

LEVIN, A.I.; KARNAYEV, N.A.

Electrochemical oxidation of trivalent chromium in industrial  
dichromate liquors. Khim.prom. no.9:642-644 S '62. (MIRA 15:11)  
(Dichromates) (Oxidation, Electrolytic)

POMOSOV, A.V.; LEVIN, A.I.

Present state and prospects for expanding the production of  
electrolytic copper powder. Porosh.met. 2 no.1:18-20 Ja-F  
'62. (MIRA 15:8)

1. Ural'skiy politekhnicheskiy institut imeni S.M.Kirova.  
(Metal powders) (Copper--Electrometallurgy)

KARNAYEV, N.A.; LEVIN, A.I.; KOTOVSKAYA, N.L.

Photoelectrocolorimetric determination of trivalent chromium  
in industrial solutions. Zav.lab. 28 no.5:547-548 '62.

(MIRA 15:6)

1. Ural'skiy politekhnicheskiy institut imeni S.M.Kirova.  
(Chromium--Analysis) (Colorimetry)

LEVIN, A.I.; LAZAREV, V.F.

ChM foam-producing agent and its effect on the formation of lead plates of a storage battery. Zhur.prikl.khim. 35 no.1:123-127 Ja '62. (MIRA 15:1)

1. Ural'skiy politekhnicheskiy institut imeni S.M.Kirova.  
(Surface-active agents) (Electrochemistry)  
(Storage batteries)

LEVIN, A.I.; LETSIKH, Ye.S.; MUKHIN, V.A.; NOMBERG, M.I.

Balance of bath voltage and ways to improve the operation of  
electrolytic cells in copper electrolysis plants. TSvet. met.  
35 no.11:52-57 N '62. (MIRA 15:11)  
(Copper--Electrometallurgy)

LAZAREV, V.P.; LEVIN, A.I.

Nature of the polarization in the formation of lead from lead  
sulfate. Zhur. fiz. khim. 36 no.6:1318-1320 Js'62  
(MIRA 17:7)

1. Ural'skiy politekhnicheskiy institut imeni Kirova.

LEVIN, A.L., inzh.

Preamplifier of a closed-circuit television channel. Vest. svyazi 23  
no.2:16-18 F '63. (MIRA 16:2)

1. Khar'kovskiy televizionnyy tsentr.  
(Television) (Amplifiers, Electron-tube)

LEVIN, A.I.; LETSIKH, Ye.S.; MUKHIN, V.A.; NOMBERG, M.I.

Balance of cell voltage and ways to economize electric power in the electrorefining of copper. *Izv.Vys. ucheb. zav.; tsvet. met.* 5 no.4: 62-71 '62. (MIRA 15:10)

1. Ural'skiy politekhnicheskiy institut, kafedra tekhnologii elektrokhimicheskikh proizvodstv.  
(Copper—Electrometallurgy)



LEVIN, A.I.

Ways of accelerating the process of electrolytic copper refining.  
TSvet. met. 36 no.1:22-28 Ja '62. (MIRA 16:7)  
(Copper—Electrometallurgy)

LEVIN, A.I.; NOMBERG, M.I.

Optimum current density in the electrorefining of copper.  
TSvet. met. 35 no.9:29-37 8 '62. (MIRA 16:1)  
(Copper--Electrometallurgy)

LEVIN, Aron Iosifovich; NOBBERG, Meyer Izrailevich; LUTSKAYA,  
G.A., red.izd-va; ISLENT'YEVA, P.G., tekhn. red.

[Electrolytic refining of copper] Elektroliticheskoe ra-  
finirovanie medi; spravochnoe posobie elektroliznika. Mo-  
skva, Metallurgizdat, 1963. 216 p. (MIRA 17:1)

LEVIN, Aron Iosifovich; LUKOVITSEV, P.D., red.; ARKHANGEL'SKAYA,  
M.S., red.izd-va; MIKHAYLOVA, V.V., tekhn. red.

[Theoretical principles of electrochemistry] Teoreticheskie  
osnovy elektrokhimii. Moskva, Metallurgizdat, 1963. 430 p.  
(MIRA 16:12)

(Electrochemistry)

LEVIN, A.I., doktor tekhn. nauk; PROSTAKOV, M.Ye., kand. tekhn. nauk

Passive films on nonferrous and ferrous metals. Zhur.  
VKHO 8 no.5:524-529 '63. (MIRA 17:1)

LETSKIKH, Ye.S.; LEVIN, A.I.

Anodic processes in the electrolytic refining of copper. TSvet.  
met. 36 no.7:29-35 J1 '63. (MIRA 16:8)  
(Copper—Electrometallurgy) (Passivation)

LEVIN, A.I.; LETSKIKH, Ye.S.

Interuniversity conference on the electrodeposition of nonferrous  
metals. *Tekhn. met.* 36 no.10:82-84 0 '63. (MIRA 16:12)

LEVIN, A.I.

