GR YKO, S.V.; IVANENKO, G.I. [illegible], PETRUSEV, I.M., CHAGOVETS, P.F. [Chahovets, P.F.]; GEIN', N.I. [Gein', N.I.]

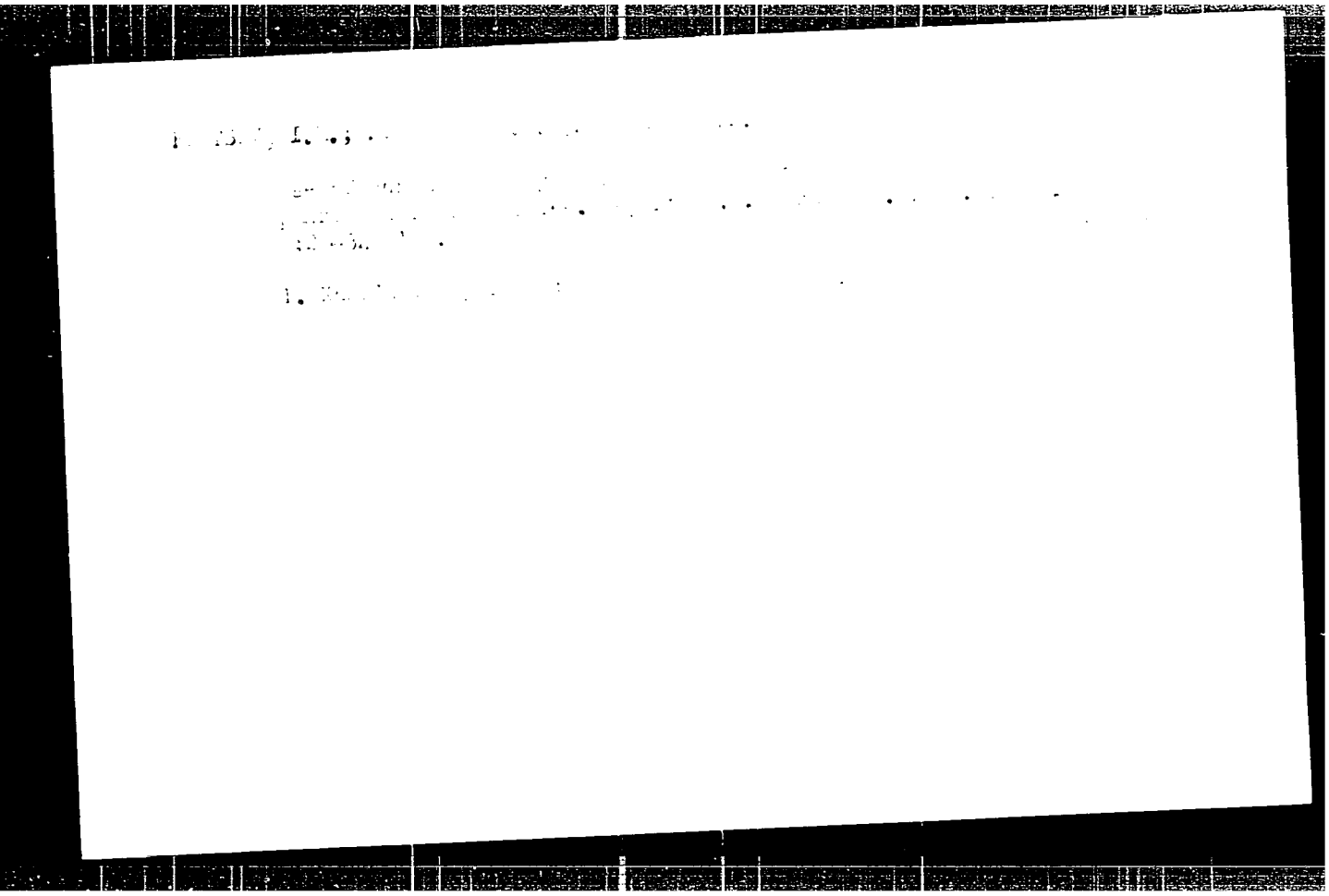
Studying aseptic methods for the preparation of drugs. [illegible]
Farmatsev. zhur. 17 no.6:43-48 '62.

1. Kafedra mikrobiologii i tekhnologii lekarstv Khar'kovskogo farmatsevticheskogo instituta.

PIVNENKO, G.P. [Pivnenko, H.P.]; CHAGOVETS, R.K. [Chahovets', R.K.]; PERTSEV, I.M.; SOTNIKOVA, O.M.

Presence of water-insoluble tannins in the roots of the spurge Euphorbia palustris. Farmatsev. zhur. 16 no.1:32-35 '61. (MIRA 17:8)

1. Khar'kovskiy farmatsevticheskiy institut.



PYARTSEV, I.M.; KRASOVSKIY, I.V. [Krasovs'kyi, I.V.]; PIVNENKO, G.P. [Pivnenko, N.P.]

Selecting the method of chromatographic analysis. Report No.1. Farmatsev. zhur. 18 no.1:18-23 '63. (MIRA 17:10)

1. Khar'kovskiy farmatsevticheskiy institut.

P[illegible]RTS[illegible]V, I. [illegible].; [illegible]V[illegible]KIY, I.V. [Krasovs'kyi, I.V.]; [illegible]IV[illegible], G.I. [[illegible]ivne[illegible], [illegible] H.P.]

Selecting the method of chromatographic analysis. Farmatsev. zhur. [illegible] no.2:13-20 '63. (MIRA 17:10)

1. Khar'kovskiy farmatsevticheskiy institut.

KRIVENCHUK P.Ye. [Kryvenchuk P.Ye.]

Determining [illegible] in some Trials [illegible]
zmor. 17 no.3:3[illegible]

1. Kafedra [illegible]

PERTSEV, I.M.; PIVNENKO, G.P. [Pivnenko, H.P.]

Use of chromatography for the study of essential oils which are used in pharmaceutical practice. Report No.2: Determination of menthol, its esters and cineole in the essential oil of peppermint using chromatographic analysis. Farmatsev. zhur. 17 no.1:21-27 '62. (MIRA 15:6)

1. Khar'kovskiy farmatsevticheskiy institut.
(CHROMATOGRAPHIC ANALYSIS) (PEPPERMINT OIL)
(MENTHOL) (CINEOLE)

PIVNENKO, G.P. [Pivnenko, H.P.]; CHAGOVETS, R.K. [Chahovets', R.K.]; PERTSEV, I.M.; BAKUMENKO, G.A. [Bakumenko, H.A.]

Increasing the productivity of workers in drugstores. Farmatsev. zhur. 15 no.1:37-42 '60. (MIRA 14:5)

1. Kafedra tekhnologii likars'kikh form i galenovikh preparativ Kharkivs'kogo farmatsevtichnogo institutu.
(DRUGSTORES)

GEFTER, Ye.L.; MOSHKIN, P.A., PERTSEV, L.D.

Synthesis of hydorxymethylphosphinic acid. Plast.massy no.4:62-63 '61. (MIRA 14:4)

(Phosphinic acid)

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S/191/61/000/004/007/009
B110/B208

53600 2209

AUTHORS: Gefter, Ye. L., Moshkin, P. A., Pertsev, L. D.

