, L. N., Paisov, A. I. SOV/32-25-6-43/53

TITLE: Application of the Mathematical Statistics for the Evaluation of the Dependence of Coercive Force Upon the Grain Size (Primeneniye matematicheskoy statistiki dlya otsenki zavisimosti koertsitivnoy sily ot velichiny zerna)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 6, p 753 (USSR)

ABSTRACT: The data of 190 melts of technical iron were worked under application of the method of the mathematical statistics and it was found that a marked correlation function exists between the coercive force and the size of grain (Fig). The engineers L. I. Krylova and Ye. P. Kapustina took part in plotting this function. Deviations of the individual points from the curve are mainly due to the differing content of carbon and sulfur in the samples. The curve was computed according to the equation $H_c = \frac{0.004}{d} + 0.55$ (d = average diameter of the grain in cm). The middle, most reliable part of the curve, is in good agreement with the data obtained by other authors (Refs 1-3). There are 1 figure and 3 references, 1 of which is Soviet.

Card 1/2

Zavod "Serp i Molot."

18.7100, 18.7500

77594
SOV/129-60-2-7/13

AUTHORS: Zhetvin, N. P., Podvoyskiy, L. N. (Candidates of Technical Sciences), Krylova, L. I. (Engineer)

TITLE: Investigation of Decarburization Kinetics of Ball Bearing Steel During Heat Treatment

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1960, Nr 2, pp 37-42 (USSR)

ABSTRACT: The experiments on the above subject were carried out at the laboratory of "Serp i molot" Plant (Zavod "Serp i molot"). Since it is very difficult to separate processes of scale formation and decarburization, which proceed simultaneously, the variation of carbon concentration in the surface layer after scale removal was selected as criterion of decarburization. After thorough study of decarburization in the initial rolled state, ShKh9- steel specimens (C, 1.00-1.10; Cr, 0.90-1.20; Mn, 0.20-0.40; Si, 0.15-0.35; S, 0.020;

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Investigation of Decarburization Kinetics of Ball Bearing Steel During Heat Treatment

77594
SOV/129-60-2-7/13

P $\leqslant$ 0.027%) were heat-treated in a laboratory electric muffle furnace at 700, 720, 740, 760, 780, 800, and 820° C, with holding periods from 1 hr to 16 min in oxidizing medium and in a tube filled with cast iron chips without access of air. To determine the role of the initial decarburization in the decarburization process, samples with scale of rolling origin and those machined for complete removal of decarburized layer were heat-treated. Heat-treated samples were studied microscopically, etched forscale removal, and machined for determination of carbon content at 0.20, 0.40, and 0.60 mm depth. Figures 1-4 illustrate the results of these tests.

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Investigation of Decarburization Kinetics of Ball Bearing Steel During Heat Treatment

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SOV/129-60-2-7/13

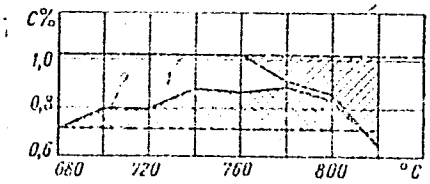

Fig. 1. Effect of temperature on variation of carbon content at 0.2 mm depth during annealing in oxidizing medium for eight hrs: (1) machined samples; (2) samples with scale.

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Investigation of Decarburization Kinetics of Ball Bearing Steel During Heat Treatment

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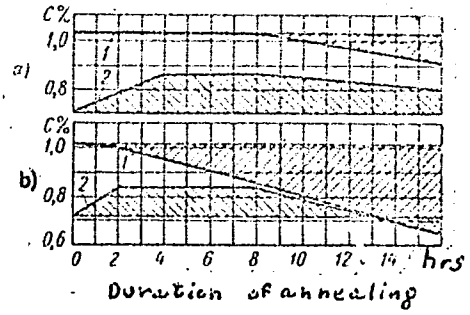

Fig. 2. Effect of time on variation of carbon content at 0.2 mm depth during annealing at 800° C: (a) in the tube; (b) in oxidizing medium; (1) machined sample; (2) sample with scale.

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Investigation of Decarburization Kinetics of Ball Bearing Steel During Heat Treatment

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SOV/129-60-2-7/13

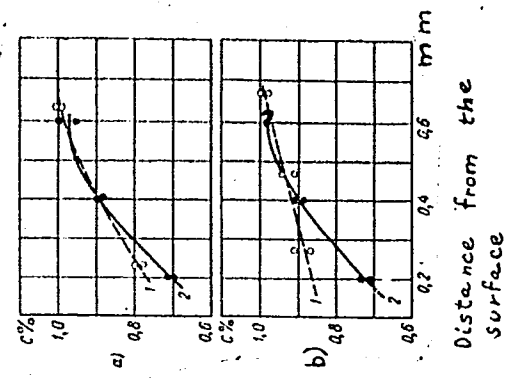

Fig. 3. Variation of carbon content in scale-covered annealed specimens after annealing for 8 hr (a) at 720° C; (b) at 780° C; (1) after annealing; (2) before annealing.

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Investigation of Decarburization Kinetics of Ball Bearing Steel During Heat Treatment

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SOV/129-60-2-7/13

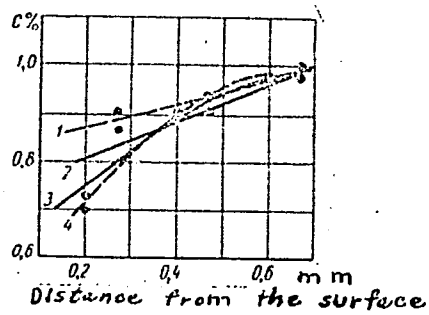

Fig. 4. Variation of carbon concentration (1) after annealing in oxidizing medium; (2) after annealing in tube; (3) before annealing in tube; (4) before annealing in oxidizing medium.