Developments in the electrochemical science and technology in the field  
of the electroprecipitation of metals. TSvet. met. 36 no.12:19-24 D '63.  
(MIRA 17:2)



LEVIN, A. I. (Ural Polytechnical Institute im. S. M. Kirov)

"Development of electrochemical science and technology in fields of electro-deposition of metals and technical progress." Electrolytic means are used at present to obtain compact metallic deposits, refined metals, metallic powders and alloys and protective and decorative coverings. Development of electrochemical technology proceeds in the direction of further increase of current densities through application of new, improved types of electrolyzers and electrodes, use of more effective additional agents, methods of feed and circulation of electrolyte, application reversing, pulsating and alternating current, as well as new electrolytes, new conditions of electrolysis and new electrochemical processes.

Report presented at the Intervuz Conference on Electrodeposition of Nonferrous Metals, Ural Polytechnical Institute im S. M. Kirov, Sverdlovsk, held from 27-30 May 1963.

(Reported in Tsvetsyye Metally, No. 10, 1963, pp 82-84)  
JPRS 24,651 19 May 64

LEVIN, A. I.

"Means of intensification of electrolytic refining of copper" - indicates it is possible to outline the following main directions of works in this field: increase of temperature of electrolyte to 60-65°C with simultaneous closing of the mirror electrolyte; supporting of concentration H<sub>2</sub>SO on a level of 200 g/l, and CuSO<sub>4</sub> 5420 to 140 G/l; owing to increase of quality of servicing of baths a decrease in interelectrode distance; during abundant slime formation change of direction of the circulation of electrolyte in baths downward; introduction of sediment and filtration of electrolyte; improvement of quality of matrix sheets and anodes; use of anodes with lowest possible quantity of lead and nickel, facilitating passivation of anodes; introduction of continuous dosage of additional agents in optimum concentrations; lowering of concentration of nickel in solution.

Report presented at the Intervuz Conference on Electrodeposition of Nonferrous Metals, Ural Polytechnical Institute im S. M. Kirov, Sverdlovsk, held from 27-30 May 1963.

(Reported in Tsvetnyye Metally, No. 10, 1963, pp. 82-84)  
JPRS 24,651                      19 May 1964

LEVIN, A. I. (Prof.-Doctor)

"The influence of superficially active materials on the process of passivation of a lead electrode"

Report presented at the Intervuz Conference on Electrodeposition of Nonferrous Metals, Ural Polytechnical Institute im S. M. Kirov, Sverdlovsk, held from 27-30 May 1963.

(Reported in Tsvetnyye Metally, No. 10, 1963, pp. 82-84)  
JPRS 24,651 19 May 64

LEVIN, Aron Iosifovich; NOMBERG, Meyer Izrailevich

[Electrolytic refining of copper; handbook for an  
electrolytic cell operator] Elektroliticheskoe rafi-  
nirovanie medi; spravocnoe posobie elektroliznika.  
Moskva, Metallurgizdat, 1963. 216 p. (MIRA 17:12)

LEVIN, A.I.

Electrohydraulic feed drive with a wide range of stepless  
speed regulation. Stan. 1 instr. 35 no.10:18..29 C '64.  
(MIRA 10:18)

GURYLEV, V.V.; LEVIN, A.I.; NASAKINA, M.B.

Use of ultrasonic waves and reversing current in the  
electrodeposition of copper from a pyrophosphate electrolyte.  
Zhur.prikl.khim. 37 no. 5:1053-1057 My '64. (MIRA 17:7)

1. Ural'skiy politekhnicheskij institut imeni S.M.Kirova.

LEVIN, A.I.; MIKHUN, V.A.

Using channel-type electrolytic cells for the electrolytic  
refining of copper. TSvet. mot. 37 no.6:18-22 Je '64.  
(MIRA 17:9)

KOCHEROV, V.I.; LETSIIKH, Ye.S.; MUKHIN, V.A.; LEVIN, A.I.

Bath voltage balance and ways of perfecting copper foil production. Izv. vys. ucheb. zav., tsvet. met. 7 no.5:39-44  
'64 (MIRA 18:1)

1. Kafedra tekhnologii elektrokhimicheskikh proizvodstv Ural'skogo politekhnicheskogo instituta.



MUKHIN, V.A.; LEVIN, A.I.

Studying the effect of chlorine ions on the quality of  
cathodic copper in the intensification of electrolysis.  
TSvet. met. 37 no.11:36-37 N '64. (MIRA 18:4)

LEVIN, A.I.; BORBAT, V.F.

Effect of fatty acids on the electrodeposition of cobalt from  
chloride electrolytes. Zhur.prikl.khim. 37 no.7:1627-1628 31  
'64. (MIRA 124)

1. Ural'skiy politekhnicheskiy Institut imeni Kirova.

LEVIN, A.I.; LAZAREV, V.F.; MUKHIN, V.A.