TITLE: Synthesis of hydroxy-methyl phosphonic acid

PERIODICAL: Plasticheskiye massy, no. 4, 1961, 62-63

TEXT: Hydroxy-methyl phosphonic acid (HMPA) is a specific hardening catalyst for methylol polyamide, foam polyurethane, furylic and other resins to which heat- and water-resistant are quickly imparted even by small quantities. This reaction, applied for the first time by H. J. Page, is not suitable for the preparation of large quantities, as the exothermic reaction cannot be controlled. A method devised by the first-mentioned author for a danger-free polymerization of tri-β,β',β"-chloro ethyl phosphite proved to be inadequate, as only one-third of the addition of formaldehyde was utilized. The hydrolysis of the chloro-methyl phosphonic acid chloride in two steps, described by M. I. Kabachnik and Ye. S. Shepeleva (Ref. 6: Izv. AN SSSR, OKhN, 185 (1951)), partially takes place under pressure. The authors have now hydrolyzed PCl, already

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S/191/61/000/004/007/009
B110/B208

Synthesis of hydroxy-methyl phosphonic acid

at the beginning of the process:

$$PCl_3 + H_2O \longrightarrow \uparrow 3\ HCl + H\text{-}PO(OH)_2 \xrightarrow{CH_2O} HOCH_2PO(OH)_2$$

This reaction may be performed in one step (I) from phosphorus trichloride and formaldehyde, or in two steps (II) with separation of the intermediate (phosphorous acid). In the case of (II) 137.5 g of PCl_3 was added to 150 ml of H_2O while stirring, with temperature rising to 50-55°C. After evaporating the hydrochloric acid, the residue solidified and gave the yellowish-white crystal mass of phosphorous acid melting at 71-72°C. Equivalent quantities of H_3PO_3 and paraform were then heated in sealed ampuls for several hours. The resulting thick yellowish liquid (CH_5O_4P; 90 % yield) crystallized slowly. The crystals had a P-content of 27.9 % and melted at 82-83°C. The condensation of H_3PO_3 with 40 % formalin solution proceeded in a similar way. Working under pressure (a) or the reflux condenser (b) gave: yields: (a) = 85 %; (b) = 80 %; P-content: (a) = 27.5 %; (b) = 27.53 %. In the one-step process (I), phosphorus

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Synthesis of hydroxy-methyl phosphonic acid

trichloride was gradually added to 38 % formalin After boiling for several hours under the reflux condenser, OMPA was obtained in a yield of 78 %. On reaction with excess formalin the yield was 81 %. N. I. Bondar' is mentioned as a co-worker. There are 7 references: 6 Soviet-bloc and 1 non-Soviet-bloc.

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PERTSEV, L.P., inzh.; KOPTELOV, L.N.

New design of clamps for flanges. Khim.mash. no.2:38-39 Mr '62. (MIRA 15:3)

(Flanges)

PERTSEV, L.P., inzh.; KHODORETS, A.N., inzh.; VERUGA, V.F., inzh.

Using a hydrodynamic clutch in the drives of machinery for the chemical industry. Khim.mashinostr. no.1:33-34 Ja-F '64. (MIRA 17:4)

PERTSEV, L.P.; YAROSHEVSKAYA, L.A.

Design of flanged joints with clamps. Standartizatsiia 28 no. 2:16-19 F '64. (MIRA 17:3)

PERTSEV, L.P., kand. tekhn. nauk, DOLINSKIY, V.M., inzh.

Calculating the strength of the rolled connection of a tube with the tube sheet of a heat-exchanging apparatus. Khim. i neft. mashinostr. no.3:20-23 S '64. MIRA 17:12

PERTSEV, L.P.; LUKASHEVICH, L.P. [illegible]

Self-sealing flanged [illegible] Mashinostroenie (MIRA [illegible]
no.4:53-54 [illegible]

KOVAL'SKIY, B.S., doktor tekhn. nauk; [illegible]EV, L.I., kand. tekhn. nauk

Study of flat flanges. Khim. i neft. mashinostr. no.6:20-22 D '64 (MIRA 18:2)

PERTSEV, L.P.; LUKASHEVICH, L.P.

Standardization of flanges of vessels and apparatus. Standartizatsiia 29 no.3:40-41 Mr '65. MIRA 18:5

PERTSEV, L.P., inzh.

Calculation of the airtightness of flange joints in containers and apparatus. Khim. mash. no.4:24-27 Jl-Ag '61. (MIRA 14:8)
(Flanges)

BARDIN, I.; BELAN, R.; BEKETIN, N.; BOYKO, V.; BORISOV, A.; BYCHKOV, V.; VASILENKO, S.; VINOGRADOV, V.; VISHNEVSKIY, A.; VODNEV, G.; DVORIN, S.; DZHAPARIDZE, Yu.; DIDENKO, V.; D'YAKONOV, N.; ZHURAVLEV, S.; ZAKHAROV, A.; IVANOV, I.; KIRSANOV, M.; KOLYADA, G.; KOROBOV, P.; LESKOV, A.; LUKICH, L.; LYUBIMOV, A.; MELESHKIN, S.; MYRTSYMOV, A.; PERTSEV, M.; PETRUSHA, F.; PITERSKIY, A.; POPOV, I.; RAYZER, D.; ROZHKOV, A.; SAPOZHNIKOV, L.; SEDOV P.; SOKOLOV, P.; TEVOSYAN, I.; TIKHONOV, N.; TISHCHENKO, S.; FILIPPOV, B.; FOMENKO, N.; SHELKOV, A.; SHEREMET'YEV, A.

Fedor Aleksandrovich Merkulov. Koks i khim.no.7:62 '56. (MLRA 9:12)
(Merkulov, Fedor Aleksandrovich, 1900-1956)

PERTSEV, M.

Drive for quality steel. Stal' 12 no.2:97-100 F '59.
(MIRA 12:2)

1. Direktor moskovskogo metallurgicheskogo zavoda "Serp i molot."
(Tool steel) (Heat-resistant alloys) (Steel, Stainless)

PERTSEV, M., inzhener; SMOLYANENKO, D.

Metallurgy in socialist countries. NTO no.7:63 Jy '59.
(MIRA 12:11)

1. Predsedatel' TSentral'nogo pravleniya nauchno-tekhnicheskogo obshchestva chernoy metallurgii (for Pertsev). 2. Predsedatel' staleplavil'noy sektsii pravleniya nauchno-tekhnicheskogo obshchestva chernoy metallurgii.
(Metallurgy)

PERTSEV, M.

Let us help metallurgical workers fulfill their pledge. NTO no.2:5-8 F '59. (MIRA 12:2)

1. Predsedatel' TSentral'nogo pravleniya nauchno-tekhnicheskogo obshchestva chernoy metallurgii.
(Iron--Metallurgy)

BOGOLYUBSKIY, N.; BORISOV, S.; GRIGOR'YEV, N.; GUSAROV, M.; GUSEV, L.; ZHAROV, S.; ZHETVIN, N.; ZALOGIN, S.; ZOLOTOV, G.; INOZEMTSEV, N.; KLEMENT'YEVA, A.; KOMAROV, A.; KOSMACHEV, V.; LAPTEV, V.; LOMOSOV, V.; MIKHAYLOV, A.; NOVIKOV, I.; PERTSEV, M.; PROKOPOVICH, P.; ROMANOV, I.; RUBLINSKAYA, R.; SVIRIDOV, G.; SOTNIKOV, G.; SUBBOTIN, A.; TURTANOV, I.; CHESNOKOV, S.; CHICHKIN, K.; CHIKHANOV, I.