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The following conclusions were made as a result

of the study: (1) Decarburization processes in ShKh9-steel do not develop at temperatures below 740° C and holding up to 16 hr. This concerns annealing of metals with or without scale in oxidizing medium or in the tube filled with fresh cast iron chips. (2) Decarburization processes develop at temperatures above 740° C and are intensified with time. For machined samples in oxidizing medium decarburization starts at: 760° C, 8 hr; 780° C, 44 hr; 800° C, 2 hr; 820° C, 1 hr. (3) For scale-covered specimens and for specimens with a previously decarburized surface layer, slight carburization (up to 1.8%) starts at 700-800° C due to diffusion processes. However, carbon content never reaches that of the initial carbon content in steel. (4) Considerable carburization of surface layer of scale-covered specimens indicates the protecting action of scale against decarburization during heat treatment. (5) No decarburization was observed either on machined or nonmachined specimens with a surface

initially depleted of carbon after heat treatment for 8 hr at maximum temperatures of 800° C in a tube filled with carbon chips. (6) The statement of some authors that decarburized layers can be transformed into scale was not confirmed. (7) It is advisable to anneal rolled ball-bearing steel semiproduct at 760-780° C for the purpose of decreasing decarburization. Holding at temperatures above 760° C for more than 8 hr is not permitted. Pickling of rolled semiproduct promotes decarburization. (8) In order to decrease the annealing period and temperature drops in the metal, it is necessary to provide spaces between metal parts and decrease weight of metal charge in the furnace. (9) Pearlite grain structure is produced across the total cross section of the rod by annealing sized components in tubes (for stress relieving and structure equalization) at maximum temperatures of 740° C and maximum holding time of 10-12 hr. Bright annealing above 740° C leads to the formation of

lamellar pearlite in the surface depleted of carbon. There are 4 figures; and 2 Soviet references.

ASSOCIATION: "Serp i Molot" Plant (Zavod "Serp i molot")

80194

S/129/60/000/04/002/020
E073/E535

18.7100

AUTHORS: Zhetvin, N. P., Podvoyskiy, L. N., Candidates of Technical Sciences, Paisov, A.I. and Kapustina, Ye. P., Engineers

TITLE: Magnetic Ageing of Soft Steel

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1960, No 4, pp 15-19 (USSR)

ABSTRACT: The magnetic ageing is characterized by an increase in the coercive force due to the formation of rejection products of a certain degree of dispersion. According to results of the authors of this paper and data in the literature it is necessary to hold the material for 500 to 600 hours at 100°C for attaining full ageing, although in practice the holding time is usually limited to between 100 and 200 hours. The authors carried out a series of experiments on commercial heats of rimming and killed low carbon electrical steel produced by "Serp i molot". Standard specimens of 400 x 40 mm, 1 to 4 mm thick were annealed at 920°C for two hours, cooled at a rate of 40°C/hour to 600°C and then cooled in air. After

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Magnetic Ageing of Soft Steel

annealing the specimens were aged. The coercive force was determined by means of a ballistic instrument with an open circuit, the accuracy being 0.02 Oe. The experiments have shown that ageing at 100°C for 100 hours results in an increase of the coercive force to approximately double in the case of rimming steel and to about 1.5 times in the case of killed steel; for ageing durations of 600 hours the increase is three times and twice respectively (see Fig 1). The effect of ageing at 100°C as a function of time (up to 300 hours) for steel containing 0.018% C and 0.012% N after having been annealed at 920°C is graphed in Fig 2. If the annealing temperature is reduced from 920 to 850°C the tendency to magnetic ageing decreases to some extent (see Table 1). By increasing the content of aluminium whilst maintaining the content of oxygen and nitrogen unchanged, the magnetic ageing of killed low carbon electrical steel can be almost entirely eliminated (see Table 2). In Fig 4

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Magnetic Ageing of Soft Steel

the influence is graphed of refining in hydrogen on the tendency to magnetic ageing for rimming steel. In Fig 5 the influence of repeated anneals on the coercive force of killed steel is graphed for steel containing 0.015% Al (curve 1) and for steel containing 0.30% Si (curve 2). It is concluded that the tendency to magnetic ageing of low carbon electrical steel is due to the increased gas saturation. Slow cooling after annealing does not eliminate the tendency to magnetic ageing but a reduction in the annealing temperature from 920 to 850°C does reduce this tendency. Refining annealing in hydrogen reduces considerably the tendency to magnetic ageing. An increase in the Al content to 0.010-0.015% for a steel containing up to 0.015% nitrogen and up to 0.006% oxygen eliminates the tendency to magnetic ageing. However, Al additions make it difficult to achieve low coercive force values. There are 5 figures, 2 tables and 6 references, 3 of which are Soviet, 2 German and 1 French.

ASSOCIATION: Zavod "Serp i molot" ("Serp i molot" Works)

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4

Podvoyskiy, L.N.

18.1130

81880

S/129/60/000/08/007/009
E073/E135

AUTHORS: Zhetvin, N.P., Podvoyskiy, L.N. (Candidates of Technical Sciences), and Krylova, L.I. (Engineer)

TITLE: Brittleness of Cold Drawn Steel Kh18

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1960, No 8, pp 30 and 35-38

TEXT: According to data published in literature the strength and ductility of high chromium steels and also the wear resistance depend to a great extent on the structure and composition of the carbides. In selecting the heat treatment regime it is necessary to bear in mind that to obtain carbide in the equilibrium state requires long heating in the range of perlitic transformation. There is a further complication that steels with high contents of chromium and carbon are prone to overheating if heated above 1200 °C. To determine the influence of the individual stages of the technology on the embrittlement and for selecting optimum test methods on specimens from current production batches, the authors investigated the influence of storing at room temperature and at below-zero temperature, the influence of tempering and also the

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S/129/60/000/08/007/009
E073/E135

Brittleness of Cold Drawn Steel Khl8

influence of plastic deformation. The investigations were carried out on the steel Khl8 (0.9% C; 0.7% Mn; 17-19% Cr; 0.6% Ni; ≥0.8% Si; Ac_1 830 °C; Ar_1 810 °C). It was established that an increase in the normalization temperature from 1000 to 1200 °C leads to a decrease in the hardness from 2.8 to 3.9 mm (measured from the diameter of a Brinell indentation) owing to an increase of the content of residual austenite in the steel. It can be seen from the data given in Table 1 that in the case of normalization at 1000 °C tempering brings about an increase in ductility, whilst in the case of air hardening from 1200 °C tempering reduces the ductility and increases hardness. Storage at temperatures of -5 to -10 °C for 14 days reduces the ductility in the case of air hardening, both with and without annealing. On the basis of the obtained results (Tables 1-6) the following conclusions are arrived at.
1) Prior to rolling the metal should not be heated above 1150 °C since in the case of overheating the structure of the rolled metal will contain residual stable austenite.
2) Storage of hot rolled metal at room temperature or at below zero temperatures is not permissible for normal rolled and for

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Brittleness of Cold Drawn Steel Kh18

overheated metal. In normal rolled metal the brittleness is due to residual stresses which occur after cooling the metal in air and in overheated metal it is due to austenite-martensite transformation.

3) Directly after rolling the material should be tempered at 720-740 °C for removing the stresses and for partial decomposition of the residual austenite. Tempering of hot rolled metal enables obtaining a perlite-troostite structure, removing thereby the after effects of overheating.

4) For ensuring the required properties for cold working, the following regime is recommended: isothermal annealing at 880 °C for 3 hours followed by cooling at a speed of 30 °C/hour to 700 °C, holding at that temperature for 4 hours and then cooling in the furnace to 650 °C followed by cooling in air.