Electrolytic lead coating of auxiliary parts of a storage battery using  
sulfamine electrolytes. Zhur. prikl. khim. 38 no.7:1569-1574 J1 '65.  
(MIRA 18:7)

1. Ural'skiy politekhnicheskij institut.

ARKHIPOV, A.Ya.; ALTAYFVA, N.V.; BAYBULATOVA, Z.K.; VISKOVSKIY, Yu.A.;  
GOLENKOVA, N.P.; KRAVCHENKO, M.F.; KUPRIN, P.N.; LEVIN, A.I.;  
POL'STER, L.A.; SEMOV, V.N.; SYRNEV, I.P.; USHKO, K.A.;  
SHOLOKHOV, V.V.; Primalni uchastiy: RODIONOVA, M.K.; CHEL'TSOV,  
Yu.G.; KUZNETSOV, Yu.Ya., kand. geograf. nauk, nauchnyy red.

[Geology and oil and gas potentials of the south of the U.S.S.R.;  
Kara-Bogaz-Gol (Gulf) region (eastern part of the Middle Caspian  
oil- and gas-bearing basin).] Geologiya i neftegazonosnost' iuga  
SSSR; Prikarabozaz'e (vostochnaya chast' Srednekaspiiskogo nefte-  
gazonosnogo basseina). Leningrad, Nedra, 1964. 300 p. (Trudy  
Nauchno-issledovatel'skoy laboratorii geologicheskikh kriteriyev  
otsenki perspektiv neftegazonosnosti no.12).

LEVIN, A.L.

Some diagnostically important symptoms of vasomotor rhinitis. Zhur.  
ush., nos. 1 gorl. bol. 24 no.5:48-53 S-0 '64.

(MIRA 18:3)

1. Iz kafedry bolezney ukha, gorla i nosa imeni zasluzhennogo  
deyatelya nauki prof. L.T.Levina (zav. - prof. V.G.Yermolayev)  
Leningradskogo Ordena Lenina instituta usovershenstvovaniya  
vrachey.

S/103/61/022/009/013/014  
D206/D304

**AUTHORS:** Korobochkin, B.L., and Levin, A.L. (Moscow)

**TITLE:** The influence of dry friction in guiding rails on the stability of the hydraulic follow-up systems in automatic cutting machines

**PERIODICAL:** Avtomatika i telemekhanika, v. 22, no. 9, 1961, 1253 - 1256

**TEXT:** In the present article the authors analyze the problem of stability and of dry friction in the follow up systems in these installations on a strictly theoretical basis. For increased accuracy in determining the behavior of the system in an oscillatory state, the saturation characteristics of the piping is introduced as conditioned by the finite pump output. In solving the problem, use was made of the electronic analogue (MF-M). To evaluate the accuracy of the results obtained the same analogue was used to obtain the solution of the Vyshnegradskiy problem which was in complete agree- ✓

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The influence of dry friction ...

S/103/61/022/009/013/014  
D206/D304

ment with the solution of this problem given by A.A. Andronov and A.G. Mayer. The present article is restricted to analyzing the influence of dry friction and that of saturation resulting from the finite output of the pump. The linearized equation of the system with linear input function, i.e. with constant velocity of the probe without friction, has the form of

$$L \frac{d^3 \delta}{dt^3} + M \frac{d^2 \delta}{dt^2} + D \frac{d \delta}{dt} + E = D \frac{dy}{dt} + R. \quad (1)$$

In it L - a factor characterizing the influence of compressibility of the fluid and elasticity of piping; M - the mass of the working part of the machine; D - the coefficient of internal damping; E - stiffness coefficient; R - the constant component of cutting speed;  $\delta$  - copying error; y - coordinate of the probe tip;  $\delta = y - x$ , where x - coordinate of the moving part of the machine. The analysis of stability of such a system reduces to the Vyshnegradskiy problem in the theory of servos without power amplification. The

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The influence of dry friction ...

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authors reduce the system to a dimensionless form of

$$\xi = \tau t, \quad P = \gamma M \sqrt{\frac{E_1}{L_1}} \psi, \quad P_r = \gamma M \sqrt{\frac{E_1}{L_1}}, \quad t = \sqrt{\frac{L}{E}} \tau. \quad (5)$$

where  $\xi$  and  $\psi$  are dimensionless coordinates of the system and  $\tau$  a dimensionless time. Since the pump output is finite, the velocity of moving arm cannot exceed

$$x'_{\max} = \frac{Q_p}{F} \quad (6)$$

where  $Q_p$  - is the pump output and  $F$  - the area of the piston. Eq. (6) in dimensionless form can be written as

$$\left(\frac{d\xi}{d\tau}\right)_{\max} = \eta_{\max} = \frac{Q_p}{F\gamma} \sqrt{\frac{L}{E}}. \quad (7) \quad \checkmark$$

The values of parameters ultimately obtained are shown as a family  
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The influence of dry friction ...