Grigorii Markelovich Il'in; an obituary. Metallurg 3 no.10:36 O '58. (MIRA 11:10)

(Il'in, Grigorii Markelovich, 1894-1958)

AUTHOR: Pertsev, A. [illegible]

TITLE: Drive for High Grade Steel [illegible] Anniversary of the Works 'Serp i Molot' (V [illegible] Borba za kachestvennuyu stal k 75-letiyu zavoda 'Serp i Molot')

PERIODICAL: Stal', 1959, Nr 2, pp 97-100 (USSR)

ABSTRACT: A brief historical survey of the development of the [illegible] is given. It is pointed out that the importance of the works in the national economy lies in the production of numerous special steels. No absolute production figures are given.

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PERTSEV, M.A.

For high-quality metal. Mekh.i skor. 13 no.8:1-2 Ag '64.
(MIRA 17:...

1. Sovet narodnogo khozyaystva SSSR.

PERTSEV, M.A.

Tasks of the Scientific Technological Society of Ferrous Metallurgy in connection with the decisions of the party concerning the fast expansion of the chemicals industry. Stal' 24 no.5:385-388 My '64. (MIRA 17:12

1. Predsedatel' TSentral'nogo pravleniya Nauchno-tekhnicheskogo obshchestva chernoy metallurgii.

PERTSEV, M.A.; FILIPPOV, S.M.

For a continued expansion of ferrous metallurgy. Metallurg 8 no.1:1-3 Ja '63. (MIRA 16:1)
(Iron and steel plants--Production standards)

PERTSEV, M.A.

Continuously improve the work of the Scientific Technological Society for ferrous metallurgy. Stal' 24 no.1:4-8 Ja '64. (MIRA 17:2)

1. Predsedatel' TSentral'nogo pravleniya Nauchno-tekhnicheskogo obshchestva chernoy metallurgii.

PERTSEV, M.A.

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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S/133/60/000/010/003/013
A054/A029

AUTHOR: Pertsev, M.A.

TITLE: All-Union Conference of Steelmakers

PERIODICAL: Stal', 1960, No. 10, pp. 900 - 901

TEXT: The Vsesoyuznoye soveshchaniye staleplavil'shchikov (All-Union Conference of Steelmakers) was convened in Stalino on August 23 - 26 1960. On the conference, which was attended by more than 600 representatives of metallurgical plants and scientific research institutes, the following main topics were discussed in three groups: open-hearth steel, electrosmelting and converter-process. Papers were read on the following problems: 1) Increasing the capacity of furnaces (enlarging the volume of operating furnaces and building new large-capacity furnaces); 2) introduction of new high-speed methods in steel melting (applying oxygen and air, new types of refractory material, improving the preparation of the charge, of the iron scrap, of fluxing material, etc. 3) producing more steel in oxygen-converters and electric furnaces. 4) extending the use of vacuum melting, applying liquid instead of solid pig iron in electric furnaces refining iron in converters, etc; 5) extending the automation of processes, in

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All-Union Conference of Steelmakers

S/133/60/000/012/003/013
A054/A029

the first place by applying electronic computers. 6) supplying foundries with high-capacity equipment and mechanizing all processes which hitherto are still being carried out manually. At the conference about 100 papers were read, among which reports by N.M. Selivanov, Head of the Tsentral'naya zavodskaya laboratoriya Magnitogorskogo kombinata (Central Plant Laboratory of the Magnitogorsk Combine) on the experiences gained in that plant with high-capacity open-hearth furnaces of the latest design and with the application of low-sulfur refined iron, having a constant amount of inclusions, by Mr. Gurskikh, Foreman at the Kuznetskiy kombinat (Kuznetsk Combine) on the open-hearth furnaces of the centre and the remote control of steel pouring, by Shvetsov, Worker of the Taganrogskiy metallurgicheskiy zavod (Taganrog Metallurgical Plant), Hero of Socialist Work, on the operation of open-hearth furnaces with natural gas. The following members took part in the discussion of selecting the most appropriate method of vacuum-treatment of steel outside the furnace: A.M. Samarin, Corresponding Member of the Academy of Sciences USSR, M.V. Pridantsev, Director of the Institut kachestvennoy metallurgii TsNIICHM (Institute of Quality Metallurgy of TsNIICHM), G.N. Oyks, Doctor of Technical Sciences and N.M. Chuyko, Doctor of Technical Sciences. B.V. Barvinskiy commented on the problem of the operational and constructional drawbacks of the new 80-ton type furnace. The following innovations and

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new processes to be realized received special reference reconstruction of the furnaces for cold gas operation, increasing the weight of the charge up to 600 - 700 and 800 - 900 tons high-capacity presses for compacting iron-scrap, grading and crushing ore with simultaneous fluxing, the improvement in quality of refractory materials so that they will meet the higher standards of the oxygen process the application of synthetic fluid slags in the ladle during the melting process, etc.

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KOROBOV, P.I.; [illegible], A.F.; [illegible], A.A.; [illegible], L.D.; [illegible]; [illegible], Ye.F.; [illegible], M.A.; [illegible]; [illegible], V.Ye.; [illegible], V.F.; [illegible], L.I.; [illegible], A.V.; [illegible], L.N.; IPATOV, P.N.; [illegible], P.P.; [illegible], V.I.; [illegible], V.N.; [illegible], A.F.; [illegible], Ya.A.; [illegible], M.P.; [illegible], A.F.; [illegible], O.[illegible]; [illegible], V.S.; [illegible], S.[illegible]; [illegible], I.[illegible]

Nikolai Nikolaevich [illegible]. Gor.zhur. no.6:76 [illegible] '60. (MIRA 14:2)

(Patrikeev, Nikol i Nikolaevich, 1890-1960)

PERTSEV, M.A.; SMOLYARENKO, D.A.

Third meeting of the smelting section of the Permanent Commission on Ferrous Metallurgy in the Mutual Economic Assistance Council. Metallurg 3 no.8:22-24 Ag '58. (MIRA 11:9)

1. Rukovoditel' sovetskoy chasti staleplavil'noy sektsii Postoyannoy komissii po chernoy metallurgii Soveta Ekonomicheskoy Vzaimopomoshchi (for Pertsev). 2. Chlen staleplavil'noy sektsii Postoyannoy komissii po chernoy metallurgii Soveta Ekonomicheskoy vzaimopomoshchi (for Smolyarenko).
(Europe, Eastern--Economic assistance)

S/130/60/000/010/001/003
A006/A001

AUTHOR: Pertsev, M. A.

TITLE: All-Union Conference of Steelmelting Engineers

PERIODICAL: Metallurg, 1960, No. 10, pp. 1-2

TEXT: The All-Union Conference of steelmakers was convened in August 23-26, in Stalino, and was attended by over 600 experts, representatives from metallurgical plants and scientific research institutes, scientists, innovators, Heroes of Socialist Labor, and workers of central institutions. The Conference work was divided into three sections: the open-hearth furnaces, the electric steel-making, and the converter steel-melting sections. At the open-hearth section great attention was paid to intensified steel melting processes using oxygen. The necessity of constructing oxygen stations at the plants was stressed. The participants exchanged experiences on the heating of open-hearth furnaces with cold natural and coke gas. The increase in the weight of melts (conversion of the furnaces to double charge) was indicated as a means of raising the efficiency of the furnaces It was also decided to take efficient measures for improving the preparation of raw material, and the quality of refractory materials. Automation of the open-