5) The authors also recommend isothermal annealing for increasing the ductility of the overheated metal.

6) In producing wire from the steel Kh18 it is necessary to ensure a minimum duration of the storage of the cold worked, non heat treated wire which should not exceed 8 hours.

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E073/E135

Brittleness of Cold Drawn Steel Kh18

The X-ray structural analysis was carried out by Engineer Belostotskaya, TsZL Zlatoustovsk Metallurgical Combine.
There are 6 tables and 8 references: 7 Soviet and 1 German.

ASSOCIATION: Zavod "Serp i Molot"
(Serp i Molot Works)

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X

S/129/60/000/011/005/016
E073/E535

AUTHORS: Zhetvin, N.P. and Podvoyskiy, L.N., Candidates of Technical Sciences, Paisov, A.I. and Kapustina, Ye.P., Engineers

TITLE: Heat Treatment of Low Carbon Electrical Steel

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1960, No.11, pp.20-24

TEXT: The author reviews current practice of heat treatment of low carbon electrical steel for rimming steel and for killed steel. For rimming steel he considers as the most progressive method of heat treatment refining annealing in hydrogen. This results in a considerable reduction of the coercive force, the non-uniformity of the properties and also the tendency to magnetic ageing, in addition to preventing or eliminating brittleness. The hydrogen also prevents oxidation of the surface. Annealing in moist hydrogen has the most intensive effect on decarburization and reducing the coercive force (see Table 3). In the case of repeated annealing, the use of dry hydrogen is preferable; the best properties are obtained by combined annealing in wet and dry hydrogen. In the case of killed steel, annealing at 850 to 870°C

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Heat Treatment of Low Carbon Electrical Steel

yields a lower coercive force than annealing at 920°C. However, in the case of double or treble annealing, better results are obtained in the case of annealing at 920°C. In killed steel, aluminium nitrides, which are stable up to approximately 1200°C, impede the growth of the austenite grain and bring about a grain refining during $\gamma \rightarrow \alpha$ transformation; therefore, annealing at 920°C as compared to annealing at 850°C. Long duration annealing in the inter-critical temperature range (850°C) leads to formation of small quantities of austenite, which is poor in carbon. This favourable influence of decarburization the carbon redistribution over-shadows the effect of decarburization during the first annealing above the upper critical point and the further decarburization during the second and third anneal above the critical point over-shadows the effect of redistribution of the carbon. The following conclusions are arrived at:
1) Annealing of low carbon electrical steel should be carried out in a decarburizing medium. The practice of some Works of annealing in iron chips reduces the possibility of obtaining a low coercive

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E073/E535

Heat Treatment of Low Carbon Electrical Steel

force.
2) For preventing oxidation of components during annealing, the use is recommended of a mixture of one part of soft steel chips and two parts sand, instead of annealing in iron chips.
3) Rimming steel should be annealed above the upper critical point. In this case an increase of the annealing temperature from 900-920°C to 950-980°C brings about a coarsening of the grain, decarburization and lower coercive force values.
4) A single anneal of killed steel at 850-870°C yields a lower coercive force than annealing at 920°C, whilst in the case of repeated annealing, the temperature should preferably be 920°C.
5) After annealing, the steel should be cooled down to 600°C with a speed of 40°C/hour or slower, with subsequent cooling in air.
6) Refining annealing in hydrogen reduces considerably the coercive force, reduces the tendency to magnetic ageing and also permits preventing or even eliminating brittleness which is a characteristic feature of rimming steels. There are 6 figures, 4 tables and 5 Soviet references.

ASSOCIATIONS: Zavod "Serp i Molot" ("Serp...
MATI

Card 3/3

PODVOYSKIY, L.

International conference in the German Democratic Republic.
Prof.-tekh. obr. 18 no.2:31 F '61. (MIRA 14:3)
(Germany, East--Chemical workers--Education and training)

PODVOYSKIY, L.N.

PHASE I BOOK EXPLOITATION SOV/6363

Zhetvin, Nikita Petrovich, Vladimir Pavlovich Tunkov, Mikhail Andreyevich Pertsev, Aleksey Ivanovich Paisov, and Lev Nikolayevich Podvoyskiy

Tekhnicheski chistoye zhelezo (Armco Iron) Moscow, Metallurgizdat, 1962. 198 p. Errata slip inserted. 2750 copies printed.

Ed.: L. Sh. Kazarnovskiy; Ed. of Publishing House: A. L. Ozeretskaya; Tech. Ed.: A. I. Karasev.

PURPOSE: The book is intended for engineering personnel at metallurgical and machine-building plants. It may also be used by students at schools of higher education and tekhnikums studying metallurgy, machine building, and electrical equipment.

COVERAGE: The book reviews methods of melting, rolling, and heat treating low-carbon electrical steel and pertinent problems of its physical metallurgy. The effect of various impurities and heat treatment on magnetic and

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technological properties of sheets and bars made from this steel is discussed. Suggestions are made on the selection of optimal conditions for heat treatment of low-carbon electrical-steel products and on the improvement of their quality. The assistance of P. Ya. Barzdayn, G. V. Sviridov, O. N. Sokolov, I. I. Fomin, B. N. Sukhotin, L. I. Krylova, Ye. P. Kapustina, Ya. L. Frid, B. M. Maksimov, Ye. M. Kontsevaya, A. D. Zaytseva, I. I. Yelin, I. M. Romanov, N. S. Safronov, A. R. Krylova, B. S. Brusilovskiy, K. N. Belousov, I. B. Tseytlin, and other engineers of the "Serp and Molot" Plant is acknowledged. There are 147 references, mostly Soviet.

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AVAILABLE: Library of Congress

SUBJECT: Metals and Metallurgy

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6/28/63

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PHASE I BOOK EXPLOITATION SOV/6363

Zhetvin, Nikita Petrovich, Vladimir Pavlovich Tunkov, Mikhail Andreyevich Pertsev, Aleksey Ivanovich Paisov, and Lev Nikolayevich Podvoyskiy

Tekhnicheski chistoye zhelezo (Armco Iron) Moscow, Metallurgizdat, 1962. 198 p. Errata slip inserted. 2750 copies printed.

Ed.: L. Sh. Kazarnovskiy; Ed. of Publishing House: A. L. Ozeretskaya; Tech. Ed.: A. I. Karasev.

PURPOSE: The book is intended for engineering personnel at metallurgical and machine-building plants. It may also be used by students at schools of higher education and tekhnikums studying metallurgy, machine building, and electrical equipment.