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D206/D304

of curves in Fig. 2b with the limits of stability shown in Fig. 2a for various initial displacements of cutting head from neutral. The same Fig. 2 shows the hyperbola of Vyshnegradskiy (Curve A, Fig. 2b) and the limits of stability region as obtained by A.A. Andronov and A.G. Mayer (Fig. 2a). It is stated in conclusion that the results by Andronov and Mayer (Ref. 2: Zadacha Vyshnegradskogo. v teorii pryamoregulirovaniya (The Vyshnegradskiy Problem in the Theory of the Control without Power Amplification) Avtomatika i telemekhanika, v. VIII, no. 5, 1947) cannot be applied directly to the problem of stability of a hydraulic follow-up system of an automatic cutting machine, if the dry friction has to be taken into account, and that the analysis of such a system with the limitation introduced by the finite output capability of the pump, has produced conditions for absolute stability as a function of its parameters and of the pump output. There are 2 figures and 4 Soviet-bloc references.

SUBMITTED: August 15, 1960

Card 4/5

LEVIN, A. L., ordinator

Surface intranasal novocaine block in the treatment of vasomotor rhinitis. Vest. otorin. no.5:34-37 '61. (MIRA 14:12)

1. Iz kliniki bolezney ukha, nosa i gorla imeni zasluzhennogo deyatelya nauki prof. L. T. Levina (zav. - prof. V. G. Yermolayev) Instituta usovershenstvovaniya vrachey i Ob'yedinennoy bol'nitsy imeni V. I. Lenina, Leningrad.

(NOSE—DISEASES) (NOVOCAINE)

LEVIN, A.L.; TROITSKAYA-TREGUBOVA, T.P., kand. med. nauk

Roentgenological study in the diagnosis of vasomotor rhinitis. Vest. oto-rin. 25 no.4:39-42 J1-Ag '63.

(MIRA 17:1)

1. Iz kliniki bolezney ukha, nosa i gorla (zav. - prof. V.G. Yermolayev) i kafedry rentgenologii (zav. - prof. Sh.I. Abramov) Leningradskogo ordena Lenina instituta usovershenstvovaniya vrachey imeni S.M. Kirova.

LEVIN, Aleksandr Lvovich, 1914; LAGTINA, Ye.V.,  
1914.

[Catarrhs of the upper respiratory tract] Katary vorkh-  
nika: vyklycheniye i lecheniye. Moskva, Izd-vo "Znanie,"  
1975. 45 p. (Moskovskii universitet: Fakultet zdorov'ia,  
no.2) (SIRA 16:1)

FOMIN, N.D., otvetstvennyy redaktor; LEVIN, A.M., redaktor; IGHATOVICH, V.M., redaktor; SKOVRONOK, A.I., redaktor; PAVLOV, N.P., tekhnicheskiy redaktor.

[Wholesale price list no.1 for production work in printing plants]  
Preiskurant no.1. optovykh tsen na produktsiyu poligraficheskikh predpriyatii. Moskva, Gos. izd-vo "Iskusstvo," 1952. 231 p.  
[Microfilm] (MLRA 8:2)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye po delam poligraficheskoy promyshlennosti, izdatel'stv i knizhnoy trgovli.  
(Printing industry--Tables and ready reckoners)

SIMANOVSKAYA, R.E.; LEVIN, A.M.; TSYPIHA, E.I.

Technical and economic indices of the production of sulfur dioxide  
and portland cement from phosphogypsum. [Trudy] NIUIF no.160:181-206  
'58. (MIRA 12:8)  
(Kazakhstan--Gypsum) (Sulfur dioxide) (Portland cement)

LEVIN, A.M., inzh.

Elastic coupling for the direct drive of refrigerator compressors.  
Khol.tekh.40 no.3:45-47 My-Je '63. (MIRA 16:9)  
(Moscow--Compressors--Transmission devices)

10 AM



SOV/137-58-9-18443

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 37 (USSR)

AUTHOR: Levin, A. M.

TITLE: On the Mechanism of Effervescence of Steel (O mekhanizme kipeniya stali)

PERIODICAL: Tr. Sibirsk. metallurg. in-ta, 1957, Nr 4, pp 119-141

ABSTRACT: To solve the question of the location of the development of the oxidizing reaction of C, the critical sizes of the bubbles of CO corresponding to the equal probability of their formation in the bulk of liquid steel (BLS), on the interface between the metal and the slag (IMS), and on the solid surface (SS) are compared. At the IMS, under the most favorable conditions (size of the angle formed between the convex slag layer and the horizontal surface being 120°, and the surface tension of the slag being one-fourth that of the metal) the critical size of the nucleus increases 20-fold as compared to its size in BLS; on a smooth SS it is still lower (at a contact angle of 140° it is only one-fifth). The nuclei forming on these interfaces as well as in BLS are very small ( $1 \cdot 10^{-7}$  -  $20 \cdot 10^{-7}$  cm) and cannot grow spontaneously because of their small size.