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All-Union Conference of Steelmelting Engineers

hearth process was discussed. N. M. Selivanov, heading the central laboratory of the Magnitogorsk Combine, reported on the operation of new high-capacity open-hearth furnaces and the melting and use of low-sulfur pig iron with a constant impurity content. Gurskikh, a master at the Kuznetsk Combine, presented information on the operation of open-hearth furnaces of the plant and remote control steel casting. Shvetsov steel worker of the Taganrog Metallurgical Plant, Hero of Socialist Labor, delivered a report on open-hearth furnaces operating on natural gas. At the electric steelmelting section a discussion was held on the selection of efficient methods for vacuum treatment of steel outside the furnace. In the discussion participated: A. M. Samarin, Corresponding Member of AS USSR, M. V. Pridantsev, Doctor of Technical Sciences, Director of the Institute of High-Quality Metallurgy TsNIIChM; G. N. Oyks, and N. M. Chuyko, Doctors of Technical Sciences. B. V. Baryinskiy reported on deficiencies in the design of new 80-ton electric furnaces. A program was set up for the mechanization of technological operations in electric steel melting and automated control of metal teeming and melting. Of the advanced technological processes, special attention was paid to metal processing with synthetic liquid slags in the ladle developed by TsNIIShM and the Zlatoust Metallurgical Plant; and to the method of important steel and alloy melting in induction and arc vacuum electric furnaces by electroslag

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ZHERTVIN, Nikita Petrovich; TUNKOV, Vladimir Pavlovich; PERTSEV, Mikhail Andreyevich; PAISOV, Aleksey Ivanovich; PODVOYSKIY, Lev Nikolayevich; KAZARNOVSKIY, L.Sh., red.; CZERETSKAYA, A.L., red. izd-va; KARASEV, A.I., tekhn. red.

[Commercially pure iron]Tekhnicheski chistoe zhelezo. Moskva, Metallurgizdat, 1962. 198 p. (MIRA 16:1)
(Iron)

PERTSEV, M.A.

Objectives of the Scientific Technological Society of Ferrous Metallurgy for the carrying out of resolutions by the November Plenum of the Central Committee of the CPSU. Stal' 23 no.3: 193-194 Mr '63. (MIRA 16:5)

1. Predsedatel' TSentral'nogo pravleniya nauchno-tekhnicheskogo obshchestva chernoy metallurgii.
(Iron--Metallurgy) (Steel--Metallurgy)

PERTSEV, M.A.

Fuller use of potentialities in ferrous metallurgy. Metallurg 8 no.7:1-3 Jl '63. (MIRA 16:8)

1. Sovet narodnogo khozyaystva SSSR.
(Iron industry) (Steel industry)

Sov/133/58-9-6/29

AUTHORS: Pertsev, M. A. (Engineer) and Smolyarenko, D. A. (Cand. Tech. Sciences)

TITLE: The Work of the Steelmaking Section of the Permanent Commission for the Iron and Steel Industry of the Council for Mutual Economic Assistance (Raboty sektsii staleplavil'nogo proizvodstva postoyannoy komissii po chernoy metallurgii Soveta Ekonomicheskoy Vzaimopomoshchi)

PERIODICAL: Stal', 1958, Nr 9, pp. 793-796 (USSR)

ABSTRACT: The third session of the above section (together with the section of the production of refractory materials) took place in April 1958 in Dnepropetrovsk. The representatives of the following countries participated: Bulgaria, Hungary, East Germany, Poland, Rumania, USSR and Czechoslovakia. The progress in the production of steel and refractories in the socialist countries during 1958-1960 and main directions of further developments in the technique of production of steel and refractories during 1960-1975 was reported and discussed. Every country reported in general terms increasing outputs by

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The Work of the Steelmaking Section of the Permanent Commission for the Iron and Steel Industry of the Council for Mutual Economic Assistance

intensification of smelting processes and construction of new production units. The only details quoted were: USSR - control of the length of flame by the angle at which the gas and air streams meet - Fig.1; Czechoslovakia - opening of tap hole by explosives - Fig.2; improvements in the lining of the tapping runner - Fig.3; a new method of heating hot tops by introducing through openings in special hot tops, a stream of oxygen ($2m^3$/min) and intermittent additions of a thermal mixture (14% Al, 35% ferrosilicon, 25.5% silicon manganese and 25.5% lime) in an amount of 1.15 kg/ton. On combustion of the mixture in a stream of oxygen, the slag and the upper layer of metal become well heated and a dense ingot with a small shrinkage cavity is obtained. This decreases head crop to 8-9% instead of the previous 17% (ingots of 2.5 t and 4.5 t). From Czechoslovakian research the following are mentioned - continuous casting with arc heating of metal in the crystallizer (mould) with subsequent rolling (without cooling) on a planetary mill; testing of steels for boilers and turbines on an experimental boiler operating at temperatures 700-850°C and pressure of 600 atm;

The Work of the Steelmaking Section of the Permanent Commission for the Iron and Steel Industry of the Council for Mutual Economic Assistance

production of clad steels, casting of high alloy steels (e.g. rods and wire for welding, heat resistant alloy containing 28-30% of Al). Although the open hearth furnace will remain the main producing unit a wider application of oxygen blown converters is recommended. The following qualities for open hearth refractories were established:

Type of refractory material:	Magnesite chromite	Periclase spinel
Beginning of deformation under a load of 2 kg/cm² °C	1550	1600
Apparent porosity, % not more than	17	14
Resistance to thermal shock (heating to 850°C) heating-cooling cycles, not less than	100	100

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The Work of the Steelmaking Section of the Permanent Commission for the Iron and Steel Industry of the Council for Mutual Economic Assistance

For upper rows of gas and air regenerators the use of bricks containing not less than 42% Al_2O_3 and porosity not exceeding 18% was recommended. There are 3 figures.

AUTHORS: Smolyarenko, D. A., Candidate of Technical Sciences, Pertsev, L. A., Engineer SOV/67-58-4-12/29

TITLE: The Perspectives of the Use of Oxygen in Metallurgy in Socialist Countries (Perspektivy primeneniya kisloroda v metallurgii sotsialisticheskikh stran)

PERIODICAL: Kislorod, 1958, V. II Nr 4, pp. 40-40 (USSR)

ABSTRACT: In April 1958 the third joint meeting of representatives of the steel-casting industry and the sections for the production of refractories was held at Dnepropetrovsk. The meeting was attended by members of the council for mutual aid (to socialist countries). The meeting was further attended by the specialists from Bulgaria, Hungary, the German Democratic Republic, Poland, Rumania, Czechoslovakia, and the USSR. Reports were delivered which concerned the manner in which conditions set up at the previous meeting (II) at Prague had been fulfilled. Lectures further dealt with the joint plan for the increase of steel production (in socialist countries) during the period of 1958-1960 and the issuing of new regulations for the development of modern methods of production during the period of 1960-1975. It was stated in

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this connection that, while the quality of open-hearth steel produced in the respective countries had remained on the same level, that of converter steel and electric steel had improved considerably. In Czechoslovakia it is planned that oxygen shall be used to a considerably increased extent in steel foundry in the course of the period extending to 1960. For this purpose the establishment of three large new oxygen plants is planned. In Czechoslovakia a new method of preparing steel ingots weighing from 2,5 to 4,5 t, which will be used for casting, has been developed. It was decided at this meeting that measures should be taken for a further increase of steel production (jointly by the socialist countries), not only by the establishment of new plants or by extending and enlarging already existing ones, but also by the increased application of oxygen in all metallurgic l processes. Among other measures, also the further development of the production of converter steel by the application of oxygen is planned.

The Perspectives of the Use of Oxygen in Metallurgy in Socialist Countries SOV/67-58-4-12/29

1. Steel industry—USSR 2. Oxygen—Applications

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PERTSEV, M.A.