COVERAGE: The book reviews methods of melting, rolling, and heat treating low-carbon electrical steel and pertinent problems of its physical metallurgy. The effect of various impurities and heat treatment on magnetic and

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technological properties of sheets and bars made from this steel is discussed. Suggestions are made on the selection of optimal conditions for heat treatment of low-carbon electrical-steel products and on the improvement of their quality. The assistance of P. Ya. Barzdayn, G. V. Sviridov, O. N. Sokolov, I. I. Fomin, B. N. Sukhotin, L. I. Krylova, Ye. P. Kapustina, Ya. L. Frid, B. M. Maksimov, Ye. M. Kontsevaya, A. D. Zaytseva, I. I. Yelin, I. M. Romanov, N. S. Safronov, A. R. Krylova, B. S. Brusilovskiy, K. N. Belousov, I. B. Tseytlin, and other engineers of the "Serp and Molot" Plant is acknowledged. There are 147 references, mostly Soviet.

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Abstract: [Authors' Russian summary modified] The authors report on 27 sufferers from epidemic hepatitis which occurred in the form of cholostatic hepatitis. The clinical features are described in comparison with the common forms of hepatitis and jaundice and in consequence of the extrahepatitic obstruction of the bile ducts. The diagnosis of cholostatic hepatitis is relatively difficult and is based on the overall clinical picture, paraclinical tests, the absence of data on extrahepatitic mechanical obstacles to the draining of the bile, and in some cases long-term observation or laparotomy. In cases with evidence of mechanical jaundice with full bile obstruction [1/2]which does not respond to treatment, surgical inter-

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(Dobrosel'skii, K.M.)
(Nikolaev, I.I.) (Chernyshev, M.A.)
(Shilovskii, V.A.)

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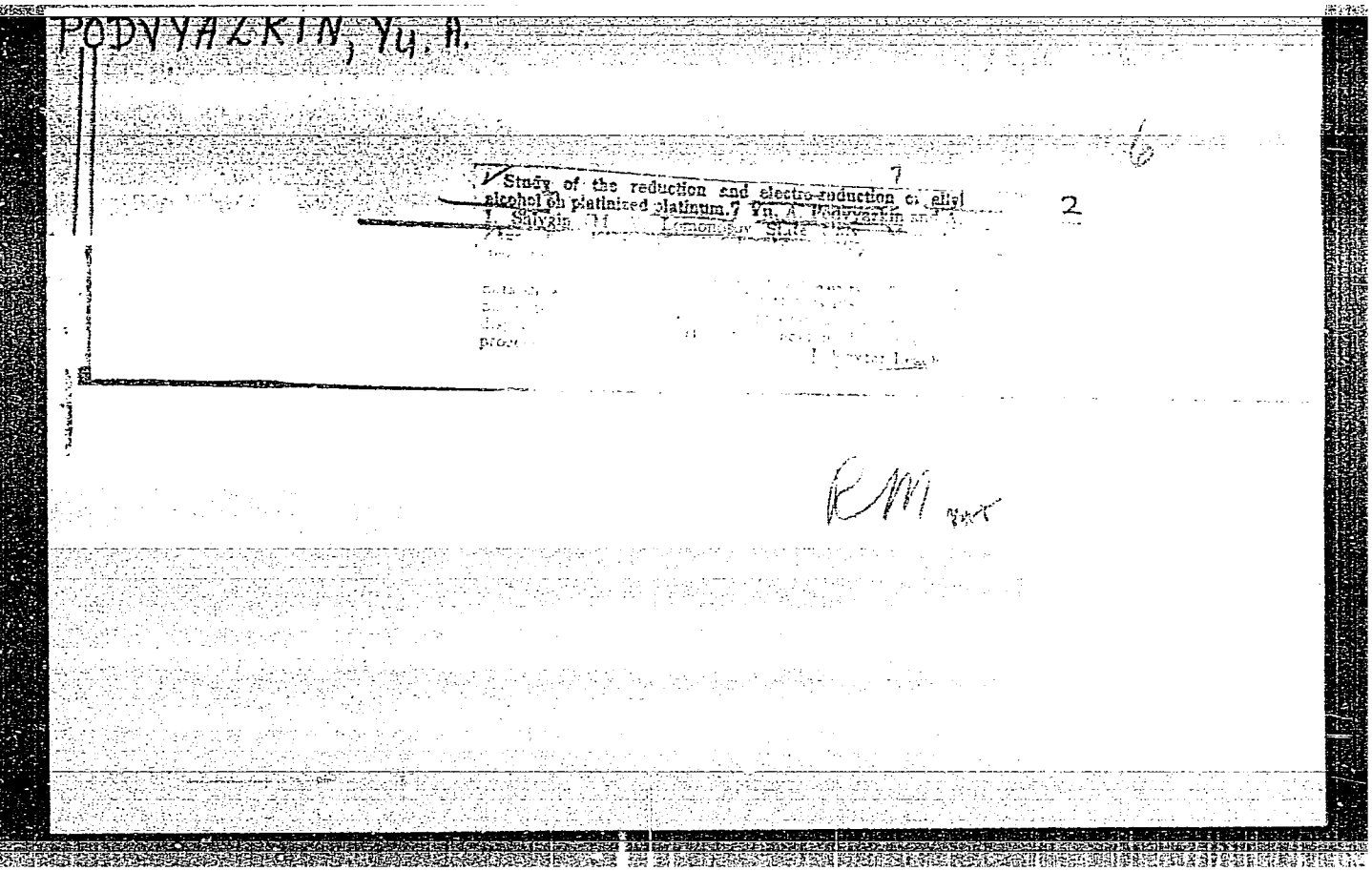

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2

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USSR/Physical Chemistry - Kinetics, Combustion, Explosions, Topochemistry, Catalysis. B-9

Abs Jour : Referat Zhur - Khimiya, No 1, 1958, 497

Author : Yu.A. Podvyazkin, A.I. Shlygin.

Inst : Moscow University.

Title : Possibility of Measuring Potentials of Powdered Catalyst in Presence of Liquid Phase.

Orig Pub : Vestn. Mosk. un-ta, Ser. matem., astron., fiz., khimii, Vol-12- 1957, No 1, 131-136

Abstract : It is proved that it is possible on principle to determine the potential of metal dispersion catalysts at the bombarding of an electrode with catalyst particles. The conditions of the potential imposition by particles of powdered nickel to a silver electrode are determined. The reliability of the measurement of potentials of powdered nickel at the hydrogenation process is shown.