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SOV/137-58-9-18443

### On the Mechanism of Effervescence of Steel

supersaturations thousands of times greater than the existing ones. Only on a rough surface with pores of  $> 1 \mu$  is the appearance of nuclei capable of growth possible. The surface oxidation of C is dependent on the presence of porous particles on IMS. To verify these conclusions the composition of metal was determined at different depths in the bath of an electric arc furnace of 20-ton capacity. The variations of the concentration of C, Mn, P, and S in the oxidizing period rarely exceed the analytical errors. The non-uniformity in O content  $\{ ([O]_{top} - [O]_{bottom}) / [O]_{mean} \} \cdot 100$  attains 50% and decreases with an increase in the intensity of effervescence. In the upper levels of the bath, the excess [O] (above the equilibrium with C) is approximately constant independently of the time of the addition of the ore, which testifies to the predominance of the development of the reaction on the floor of the furnace.

1. Steel--Carbonization    2. Slags--Surface tension    3. Furnaces    S. P.  
--Performance

LEVIN, A.M.

SOV/137-58-8-16527

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 42 (USSR)

AUTHORS: Levin, A.M., Kramarov, A.D.

TITLE: Smelting of Electrical Steel From Blooms Containing Ni (Opyt vyplavki elektrostali iz nikel'soderzhashchey kritsy)

PERIODICAL: Tr. Sibirsk. metallurg. in-ta, 1957, Nr 4, pp 142-157

ABSTRACT: A 10-ton basic arc furnace was employed for smelting four batches of Cr-Ni-Mo steel. Two batches were smelted in accordance with standard procedures, whereas the smelting of the other two batches was carried out with a charge containing 60 and 64% of blooms with the following composition: 82.5-86.8% Fe<sub>total</sub>, 0.99-1.06% Ni, 0.19-0.38% Cr, 1.65-1.86% C, 0.09-0.12% S, and 0.17-0.22% P. The nonmetallic components of the blooms amounted to approximately 20% and contained up to 45% SiO<sub>2</sub>. The technology of experimental smeltings differed from the standard procedures in the following respects: a) introduction of 200-400 kg of lime and 100 kg of Fe ore into the charge; b) addition of 500 kg of lime and 150-200 kg of ore during the melting stage; c) discharging the slag twice during the melting stage; d) a P content of 0.067 and 0.116% after fusion.

Card 1/2

SOV/137-58-8-16527

Smelting of Electrical Steel From Blooms Containing Ni

e) introduction of an oxidizing slag in amounts equivalent to 41.7 and 36.9%; f) a reduction in Mn content to 0.02% at the end of the boil stage; g) a reduction in S content to values of 0.064 and 0.073% after fusion, and 0.031 and 0.029% prior to the beginning of the finishing stage; h) reduction in Ni consumption by 5 kg/t of steel and an increase in the consumption of Fe-Mn by 8 kg/t of steel; i) increase in the time required for smelting of 1 ton of metal, under current from 37 to 46 minutes; j) a 30-35% increase in consumption of electrical energy coupled with a reduction in output of liquid metal from 95 to 80%. The finished metal of the experimental smeltings was characterized by an increased P content and a reduced concentration of gases and nonmetallic inclusions. As evidenced by macro inspection, susceptibility to flakes, mechanical properties of longitudinal and transverse specimens at normal and reduced temperatures, by anisotropy and temper-brittleness tendencies, the metal produced in experimental smeltings does not differ from metal obtained by standard smelting methods.

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|-----------------------------|-----------------------------------|
| 1. Steel alloys--Production | 2. Electric furnaces--Performance |
| 3. Steel alloys--Properties | 4. Nickel--Metallurgical effects  |

A.Sh.

Card 2/2

SOV/137-58-9-18574

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 57 (USSR)

AUTHOR: Levin, A.M.

TITLE: The Effect of the Conditions of Wetting on the Process of Stirring of Steel During Boiling (Vliyaniye usloviy smachivaniya na peremeshivaniye stali pri kipenii)

PERIODICAL: Tr. Sibirsk. metallurg. in-ta, 1957, Nr 4, pp 171-178

ABSTRACT: Dimensions of bubbles breaking away from the bottom of a steel smelting furnace were calculated for various conditions of wettability of the furnace bottom by liquid metal. The volume of the bubbles increases proportionately with the third power of the contact angle  $\theta$  and amounts to 10-800 mm<sup>3</sup>. By taking this function into consideration, the well-known formulae for the volume of the bubbles evolved and the degree of agitation of metal produced by the bubbles were further refined. It is demonstrated, by means of a specific example, that as the angle  $\theta$  varies from 20° to 140° the volume of the bubbles appearing on the surface increases approximately three-fold, while their capacity for agitation of the molten metal increases by 50%.

Card 1/1

1. Furnaces--Operation
  2. Metals (Liquid)--Performance
  3. Mathematics
- S.P.

SOV/137-58-10-20613

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 39 (USSR)

AUTHORS: Levin, A.M., Danilov, P.M., Yeremenko, S.N., Pravdina, T.E.