Ferrous metallurgy in 1964-1965. (Results and prospects.)
Metallurg 10 no.1:1-3 Ja '65. (MIRA 18:4)

1. Sovet narodnogo khozyaystva SSSR.

SOV/130-58-8-9/18

AUTHORS: Pertsev, M.A. and Smolyarenko, D.A.

TITLE: Third Meeting of the Steel-making Section of the Permanent Commission on Ferrous Metallurgy of the Council for Economic Mutual Aid (Tret'ye zasedaniye sektsii stale-plavil'nogo proizvodstva Postoyannoy komissii po chernoy metallurgii Soveta Ekonomicheskoy Vzaimopomoshchi)

PERIODICAL: Metallurg, 1958, nr 8, pp 22 - 24 (USSR)

ABSTRACT: The third meeting of the steel-making section was held jointly with the refractories section of the Permanent Commission on Ferrous Metallurgy in Dnepropetrovsk in April, 1958. The following countries were represented: Bulgaria, Hungary, East Germany, Poland, Rumania, USSR and Czechoslovakia. The conference heard and discussed reports on the progress of the measures recommended for 1958-1960 steel production increases, development of new steel-making techniques for 1960-1975, improvement of refractories, development of proposals on bearing-steel production increases and standardisation of conditions. Reports on progress in 1956-1957 and development plans for the next few years. Measures planned for 1960-1975 include the construction of larger units, wide use of oxygen, use of cold, high-calorific value fuel, use of

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natural gas where available, increase in casting facilities, introduction of continuous casting, oxygen-blown converter processes. The open-hearth is to remain the main steel-making process and new and better refractories (Table 1) are to be adopted: for the upper rows of checkers, bricks with over 42% Al_2O_3 and porosity not exceeding 18% will be used. Induction and arc-furnace melting under high vacuum was recommended for high-quality alloy steels. Scrap preparation is to be improved and maximal mechanisation, the adoption of spectroscopic analysis, evaporative cooling and waste-heat boiler were recommended. Before 1965, the Socialist-camp countries are gradually to go over to the melting of ball-bearing steels with vacuum treatment in the ladle or during pouring; for internal use, the existing national marks are to continue but for export two standards are recommended (Table 2). For machine tool construction an agreed compromise between existing state standards (GOST) for non-metallic inclusions and customer requirements are

Third Meeting of the Steel-making Section of the Constant Commission on Ferrous Metallurgy of the Council for Economic Mutual Aid

recommended. GOST 801-58 for the composition of ball- and roller bearing steels (Table 3) was confirmed in the USSR in May, 1958 and will come into force on April 1, 1959. Improved standards are to be adopted by the member countries in 1960-1962. The members visited the Imeni Petrovskogo (imeni Petrovskiy) Works, the Krivoy Rog and the Zaporozhstal' Works and expressed their thanks to N.A. Tikhonov, president of the Dnepropetrovsk Economic Council and the head of its production-technical department, D.G. Ignatenko, for the successful organization of the meeting.
There are 3 tables.

ASSOCIATIONS: Sovetskaya chast' staleplavil'noy sektsii postoyannoy komissii po chernoy metallurgii SEV (Soviet branch of the Steel-making Section of the Permanent Commission on Ferrous Metallurgy of the Council for Economic Mutual Aid)

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Third Meeting of the Steel-making Section of the Constant Commission on Ferrous Metallurgy of the Council for Economic Mutual Aid

and Stalelavil'naya sektsiya Postoyannoy komissii po chernoy metallurgii SEV (Steel-making Section of the Permanent Commission on Ferrous Metallurgy of the Council for Economic Mutual Aid)

1. Steel--Production 2. Steel--Applications

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PERTSEV, M A

AFONIN, K.B.; BURTSEV, K.I.; BYSTROV, S.N.; VINETS, G.B.; VODNEV, G.G.; VORONIN, A.S.; GEVLICH, A.S.; GRYAZNOV, N.S.; GUDIM, A.F.; GUSYATINSKIY, M.A.; DVORIN, S.S.; DIDENKO, V.Ye.; DMITRIYEV, M.M.; DORDE, M.M.; DOROGOBID, G.M.; ZHDANOV, G.I.; ZAGORUL'KO, A.I.; ZELENETSKIY, A.G.; IVASHCHENKO, Ya.N.; KAFTAN, S.I.; KVASHA, A.S.; KIREYEV, A.D.; KLISHEVSKIY, G.S.; KOZYREV, V.P.; KOLOBOV, V.N.; LGALOV, K.I.; LEYTES, V.A.; LERNER, B.Z.; LOBODA, N.S.; LUBINETS, I.A.; MANDRYKIN, I.I.; MUSTAFIN, F.A.; NEMIROVSKIY, N.Kh.; NEFEDOV, V.A.; OBUKHOVSKIY, Ya.M.; PERTSEV, M.A.; PETROV, I.D.; PODOROZHANSKIY, M.O.; POPOV, A.P.; RAK, A.I.; REVYAKIN, A.A.; ROZHKOV, A.P.; ROZENGAUZ, D.A.; SAZONOV, S.A.; SIGALOV, M.B.; STOMAKHIN, Ya.B.; TARASOV, S.A.; FILIPPOV, B.S.; FRIDMAN, N.K.; FRISHBERG, V.D.; KHAR'KOVSKIY, K.V.; KHOLOPTSEV, V.P.; TSAREV, M.N.; TSOGLIN, M.E.; CHERNYY, I.I. CHERTOK, V.T.; SHEIKOV, A.K.

Samuil Berisovich Bamme. Koks i khim. no. 6:64 '56. (MLRA 9:10)
(Bamme, Samuil Berisovich, 1910-1956)

PERTSEV, M.A.

Foundation of modern industry. Metallurg 6 no.10:1-3 O '61.
(MIRA 14:9)

1. Gosudarstvennyy planovyy komitet Soveta Ministrov SSSR.
(Metallurgical plants)

Pertsev, M. A.

14697. (Russian.) Preventing Axial Cracks in Alloy Steel Ingots. Ustranenie obrazovaniia osevykh treshchin v slitkakh legirovannoi stali. In. M. Bokshtukhli, M. A. Pertsev, and F. V. Kuzlov. *Stal'*, v. 16, no. 7, June 1956, p. 602-608.

Causes of axial cracks in Cr-Ni-W steel ingots. Preventing these defects by slowing down the rate of cooling in the mold or by casting semi-molten metal in heated molds.

Central Sci. Res. Inst. Ferrous Metallurgy
and Zlatoustov Metallurgical Plant

AGEYEV, P.Ya.; ALABYSHEV, A.F.; BAYMAKOV, Yu.V.; BELYAYEV, A.I.; BATASHEV, K.P.; BUGAREV, L.A.; VASIL'YEV, Z.V.; GUPALO, I.P.; GUS'KOV, V.M.; ZHURIN, A.I.; VETYUKOV, M.M.; KOSTYUKOV, A.A.; LOZHKIN, L.N.; OL'KHOV, N.P.; OSIPOVA, T.V.; PERTSEV, I.I.; RUMYANTSEV, M.V.; STRELETS, Ye.L.; FIRSANOVA, L.A.; CHUPRAKOV, V.Ya.

Georgii Alekseevich Abramov. TSvet.met. 27 no.2:72-73 Mr-Ap '54. (MLRA 10:10)
(Abramov, Georgii Alekseevich, 1906-1953)

PERTSEV, N.N.; ALEKSANDROV, S.M.