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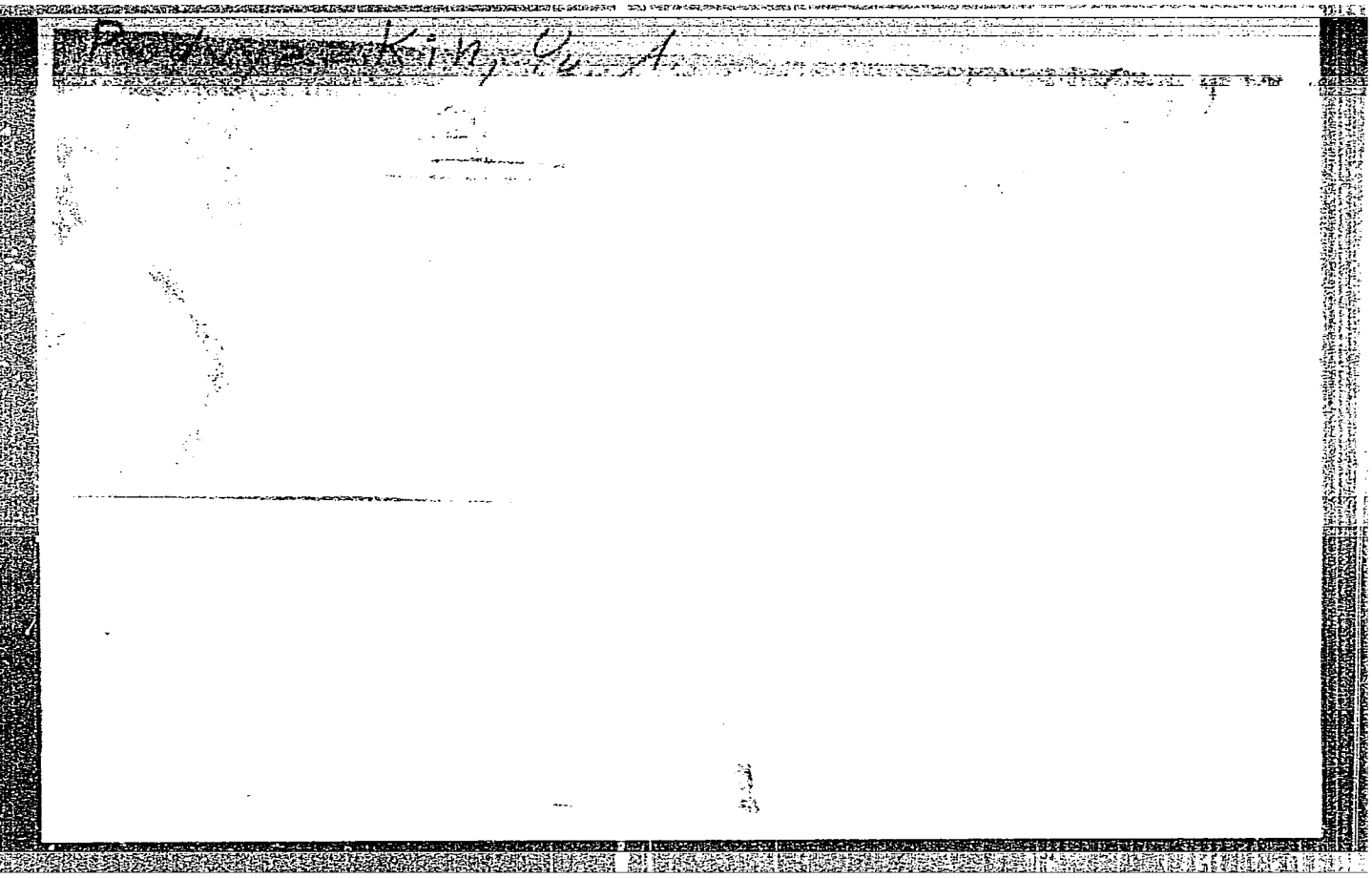

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~~KOLOTYRKIN, YA.~~

5(4) PHASE I BOOK EXPLOITATION SOV/2216

Soveshchaniye po elektrokhimii. 4th, Moscow, 1956.

Trudy...; [sbornik] (Transactions of the Fourth Conference on Electrochemistry; Collection of Articles) Moscow, Izd-vo AN SSSR, 1959. 868 p. Errata slip inserted. 2,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk.

Editorial Board: A.N. Frumkin (Resp. Ed.) Academician, O.A. Yesin, Professor; S.I. Zhdanov (Resp. Secretary), B.N. Kabanov, Professor, S.I. Zhdanov (Resp. Secretary); B.N. Kabanov, Professor; Ya. M. Kolotyrkin, Doctor of Chemical Sciences; V.V. Losev, P.D. Lukovtsev, Professor; Z.A. Solov'yeva; V.V. Stender, Professor; and G.M. Florianovich; Ed. of Publishing House: N.G. Yegorov; Tech. Ed.: T.A. Prusakova.

PURPOSE: This book is intended for chemical and electrical engineers, physicists, metallurgists and researchers interested in various aspects of electrochemistry.

COVERAGE: The book contains 127 of the 138 reports presented at the Fourth Conference on Electrochemistry sponsored by the Department of Chemical Sciences and the Institute of Physical Chemistry, Academy of Sciences, USSR. The collection pertains to different branches of electrochemical kinetics, double layer theories and galvanic processes in metal electrodepositon and industrial electrolysis. Abridged discussions are given at the end of each division. The majority of reports not included here have been published in periodical literature. No personalities are mentioned. References are given at the end of most of the articles.

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(Mine ventilation)
(Bukhman, IA.Z.) (Molotkov, P.G.)