TITLE: Oxygen, Nonmetallic Inclusions, and Certain Problems of the Technology of Electric Steelmaking (Kislород, nemetallicheskiye vkluycheniya i nekotoryye voprosy tekhnologii elektropлавki stali)

PERIODICAL: Izv. vyssh. uchebn. zavedeniya. Chernaya metallurgiya, 1958, Nr 1, pp 55-74

ABSTRACT: Specimens of metal were taken during 13 heats of various steels in 30-t electric-arc furnaces. [O] was determined by the Hertz method and by vacuum melting, the nonmetallic inclusions (NI) were determined by electrolytic and metallographic methods. It was established that in low-carbon steels (LCS) [O] at the end of the oxidizing period attains 0.06%, but declines to 0.02% when ready for tapping, and further to 0.01% during tapping. In medium-carbon steels (MCS), [O] was 0.041-0.01% at the end of the oxidizing period and dropped to 0.01% when it was time for tapping. In high-carbon steels (HCS) [O] fluctuates in the vicinity of ~0.01% during the entire heat, and approximates 0.005% when ready for tapping. It is found

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SOV/137-58-10-20613

Oxygen, Nonmetallic Inclusions, and Certain Problems (cont.)

that only in the LCS did [ O ] diminish to less than equilibrium with C during period of Fe-Si and Al deoxidation, while in all other cases it was higher than the values in equilibrium with C. The most pronounced diminution in [ O ] occurred during the slagging off of the oxidizing and the making of the white slag. Upon deoxidation of the Si, the LCS first displayed a pronounced diminution in [ O ], which later slowed down or ceased completely, while in MCS a smooth drop in [ O ] was observed, and in HCS there was no change in [ O ] in the majority of cases. During tapping there was a pronounced reduction in [ O ] in the LCS, a less pronounced reduction in MCS, while both decreases and increases in [ O ] were observed in HCS. On deoxidation, the Si contents of NI in LCS rose on the average from 0.0038 to 0.0288% and then declined to 0.01% at the time of Al addition, subsequently rising to 0.0292%, and declining again to 0.01% during tapping. A similar regularity was also observed in MCS, but in HCS the NI contents fluctuated - 0.007%, did not increase after Si deoxidation, and increased after Al deoxidation to less than 0.01%. The data obtained are taken as good cause for recommendation of intensified deoxidation of the steel at the outset of the reduction period by use of complex deoxidizers and addition of Fe-Si to the slag in addition to Fe-Si, as this makes for a shorter heat. Bibliography: 7 references.

1. Steel--Production    2. Induction furnaces--Operation    3. Steel    A.Sh.  
Card 2/2    --Impurities    4. Oxygen--Performance

SOV/137-58-9-18620

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 65 (USSR)

AUTHORS: Levin, A.M. Kramarov, A.D.

TITLE: The Minimum Silicon-carbon Ratio in Killed Steel (O minimal'-nom sootnoshenii mezhdru soderzhaniyem kremniya i ugleroda v spokoynoy stali)

PERIODICAL: V sb.: Staleplavil'n. proiz-vo. Moscow, Metallurgizdat, 1958, pp 3-10

ABSTRACT: A theoretical analysis shows that the minimum amount of Si needed to deoxidize steel depends upon its C contents: When C rises from 0 to 0.1% it increases from 0 to 0.08%; when the C content is 0.1-0.16%, 0.08% Si is required, while with 0.16-0.30% C the Si requirement is 0.08-0.23%, and with 1.4-4.3% C the amount of residual Si diminishes from 0.23 to hundredths of a per cent. To verify the theoretical conclusions, experiments are conducted on the deoxidation of carbon steels of various compositions melted in an 80-kg electric furnace with 180-kva transformer. 130 experimental ingots of 2.2 kg weight were investigated and confirmed the theoretical principles established. The experimental and theoretical curves of ratio of ingot

Card 1/2



SOV/137-58-9-18620

The Minimum Silicon-carbon Ratio in Killed Steel

density to C and Si contents are similar in quality and in good quantitative agreement.

L.K.

1. Steel--Processing results    2. Carbon--Theory    3. Silicon--Theory    4. Steel--Test

Card 2/2

18(5)

SOV/148-59-1-8/19

**AUTHORS:** Levin, A.M., Docent, Candidate of Technical Sciences; Tedér, L.I.; Glazov, A.N.; Monastyrskiy, V.Ya.; Chernenko, A.D. and Alyavdin, V.A., Engineers

**TITLE:** Metal Refining in Intensified Smelting of Structural Electric Steel (Rafinirovaniye metalla pri intensifikatsii plavki konstruktсионnoy elektrostali)