Ludwigite with a high content of alumina. Zap. Vses. min. ob-va 93 no.1:13-20 '64 (MIRA 18:2)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR i Institut geokhimii i analiticheskoy khimii imeni Vernadskogo AN SSSR.

[illegible], L.I.; [illegible], N.N.; MALINKO, S.V.;

[Trade of [illegible] boron and diagnostic features of boron minerals in skarn deposits] Usloviia obrazovaniia i diagnosticheskie priznaki bornykh minerlov [illegible]. Moskva, Nedra, [illegible]. [illegible] p. (VIMS [illegible])

PERTSEV, N.N.

Twins of forsterite from the magnesian skarns of Arctic Yakutia.
Trudy Min.muz. no.16:259-261 '65.
(MIRA 18:8)

BERTSEV, N.N.; OSTROVSKAYA, T.V.; NIKITINA, I.B.

New mineral "bersenite." Zap.Vses.min.ob-va 94 no.2:180-186 '65.
(MIRA 18:5)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva.

BERLIN, L.Ye.; PERTSEV, N.N.; SHABYNIN, L.I., nauchnyy red.; LYUBCHENKO, Ye.K., red. izd-va; BYKOVA, V.V., tekhn. red.

[Industry's requirements as to quality of mineral raw materials] Trebovaniia promyshlennosti k kachestvu mineral'nogo syr'ia; spravochnik dlia geologov. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geol. i okhrane nedr. No.69. [Boron] Bor. Nauchn. red. L.I.Shabynin. 1961. 50 p. (MIRA 14:11)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.

(Boron)

SOKOLOV, G.A., doktor geol.-min. nauk, otv. red. Prinimali uchastiye: VLASOVA, D.K.; GLAGOLEV, A.A.; ZHARIKOV, V.A.; LOGINOV, V.P.; LUKIN, L.I.; MYAKELYA, R.O.; OMEL'YANENKO, B.I.; OSTROVSKIY, I.A.; PERTSEV, N.N.; PODDLESSKIY, K.V.; RUSINOV, L.V.; SOFIANO, T.A.; TIMOFEYEVA, L.K.; SHABYNIN, L.I.; SHADLUN, T.N.; LAPIN, V.V., red. izd-va; MAKUNI, Ye.V., tekhn. red.

[Physicochemical problems in connection with the formation of rocks and ores] Fiziko-khimicheskie problemy formirovaniia gornykh porod i rud. Moskva, Vol.1. 1961. 658 p. (MIRA 14:10)

1. Akademiya nauk SSSR. Institut geologii rudnykh mestorozhdenii, petrografii, mineralogii i geokhimii. 2. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva (for Vlasova, Glagolev, Zharikov, Omel'yanenko, Ostrovskiy, Pertsov, Shabynin). 3. Moskovskiy geologo-razvedochnyy institut im.S.Ordzhonikidze (for Shabynin, Pertsov.)

(Petrology)

PERTSEV, N.

Following the instructions of trade-union members.
Sov. profsoiuzy 18 no.21:15-16 N '62. (MIRA 15:11)

1. Predsedatel' rabochego komiteta sovkhoza "Stavropolets" Stavropol'skogo kraya.
(Stavropol Territory--Trade unions)
(State farms)

PERTSEV, N.N.

Harkerite and kotoite in the skarns of polar Yakutia. Geol.i geofiz. no.7:102-105 '61. (MIRA 14:9)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii Akademii nauk SSSR, Moskva.
(Yakutia--Boron) (Yakutia--Skarns)

PERTSEV, N.N.; NIKITINA, I.B.

New data on serendibite. Zap.Vses.min.ob-va 88 no.2:169-172 '59. (MIRA 12:8)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva.
(Serendibite)

SHABYNIN, L.I.; PERTSEV, N.N.

Some new data on suanite and its paragenesis. Zap.Vses.min.ob-va. 92 no.2:146-158 '63. (MIRA 16:5)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva.
(Suanite)

PERTSEV, N. N.

Warwickite and serendibite from magnesium skarns of southern Yakutia. I. I. Shabynin and N. N. Pertsev. *Zapiski Vsesoyuz. Mineralog. Obshchestva* 85, 313-28(1956).—cf. Larsen and Schaller, *C.A.* 27, 2653; Geiler, *C.A.* 33, 3723.—In contact-metasomatic Fe-ore deposits, associated with szaibelyite, ludwigite, and sinhalite, Shabynin previously described a series of complex boron compds., among which the rare mineral warwickite, $(Mg,Fe)TiO(BO_2)_2$, and serendibite, $(Ca,Mg)_3Al_2BSi_2O_9(OH)$, are noteworthy. The typical Mg infiltration skarns accompanying the Fe ores (chiefly magnetite) are of diopside-phlogopite type, with a ludwigite and szaibelyite, all of post-magnetic-metasomatic genesis. The original carbonate rock was a dolomite, residues of which are observed in "calciphyres" with olivine and spinel. Also clinohumite and scapolite and amphiboles occur in such skarns, and unchanged Archean-migmatitic rock inclusions. Warwickite is chiefly observed in the holomitic calciphyres, probably replacing ludwigite. It may occur in the phlogopite-ludwigite skarns. The detn. of the optical properties is very difficult because of the deep color of the mineral (high in Fe) and of the minuteness of its crystals; ns are (±0.005) $\gamma = 1.827$; $\beta = 1.818$; $\alpha = 1.808$; $2V = 55°$ or higher, optically pos.; orientation $c = c$ (prismatic); $\gamma = b$; pleochroism in intense brown colors, absorption $c > b > a$. Cleavage (102) with the angle 97° is typical, further (100), and less distinct (001). No chem.

Shabynin, L.I.; Bertsev, N.M.

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ainly its was possible. Serendibite chiefly occurs in spinel-diopside skarns with parasite, phlogopite, and calcite; it forms lenses and granular aggregates up to 15 cm. in diam. Characteristic is the intergrowth of serendibite after spinel in calcite-filled cracks, and the insoch. with a deep-blue tourmaline and chlorite which also replace serendibite. The intimate intergrowths of this mineral with spinel and tourmaline made a spin. and an analysis of the serendibite impossible. The mineral shows highly variable deep colors, chiefly blue, green, and brown, strong pleochroism, and very strong dispersion, further a polysynthetic twinning of plagioclase-like type. The absorption and optical elasticity ellipsoids do not coincide; evidently, there are inner tensions (pressure twinnings); the angle of γ with the indistinct cleavage plane is about 22°. The optical absorption curves for the chief elliptoid axes in the wave length range from 400 to 700 mμ show striking differences among one another; γ is for the spectral line F = 1.758, for the C line = 1.755. The absorption curves for γ and α intersect each other at about 500 mμ. In its chem. character, the Yakutian serendibite is especially variable in its Fe and B contents; a curve is given which shows the d, and the n_D as functions of the Fe_2O_3 contents. The angle 2V is variable around 90°; the optical character may be either pos. or neg. W.R.

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SHABYNIN, L.I.; PERTSEV, N.N.

Warwickite and serendibite from magnesium skarns of southern Yakutia. Zap.Vses.min.ob-va 85 no.4:515-528 '56. (MLRA 10:2)

(Yakutia--Warwickite) (Yakutia--Serendibite)

PROVORNOV, S.M.; GREBENNIKOV, O.F.; GUSEV, V.P.; PERTSEV, S.M.

Photomicrographic attachment for the high-speed SKS-1 motion-picture camera. Trudy LIKI no.11:29-33 '64. (MIRA 18:10)

1. Kafedra kinofotoapparatury Leningradskogo instituta kinoinzhenerov.

PERTSEV, S.M.