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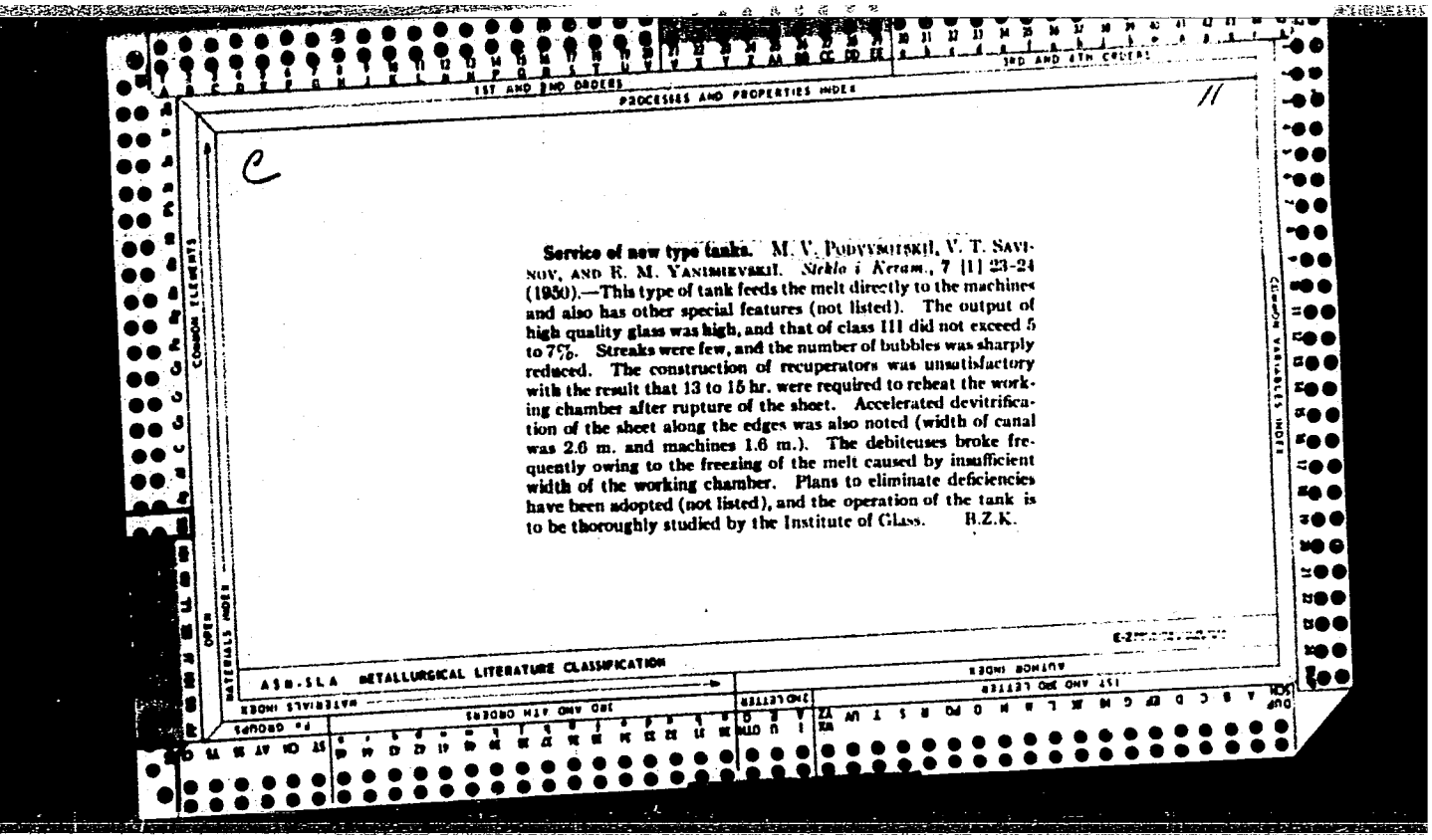
Cherevatenko, L. V., and Podvysotskii, M. V. REFRACTORY BRICK RICH IN GROG FROM THE LISSICHANSK GLASSWORKS. Stekol'naya Prom., 1940 (3--4) 8--11.---
A superior refractory brick, high in grog and suitable for glassworks, was obtained with clay from a deposit near Druzhkovo. It contained SiO_2 48.22 to 51.20, Al_2O_3 33.17 to 34.97, Fe_2O_3 1.52 to 2.95, TiO_2 0.50 to 1.06, CaO 0.64 to 1.00. MgO 0.27 to 2.11, and SO_3 0.48 to 0.75; ignition loss was 7.70 to 11.48%. The brick are porous; the strength of sidewall brick is 460 to 508 kg./sq. cm. Deformation under pressure starts at 1380° to 1500°; fusion point is 1720°.



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Diagnostic value of antistreptolysin in rheumatic disease and in streptococcal infection. Arch. immun. ter. dosw. 3:499-509 1955.

1. Instytut Immunologii i Terapii Doswiadczalnej PAN we Wroclawiu (Dyrektor: prof. dr. L. Hirszfeld) Dzial Immunologii Ogolnej (Kierownik: prof. dr. L. Hirszfeld).

(STREPTOLYSIN, antagonists,
antistreptolysin O in sera in streptoc. infect. & rheum. (Pol))
(STREPTOCOCCAL INFECTIONS, blood in,
antistreptolysin O (Pol))
(RHEUMATISM, blood in,
same)

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(HEMAGGLUTINATION, effect of drugs on,
sodium salicylate (Pol))
(SERODIAGNOSIS,
precipitation reactions, eff. of sodium salicylate (Pol))
(SODIUM SALICYLATE, effects,
on hemagglut. & serum precipitation reactions (Pol))

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Studies on antistreptolysin titer in inflammatory diseases of the uvea. Klin. oczna 26 no.3:193-198 1956.

1. Z Kliniki Ocznej A.M. we Wroclawiu. Kierownik: prof. dr. W. Kapuscinski i z Instytutu Immunologii i Terapii Doswiadczalnej P.A.N. we Wroclawiu. Kierownik: prof. dr. L. Hirszfeld.

(BLOOD,
antistreptolysin titer in uveitis (Pol))
(STREPTOLYSIN, antagonists,
antistreptolysin titer of blood in uveitis (Pol))
(UVEITIS, blood in,
antistreptolysin titer (Pol))

Podwinska, J.

JANKOWSKI, Wiktor.;BIELICKA, Elzbieta.;SLOMSKA, Janina.;PODWINSKA, Jadwiga.

Significance of antistreptolysin level in blood as test determining the clinical condition of the adenoids. Polski tygo. lek. 12 no.17: 647-649 22 Apr 1957.

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(STREPTOLYSIN, antag.
antistreptolysin in blood, determ. in indic. for adenoidectomy (Pol))

(ADENOIDS, surg.
indic., determ. of blood antistreptolysin (Pol))

PODWINSKA, JADWIGA

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on Streptoc. pyogenes incidence in throat & antistreptolysin level of blood)
(STREPTOCOCCAL INFECTIONS
eff. of tonsillectomy on Streptoc. pyogenes incidence in throat (Pol))
(ANTISTREPTOLYSIN, in blood
O, eff. of tonsillectomy (Pol))

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1. Department of Protozoology, Institute of Immunology and Experimental Therapy, Polish Academy of Sciences, Wroclaw and Department of Microbiology, School of Medicine, Wroclaw.

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Palladium on aluminum oxide as an active catalyst for low temperature hydrogenation of fats in solvents. Trudy Inst. khim. nauk AN Kazakh. SSR 13:202-206 '65. (MIRA 18:9)

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1. Z III Kliniki Chirurgicznej Sl. AM w Bytomiu; kierownik: prof. dr M. Trawinski.