**PERIODICAL:** Izvestiya vysshikh uchebnykh zavedeniy - Chernaya metallurgiya, 1959, Nr 1, pp 71-81 (USSR)

**ABSTRACT:** Comparative tests were carried out on kinetics of harmful impurities with the use of conventional and experimental methods of structural steel smelting. The basic peculiarities of the experimental technology which caused intensification of smelting and reduced the smelting time by one hour, included: dephosphorization during the smelting process; use of gaseous oxygen; termination of smelting combined with oxidizing blowing-through; reduced quantity of burning-out carbon; preliminary deoxidation with silico-manganese and early addition of ferrosilicon plus coke dust, and ferrochrome; metal treatment by slag of the same metal at the moment of discharge. Results

Card 1/3

SOV/148-59-1-8/19

**Metal Refining in Intensified Smelting of Structural Electric Steel**

of the tests were compared and the following conclusions were made: Dephosphorization did not depend on the basicity of the slag and on the temperature, whereas the ferrous oxide content had a strong effect on phosphorus distribution between the metal and the slag; due to metal treatment by slag of the same metal, the desulfurization rate in the test method was higher than in the conventional technology; a strong effect of ferrous oxide on the desulfurization coefficient in the ladle was observed and therefore slag deoxidation prior to the discharge was imperative. The decrease of burning-out carbon did not increase the hydrogen content. Preliminary deoxidation and early addition of ferrosilicon dust caused speeded-up elimination of oxygen. Prior to the addition of agents with higher reducing capacities than those of carbon, the oxygen content depends on the carbon content and, in the case of "12KhN2A" steel on the silicon content. Mixing of the metal with the slag caused a decrease of the oxygen content during the discharge. The determination of non-metallic impurities was carried out by Engineer S.N. Yermenko, who stated that, in spite of the shortened reduction time, intensified deoxidation created favorable conditions for eliminating impurities. The

Card 2/3

SOV/133-59-4-10/32

AUTHOR: Levin, A.M., Docent, Teder, L.I., Monastyrskiy, V.Ya.,  
Glazov, A.N., Alyavdin, V.A., and Chernenko, A.D.,  
Engineers

TITLE: Intensification of Smelting Structural Electric Steel  
(Intensifikatsiya plavki konstruktsionnoy elektrostali)

PERIODICAL: Stal', 1959, Nr 4, pp 323-327 (USSR)

ABSTRACT: An investigation of the possibilities of intensifying the electric smelting process carried out on the Kuznetsk Metallurgical Combine during 1956-1957 is described. For this purpose 100 heats of structural steels were carried out (table 1) in which the following methods of intensification of smelting were tested: 1) the use of oxygen for the oxidation of admixtures; 2) combining of the end of the melting period with the beginning of oxidation; 3) dephosphorisation of metal during melting; 4) decreasing the amount of burned out carbon (up to 0.2%); 5) intensification of the deoxidation by the use of a preliminary precipitation deoxidation with complex deoxidants and with an addition of powdered ferrosilicon after the making of a reducing slag together with powdered coke; tapping of metal

Card 1/3

SOV/133-59-4-10/32

Intensification of Smelting Structural Electric Steel

together with slag with an energetic stirring;  
6) intensification of the desulphurisation process;  
7) intensification of alloying by starting it at the beginning of the reducing period. The comparison of changes in the composition of metal and slag during smelting by the usual and experimental practices for steel 40Kh is given in Fig 1 and 2 respectively, the comparison of mechanical properties of metal produced by the usual and experimental practices - table 2. Mean duration of the individual smelting periods and whole heats - table 3. It is concluded that the experimental technology of smelting electric structural steels can be used with advantage. The investigation of the metal produced by the experimental technology indicated that it is of satisfactory quality which was confirmed by a considerable decrease in the proportion of out of grade steel (from 0.872 to 0.186%). The mean duration of a heat is decreased by 1 hour which under operating conditions of the melting shop on the work increased the productivity of a furnace by 14% and

Card 2/3

SOV/133-59-4-10/32

Intensification of Smelting Structural Electric Steel

decreases the specific power consumption by 80 kwhr/ton of steel. There are 2 figures, 3 tables and 11 references of which 9 are Soviet, 1 German and 1 American.

ASSOCIATION: Sibirskiy Metallurgicheskiy Institut i Kuznetskiy Metallurgicheskiy Kombinat (Siberian Metallurgical Institute and the Kuznetsk Metallurgical Combine)

Card 3/3

KRAMAROV, A.D.; TOLSTOGUZOV, N.V.; ZARVIN, Ye.Ya.; TIMMERMAN, V.P.; LEVIN,  
A.M.; GUROV, A.K.

Making manganese alloys from Usa deposit manganese ores. Izv. vys.  
ucheb. zav.; chern. met. no.12:46-54 '60. (MIRA 14:1)

1. Sibirskiy metallurgicheskiy institut.  
(Usa Valley—Manganese ores)  
(Manganese alloys—Metallurgy)

ZARVIN, Ye.Ya.; KRAMAROV, A.D.; TOLSTOGUZOV, N.V.; GUROV, A.K.; LEVIN, A.M.;  
TIMMERMAN, V.P.