Electrolytic polishing of the film feeding tooth sprockets. Trudy LIKI no.8:13-16 '62. (MIRA 16:6)

1. Kafedra kinofotoapparatury Leningradskogo instituta kinoinzhenerov.

(Electrolytic polishing)
(Motion-picture projectors)

BARBANEL', S.R.; PERTSEV, S.M.

Device for a semiautomatic plotting of the vibration graphs of objects photographed on motion-picture films. Trudy LIKI no.8:17-23 '62. (MIRA 16:6)

1. Kafedra kinofotoapparatury Leningradskogo instituta kinofotoinzhenerov.
(Motion-picture photography—Equipment and supplies)

PERTSEV, V.; EMINOV, A.

Standing works council. Sov.profsoiuzy 7 no.22:26-28
N '59. (MIRA 12:12)

1. Predsedatel' komiteta profsoyuza zavoda neftyanogo mashinostroyeniya imeni Petrova Stalingrad (for Pertsev). 2. Zamestitel' glavnogo inzhenera, predsedatel' postoyanno deystvuyushchego proizvodstvennogo soveshchaniya zavoda neftyanogo mashinostroyeniya im. Petrova, Stalingrad (for Eminov).
(Stalingrad--Works councils)

PERTsEV. V.

23499. NA CHERNYKh ZEMLYaKh. (O RABOTE MOLODEZhNYKh ZhLVOTNOVOLChESKIKh BRIGAD. OChERK). ILL. B. BERENDGOF. VOKRUG SVETA, 1949, No 7, c. 15-23

SO: LETOPIS' NO. 31, 1949

PERTSEV, V.G., inzh. (Tashkent)

Rate principle and the payment rates. Gel.-dor.transp. 45 no.12:57-59 D '63. (MIRA 17:2)

LARIONOVA, Ye. ., kand.ekonom.nauk; LEVIN, L.R. ...ekonom.nauk; BERLINER, G.Sh. (Tashkent); BELEN'KIY, M.N., kan .ekonom.nauk (Tashkent); PERTSEV, V.G., kand.ekonom.nauk (Tashkent)

Book on transportation finances. Reviewed by E.V.Larionova and others. Zhel.dor.transp. 46 no.6:93-96 Je '64. (MIRA 18:1)

1. Nachal'nik finansovoy sluzhby Sredneaziatskoy dorogi (for Berliner).

PERTSEV, V.G., aspirant

Planning of rates and the profitableness of railroads. Trudy MIIT no.142:82-96 '61. (MIRA 15:1)
(Railroads--Rates)

CHIKOBAVA, A. S., PERTSEV, V. N., KOROVIN, YE., P.

Scientific Societies

Results of the 10th session of the Council for Coordination. Vest. AN SSSR, 22, No. 1, 1952.

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

PERTSEV, Ye., mayor intendantskoy sluzhby; VASHKOVSKIY, V., kapitan intendantskoy sluzhby

How can potatoes and vegetables be preserved? Tyl i snab. Sov. Voor. Sil 21 no.9:66-67 S '61. (MIRA 14:12)
(Vegetables--Storage)

PERTSEV, Yu.V., inzh.

Slag removal by a screw conveyor. Elek. sta. 34 no.7:80-81 Jl '63. (MIRA 16:8)

PERTSEVA, A.A.; SOLOVTSOVA, T.A.

Agricultural regions of Kustanay Province, the Virgin Territory. Vest. Mosk. un. Ser. 5:Geog. 18 no.2:11-18 Mr-Ap '63. (MIRA 16:3)

1. Kafedra ekonomicheskoy geografii SSSR Moskovskogo universiteta.
(Kustanay Province—Agricultural geography)

ZVORYKIN, K.V.; PERTSEVA, A.A.; TSEDELER, Ye.B.; LEBEDEV, N.P.; VIDINA, A.A.

Work in the typing and qualitative evaluating of arable lands.
Vop.geog. no.43:86-108 '58. (MIRA 12:5)
(Soils)

[redacted], A. A.

[redacted]

SO: Letopis' Zhurnal'nykh Statey, Vol. [redacted], Moskva, 1949

15

C.A.

The microbiological processes in composting low moor peat. A. N. Pertseva. *Doklady Vsesoyuz. Ordena Lenina Akad. Sel'skokhoz. Nauk im. V. I. Lenina* 15, No. 6, 19-25 (1950).—Lab. expts. on composting peat with addns. of lime, P, K, and N alone and in combination. NH_3, NO_3, and org. forms of N were detd. J. S. Joffe

PERTSEV, Yu., kapitan, rukovoditel' gruppy politicheskikh zanyatiy

Students' activity in political studies. Komm. Vooruzh. Sil
5 no.1:73-74 Ja '65. (MIRA 18:2)

PERTSEVA, A.N.; GOLIKOV, V.G.

Effect of different components of peat composts on the course of microbiological processes during composting. Trudy Vses. inst. sel'khoz. mikrobiol. no.14:133-141 '58. (MIRA 15:4)
(Compost)

PERTSEVA, A.N.; VASYUK, L.F.

The ratio among various groups of micro-organisms in the root system of flax and buckwheat during different developmental stages following application of the AMB bacterial fertilizer. Trudy Vses. inst. sel'khoz. mikrobiol. no.14:263-274 '58. (MIRA 15:4)
(Soil inoculation) (Flax) (Buckwheat)

PERTSEVA, A.N.; NIKITINA, Yo.A.

Development of the microflora in the AMB peat-lime fertilizer produced by different methods. Trudy Vses. inst. sel'khoz. mikrobiol. 16:216-222 '60. (MIRA 13:9)

(Soil inoculation)

LAZAREV, N.M.; NORKINA, S.P.; PERTSEVA, A.N.

Regulating microbiological processes in overturned sod on turf-Podzolic soils. Agrobiologiia no.5:3-8 S-O '58. (MIRA 11:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennoy mikrobiologii, g. Leningrad.
(Soil micro-organisms) (Grasses)

PERTSEVA, A.N., kand.biol.nauk; ROGACHEVA, P.U.

Influence of AMB bacterial fertilizer on the root microflora of various plants. Dokl. Akad. sel'khoz. 23 no.3:20-25 '58. (MIRA 11:4)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennoy mikrobiologii. Predstavlena akademikom I.I. Samoylovym.
(Soil inoculation)
(Rhizosphere microbiology)

Pertseva, A. N.

The microflora of black soils and its importance to the root nutrition of plants. V. N. Bylinkina and A. N. Pertseva. *Trudy Vsesoyuz. Nauch.-Issledovatel. Inst. Sel'skokhoz. Mikrobiol.* 3, 5-13(1953).—Samples of the following soils were studied: (1) Precaucasian black soil from the Rostov Exptl. Station; (2) usual black soil from the Agricultural Institute of the Voronezh region; (3) southern black soil from the Institute of Grain Economy of the Saratov region; (4) Kuban black soil; (5) dark-brown soil from the Ershov Exptl. Center (also of the Saratov region); and (6) humus-carbonaceous and midpodzolic clay soil of the Leningrad region which was used as the control. Golden-rain strain of oats were planted experimentally in the spring in flower pots of 3.5-kg. capacity. Weight of the dry plant substance indicated highest yield in soil type 1 and lowest in type 4. The addn. of fertilizer to 1 produced no beneficial effect. Marked improvement in the yield was observed in all other soils upon the addn. of N fertilizers, indicating that the natural nitrogenous compds. present in the upper arable layers of those soils were in the form not readily available to the growing plants. Soil of type 4 responded particularly well to the addn. of P fertilizers, while soil of type 6 responded best to the addn. of N and P contg. fertilizers. Soils 1, 5, and 6 proved most active microbiologically, stored a greater percentage of nitrates, had a higher azotobacter population, and a lower β-humus content. The parallelism between the yield of plant substance and the no. of azotobacters may be only a secondary manifestation, since such parallelism was frequently observed in soils rich in natural N substances as well. The question of the effectiveness of the addn. of azotobacter cultures to the soil cannot be answered in categorical terms. Much depends upon the structure of the soil, the natural presence or the artificial addn. of P compds., the presence of α-humates, the presence of toxic organic constituents, and the pH of the soil.