(PREDNISONE TOXICOLOGY)
(COLITIS, ULCERATIVE)
(COLONIC DISEASES)
(NECROSIS)

L 04881-67

ACC NR: AP6026290 (A,N) SOURCE CODE: PO/0069/66/000/007/0596/0601

AUTHOR: Godlewska, Z., (Master of arts); Podwojcic, W., (Master of arts); Kierebinski, C., (Major, Doctor, Engineer)

ORG: Scientific-Research Center of the Nutrition Service (Osrodek Naukowo-Badawczy Sluzby Zywnosciowej)

TITLE: Nutritional value of army bread

SOURCE: Lekarz wojskowy, no. 7, 1966, 596-601

TOPIC TAGS: food, food chemistry, vitamin, armed force supply

ABSTRACT: The problem of the nutritional value of the various kinds of bread used in the Polish Armed Forces is discussed in this article. Three main categories are considered: 1) rye breads, 2) wheat breads, and 3) mixed (rye and wheat) breads. The most commonly used breads at the present time in the Polish Army are the "rembertow" and "pisk" mixed varieties. The purpose of the paper was to determine by actual testing and through a system of analytical designations the true value of a certain number of nutritional factors in mixed rye-wheat army bread. Test samples were taken from three military bakeries located in different regions of the country. Five 2-kg loaves were taken at random from different portions of a baking batch.

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ACC NR: AP6026290

Twenty-four hours after baking, sections from each loaf were removed and blended with similar sections from the remaining four loaves of the same test group. The test samples so obtained were checked for a total of 11 nutritional factors, including vitamins and minerals. Two tables are given illustrating the chemical composition of 100 of both types of army bread (rembertow and pisk). It was found that differences in the basic nutritional values in the bread types examined are not significant, although there are some divergencies in vitamin content. It also appears that differences in the same kind of bread, but obtained from different bakeries, are also negligible. Orig. art. has: 3 tables.

SUB CODE: 06,15/ SUBM DATE: 23Dec65/ ORIG REF: 008/

Card 2/2

PODWORSKI,M

Participation of the students of forestry schools in the campaign "National Forest and Afforestation Day." p.6

LAS POLSKI. (Ministerstwo Lesnictwa oraz Stowarzyszenie Naukowo-Techiczne Inzynierow i Technikow Lesnictwa i Drzewnictwa) Warszawa, Poland
Vol.29, no.4 Apr. 1955

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Uncl.

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The House of the Engineer is being realized thanks to the efforts of engineers and technicians. Przegl techn 84 no.43:5 27 O '63.

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SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

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Vol. 7, No. 9, Sept. 1955
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TECHNOLOGY
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SO: East European Accession, Vol. 5, No. 5, May 1956

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The production unit and tariff in railroad transportation. p. 456.
Vol 7, no. 12, Dec. 1955. PRZEGLAD KOLEJOWY. Warsaw, Poland.

So: Eastern European Accession. Vol 5, no. 4, April 1956

POLWYSOCKI, S.

Modifications of the uniform transit tariff. p.385

Warszaw, Poland. PRZEGLAD KOLEJOWY. Wydawnictwa Komunikacyjne
Vol.10, no.9 Sept. 1958

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Uncl.

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"Railroad freight rates and prime costs." p. 368. (PRZEGLAD KOLEJOWY. Vol. 6, No. 10, Oct. 1954. Warszawa, Poland)

SO: Monthly List of East European Accessions. (EEAL). LC. Vol. 4. No. 4. April 1955. Uncl.

NIKITINA, G.V.; PODYA, A.I.; ROMANENKO, V.N.

Device for imparting vibration to crystals extracted from the melt.
Prib. i tekh. eksp. 8 no.3:196-197 My-Je '63. (MIRA 16:9)

1. Fiziko-tekhnicheskiy institut AN SSSR.
(Crystals--Growth)

L 13540-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD

ACCESSION NR: AP3002753 S/0120/63/000/003/0196/0197

57
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AUTHOR: Nikitina, G. V.; Podya, A. I.; Romanenko, V. N.

TITLE: Device for vibrating the crystal pulled from the melt

SOURCE: Pribory* i tekhnika eksperimenta, no. 3, 1963, 196-197

TOPIC TAGS: crystal pulling, vibrating crystals

ABSTRACT: As it was pointed out before (G. V. Nikitina, V. N. Romanenko, V. M. Tuchkevich, Sb., Kristallizatsiya i fazovy*ye perekhody*, - 1962, Izd-vo AN BSSR), vibrating the crystal being pulled with a double commercial frequency expedites the process of crystal growing. The article describes a new device for producing axial vibrations in the crystal by means of a VSP-1 electromagnet in addition, the crystal can be turned in the melt. Vibration amplitude is adjustable from a few hundredths mm to a few mm. A construction sketch is presented. Orig. art. has: 1 figure.

ASSOCIATION: Physico-Technical Inst., AN SSSR

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KOREKHOV, P. P.; PODYARLONSKIY, S. I.

USSR (600)

Fisheries

How the crew of the trawler "Semga" attained successes in production. Ryb. khoz. 28 no. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, April 1952. UNCLASSIFIED.

SHOSTAKOVSKIY, M.F.; KALABINA, A.V.; STARTSEVA, M.Ya.; POD'YACHENKO, N.P.

Synthesis and transformations of vinyl aryl ethers. Report No.4: Synthesis and properties of vinyl ethers of ortho-, meta-, and para- cresols and para-tert-amyl phenol. Izv. Fiz.-khim. nauch.-issl. inst. Irk. un. 5 no.1:90-100 '61. (MIRA 16:8)

(Ethers) (Phenol) (Cresol)

POD"YACHEV, N.

Centralized accounting in the "Bashneft'" group of trusts. Bukhg. uchet 16 no.3:45-47 Mr '57. (MLRA 10:5)
(Petroleum industry--Accounting)

POD"YACHEV, N.I.; STOROZHENKO, Yu.G.; KONDRASHOVA, L.F.

Effect of mineral feritlizers on potato and vegetable yields in Sakhalin. Soob.Sakhal.fil. AN SSSR no.3:3-15 '56. (MLRA 10:7)
(Sakhalin--Vegetables) (Fertilizers and manures)

POD'YACHEV, N.I.; STOROZHENKO, Yu.G.

Preliminary results of liming some soil types of Sakhalin.
Soob.Sakhal.fil. AN SSSR no.3:16-26 '56. (MLRA 10:7)
(Sakhalin--Soil acidity) (Lime)

POD'Y ACHEV, N. V.

Electric Power Stations

Changing the roof of an operating heating and electric power station. Elek. Sta. 23 no. 3, 1952
Inzh.

Monthly List of Russian Accessions, Library on Congress, July 1952. Unclassified.

POD" YACHEV, V. M.

32682. Opyt sanitarnogo obsluzhivaniya predpriyatiy promyslovoy kooperatsii. fel'dsher i akusherka, 1949, No. 10, s. 45 - 48

SO: Letopis' Shurnal'nykh Statey, Vol. 44, Moskva, 1949

PODᵂYACHEV, V.M.

Moscow Section of Radiobiological Laboratory Workers and Radiological Technicians. Med. sestra 20 no.1:60 Ja '61. (MIRA 14:3)

1. Predsedatel' pravleniya sektsii rentgenolaboratov i rentgenologov Moskvy.

(RADIOLOGY, MEDICAL—SOCIETIES)

KHUDYAKOV, I.F.; TIKHONOV, A.I.; RYBNIKOV, V.I.; Prinimali uchastiye: POD'YACHEV, Yu. A., inzh.; BAYBULOV, D.Kh., inzh.; OSOKIN, V.V., inzh.

Copper balance in the metallurgical production of the Karabash Mining and Metallurgical Combine. Sbor. nauch. trud. Ural. politekh. inst. no. 134:14-22 '63. (MIRA 17:1)

VORONOVA, N.A.; GINZBURG, Yu.N.; TOVAROV, V.V.; TKACH, V.T.; Prinimali uchastiye: OSKALENKO, G.N.; KOROTAYEVA, V.P.; POD'YACHEVA, I.B.; NIKANOROVA, N.A.

The problem of raising the quality of cylindrical grinding bodies. Trudy Giprotsement no.24:119-144 '62. (MIRA 16:4)
(Milling machinery)

DOBRZHANSKAYA, Z. S.; POD'YACHEVA, I. B.

Cement

Method of determining individual oxides of alkali metals in raw material and in clinkers. TSement 19, No. 1, 1953.

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PHASE I BOOK EXPLOITATION SOV/3537

Akademiya nauk Kazakhskoy SSR. Institut khimicheskikh nauk

Trudy, t. 5 (Transactions of the Institute of Chemical Sciences, Kazakh SSR, Academy of Sciences, Vol 5) Alma-Ata, Izd-vo Akademii nauk Kazakhskoy SSR, 1959. 154 p. 1,000 copies printed.

Ed.: M.D. Zhukova; Tech. Ed.: Z.P. Borokina; Editorial Board of Series: D.V. Sokol'skiy (Resp. Ed.), V.G. Gutsalyuk, and B.V. Suvorov (Resp. Secretary).

PURPOSE: This collection of articles is intended for personnel of scientific research laboratories, laboratories of industrial enterprises, and faculty members of schools of higher education.

COVERAGE: The collection reviews problems of liquid-phase catalytic hydrogenation to upgrade and reactivate various products. Hydrogenation of unsaturated bonds of various types, adsorption of hydrogen on different catalysts, chromatographic separation of mixtures, and the effect of halogen salts of alkali metals on the rate of hydrogenation reactions promoted by various skeleton catalysts are described. Conditions of catalytic hydrogenation of natural fat, sunflower oil, and such synthetic products as esters of high-molecular fatty acids are set out. Dehydration of the butane fraction carried out in combination with isomerization is analyzed. Principles of selecting catalysts and regenerating them are reviewed and the formation of adsorption potentials on metal catalysts is explained. Each article presents conclusions drawn on the basis of experimental findings. References accompany most of the articles.

Shmonina, V.P., A.N. Khasanova, and D.V. Sokol'skiy. Chromatographic Separation of Mixtures of Nitrobenzene-Aniline Products 28

Golodova, L.S., and D.V. Sokol'skiy. Study of Hydrogenation Reactions of Natural Fats and Their Simplest Synthetic Analogues, the Esters of High-Molecular-Fatty Acids 36

Golodova, L.S., D.V. Sokol'skiy, and Ye.A. Podyacheva. Kinetics and Mechanism of Hydrogenation of Sunflower Oil in Solutions 44

Lukyanov, A.I. Problem of Formation of Adsorption Potentials on Metal Catalysts 50

Yershanov, A.I., and D.V. Sokol'skiy. Potentiometric Study of Hydrogenation of Benzalacetone Over Skeleton Pd/Al Catalysts 56

Buralkina, L.A., O.V. Pavlova, Z.P. Prusakova, and D.V. Sokol'skiy. Dehydroisomerization of the Commercial Fraction of n-Butane Over Oxide Catalysts 64

Shmonina, V.P., K.M. Vlasova, and D.V. Sokol'skiy. Catalytic Reduction of Aromatic Nitro Compounds. Part IX 72

Plit, R.M. [Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V. Lomonosova--Moscow Institute of Fine Chemical Technology imeni M.V. Lomonosov]. Some Principles of Selecting Catalysts for Liquid-Phase Hydration of Acetylene to Acetaldehyde 81

Shcheglov, N.I., and D.V. Sokol'skiy. Some Methods of Reactivating the Skeleton Nickel Catalyst 92

Shcheglov, N.I., and D.V. Sokol'skiy. Hydrogenation of Acetylene in the Liquid Phase 97

Sokol'skiy, D.V., and L.F. Dunina. Hydrogenation of a Sodium Salt of Propiolic Acid Over Platinum

Sokol'skaya, A.N., and D.V. Sokol'skiy. Hydrogenation of Cinnamic Alcohol (Styrone) 110

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GOLODOVA, L.S.; SOKOL'SKIY, D.V.; POD'YACHEVA, Ye.A.

Kinetics and mechanism of hydrogenation of sunflower seed oil in solutions. Trudy Inst.khim.nauk AN Kazakh.SSR 5:44-49 '59. (MIRA 13:6)

(Sunflower seed oil)
(Hydrogenation)

PCD''YACHIKH, P. G.

Vsesoiuznaia perepis' naseleniia 1939 goda [All-Union census of 1939]. Gosstatizdat, 1953, 148 p.

SO: Monthly List of Russian Accessions, Vol. 7 No. 1 April 1954.

POD'YACHIKH, P.

AUTHOR: Pod'yachikh, P.

2-2-3/12

TITLE: The Census of 1959 - The Most Important Task of the Statistical Boards (Perepis' naseleniya 1959 goda - vazhneyshaya zadacha statisticheskikh organov)

PERIODICAL: Vestnik Statistiki, 1957, # 2, p 18-28 (USSR)

ABSTRACT: The article deals with the census of the entire population in the USSR to be carried out in January 1959. It will be the task of the statistical boards all over the country to take care of this vast program under the supervision of the Central Statistical Administration (Tsentral'noye statisticheskoye upravleniye - TsSU) in Moskva. The author points out the great importance of the census for the future economic development of the country as it is the basis of correct planning under the Communist regime. Since the Revolution three censuses have been carried out - in 1920, 1926 and 1939, which reveal the great changes in the social and economic structure in the course of the years. While in 1926 845,000 landowners employed farm workers and only 1 per cent of the smallest farms were incorporated in collective farms, the census of 1939 revealed that individual farming was liquidated and that all former farm owners were employed on large collective farms, performing their

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