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BYLINKINA, V.N., kandidat biologicheskikh nauk; PERTSEVA, A.N., kandidat biologicheskikh nauk.

Microflora of chernozem soils and its importance for root nutrition of plants. Trudy Vses.inst.sel'khoz.mikrobiol. 13:5-13 '53. (Chernozem soils) (Soil microorganisms) (MLRA 8:1)

LAZAREV, N.M.; BYLINKINA, V.N., kandidat biologicheskikh nauk; PERTSE-VA, A.N., kandidat biologicheskikh nauk; BAYKO, V.P., kandidat sel'skokhozyaystvennykh nauk.

Importance of the subsoil horizons of chernozem soils in the nutrition of plants. Trudy Vses.inst.sel'khoz.mikrobiol. 13:14-21 '53. (MLRA 8:1)

(Chernozem soils) (Soil fertility)

The importance of the subillable layers of black soils to plant nutrition. N. M. Lazarev, V. N. Bylinkina, A. N. Pertseva, and V. P. Balko. *Trudy Vsesoyuz. Nauch.-Issledovatel. Inst. Sel'skokoz. Mikrobiol.* 8, 14-21(1953).—Preliminary set of expts. was made with following 3 types of soil: (1) Southern black soil of the South-Eastern Inst. of Grain Economy with soil layers 0-18, 19-37, and 38-56 cm. deep; (2) humus-carbonaceous soil from the Leningrad-Kingiseppsk region, with soil layers 0-20, 21-35, and 36-50 cm. deep; (3) midargillaceous loamy soil from the Lakhta station of the Leningrad region, with soil layers 0-18, 19-35, and 35-50 cm. deep. It was found that total N values decreased with the depth of soil layers; the nitrate N was of equal value in the upper 2 layers of soil (1) and considerably reduced in the 28-55 cm. layer. In the podzolic soil, the biol. activity, which is generally low in the upper layers, is practically absent in the deeper soil layers. The second series of plant-growing expts. were carried out in pots 20 cm. high when individual soil layers were tested and in pots 60 cm. high when the total 3 soil layers were tested integrally. Plant yields in dry wt. were practically the same in each of the 3 soil layers at normal pH. When the pH was lowered the yield in the subarable layers was reduced. In the 60-cm. pots, in which the total of 3 soil layers were tested, the yield in the case of soil type (1) was greater than the total of the yields of its individual constituent layers. In the podzolic soil the yield of the entire 3-layered test was smaller than in the single 0-17 cm. layer owing to the fact that the root system extended into the poorer lower soil layers. Knowledge of this has an important bearing on the application of deep-soil fertilization and microbioactivation in different crops, especially in the case of perennial grasses.

B. S. Levine

(2)

DISTANOV, E.G.; KLYAROVSKIY, V.M.; KOVALEV, K.R.; PERTSEVA, A.P.

Age of complex metal mineralization in the Salair ore field.
Geol. rud. mestorozh. 6 no.5:94-97 S-O '64. (MIRA 17:12)

1. Institut geologii i geofiziki Sibirskogo otdeleniya AN SSSR.

S/810/62/000/000/007/013

AUTHORS: Lokshin, F. L., Pertseva, A. P., Mikhaylenko, G. V., Lokshin, L. F.

TITLE: The quench-hardening of steel in a field of hydraulic shocks and of ultrasonic-frequency mechanical vibrations.

SOURCE: Metallovedeniye i termicheskaya obrabotka; materialy konferentsii po metallovedeniyu i termicheskoy obrabotke, sost. v g. Odesse v 1960 g. Moscow, Metallurgizdat, 1962, 221-232.

TEXT: The paper describes an experimental investigation of a new method of heat treatment of metals in a field of hydraulic shocks and ultrasonic frequency (HSUS) mechanical vibrations, which consists in the quench-hardening (QH) of steel in water or oil under continuous electrical discharges. The resulting HS phenomena and US mechanical vibrations were made to assume frequencies from 100-600 kcps. It is shown that QH in a HSUS field is conducive to a more complete transformation of austenite (A) into martensite (M). Cylindrical specimens, 15-mm diam, 20-mm high, of steels У8А (U8A), У10А (U10A), У11 (U11), У12 (U12), ШХ15 (ShKh15), 9ХС (9KhS), 7Х (7Kh), and 7Х3 (7Kh3), were tested. The discharge-capacitor voltage was varied from 30-80 kw (depending on the chemical composition of the steel), its capacity held at 0.24 μf. These 2 values determine

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the pressure, specific impulse, and specific energy of the shock waves. Effect of HSUS field on the amount of retained A: Test results are summarized in a full-page table, showing that the A-M transformation with HSUS QH is total. Effect of HSUS on the fine structure of the M: Directly upon inception of quench (Q), the HSUS field acts on the A. Then, as the cooling in the M interval proceeds, they act also on the newly forming M. The results of X-ray diffraction analysis are shown, indicating that in the HSUS field carbide formation proceeds even during the Q process itself. The carbides detected are Fe_3C. Graphic representations of the process data show that, at any given temperature, steel QHed in a HSUS field contains less C immediately after Q and anneal than steel QHed in the ordinary way. All other conditions being equal, steel QHed in a HSUS field contains more C in the solid solution if its Cr is smaller. QH in a HSUS field is conducive to the separation of the C from the solid solution, the formation of centers of the carbide phase, and their intensive growth. Therefore, the ordinarily observed Q phenomena, in which the growth of the carbide nuclei is impaired by their C-depleted immediate surroundings, are corrected by the HSUS field. Peculiarities of the structural forms of M: The microphotographs shown manifest the nonuniform, macro-acicular M structure obtained by ordinary QH, as compared with the crypto-acicular M structure with uniformly distributed carbides obtained in the HSUS field. Effect on the hardness of the steel: The steels QHed in a HSUS

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field have a more elevated hardness, and the reduction in hardness of such steels begins at higher anneal temperatures. However, the differences are small in the QHed state, since the 2 processes occurring, namely, the A-M transformation on the one hand and the removal of residual C on the other hand, have opposite effects on the hardness. The deformation of the second kind in steel QHed in a HSUS field are smaller than in steel QHed in the ordinary way; hence, the more elevated hardness of such steels cannot be attributed to stresses of the second kind, but to the more refined M structure and the dispersed mosaic structure. There are 10 figures and 3 tables; no references.

ASSOCIATION: Novocherkasskiy politekhnicheskiy institut (Novocherkassk Politechnical Institute).

DMITRIYEV, A.N.; DOIL'NITSYN, Ye.F.; KLYAROVSKIY, V.M.; PERTSEVA, A.F.

Use of nitrogen 15 as an internal standard in determining the quantity of radiogenic argon. Geokhimiia no.7:874-879 (MIRA 18:11)

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