Use of silicomanganese made of Usa ores for the reduction of  
steel. Izv. vys. ucheb. zav.; Chern. met. no.12:55-62 '60.  
(MIRA 14:1)

1. Sibirskiy metallurgicheskiy institut.  
(Usa Valley—Ore deposits)  
(Silicon-manganese alloys)



GUTERMAN, B.L.; LEVIN, A.M.

Technical and economic evaluation of the process of simultaneous  
production of phosphorus and aluminous cement. [Trudy] NIUIF  
no.164:103-104 '59. (MIRA 15:5)  
(Cement industries) (Phosphorus industry)

EDNERAL, Fedor Prokop'yevich; FILIPPOV, Anatoliy Fedorovich;  
KRAMAROV, A.D., prof., doktor tekhn. nauk, retsenzent;  
TOLSTOGUZOV, N.V., dots., kand. tekhn. nauk, retsenzent;  
LEVIN, A.M., retsenzent; VISHNYAKOV, A.V., retsenzent;  
KATS, L.N., retsenzent; SHVEDOV, L.V., red.; ROZENTSVEYG,  
Ya.D., red. izd-va; MIKHAYLOVA, V.V., tekhn. red.

[Calculations on the electrometallurgy of steel and ferro-  
alloys] Raschetny po elektrometallurgii stali i ferrosplavov.  
Izd.2., ispr. i dop. Moskva, Metallurgizdat, 1962. 230 p.  
(MIRA 15:12)

(Steel--Electrometallurgy)  
(Iron alloys--Electrometallurgy)

LEVIN, A.M.; GLAZOV, A.N.; VERSHININ, V.I.; DANILOV, P.M.; PASHCHENKO, V.Ye.

Characteristics of the production of catalyzer steel with a low  
addition content. Izv. vys. ucheb. zav.; chern. met. 8  
no.10:62-68 '65. (MIRA 18:9)

1. Sibirskiy metallurgicheskiy institut i Kuznetskiy metallurgi-  
cheskiy kombinat.

LEVIN, A.M.; SALIKHODZHAYEV, S.

Developing and testing a burner with a metal net emitter.  
Gaz.prom. 10 no.2:14-18 '65.

(MIRA 18:12)

L 9581-66 EWT(m)/EPF(n)-2/ENP(t)/ENP(b)/EWA(h) IJP(c) JD/JG

ACC NR: AP5026783

SOURCE CODE: UR/0286/65/000/017/0069/0069

INVENTOR: Levin, A. M.; El'manovich, V. N.; Zhorova, L. P.

40  
B

ORG: none

TITLE: Tantalum-base alloy. Class 40, No. 174366

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 17, 1965, 69

TOPIC TAGS: tantalum alloy, niobium containing alloy, rhenium containing alloy

ABSTRACT: This Author Certificate introduces a tantalum-base alloy with improved physicomachanical and technological properties containing 25--35% niobium and 1--10% rhenium. [AZ]

SUB CODE: 11/ SUBM DATE: 25Jan64/ ATD PRESS: 4164

leh  
Card 1/1

UDC: 669.294.5

L 02318-67 ENT(1)/T IJP(c)

ACC NR: AR6016569

SOURCE CODE: UR/0196/65/000/012/T019/T019

AUTHOR: Devin, A. M.; Bryukhanov, O. N.

74  
B

TITLE: Effect of radiative reflux from a heated component on the operating stability of infrared gas burners

SOURCE: Ref. zh. Elektrotehnika i energetika, Abs. 12T75

REF SOURCE: Sb. Ispol'z. gaza v nar. kh-ve. Vyp. 3. Saratov, 1965, 170-174

TOPIC TAGS: IR radiation, IR source, radiation effect, radiative heating

ABSTRACT: The authors study the effect which radiative reflux from the article being heated has on the warm-up of ceramic plates and the operating stability of infrared heaters. Natural gas was used in the tests. The specimen used for heating was a 1 mm plate made from grade 3 steel. Ceramic plates perforated with holes 1.55 mm in diameter were tested. The results of the study show that an increase in the heat radiated by the specimen and an increase in the temperature to which the plate is heated results in the possibility of flame breakthrough and reduces the reliability of infrared burner operation. Radiative reflux during drying and other types of low-temperature treatment has no effect on the stability of burner operation. 3 illustrations, bibliography of 4 titles. [Laboratory of Gas Devices]. L. Tragova. [Translation of abstract]

SUB CODE; 13, 20

UDC; 662.951.2

Card 1/1

L 08193-67 EWT(m)/EWP(w)/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6030502

(A)

SOURCE CODE: UR/0149/66/000/004/0117/0120

AUTHOR: Lovin, A. N.; Zhorova, L. P.; Elmanovich, V. N.

47  
-11

ORG: Moscow Institute for Steel and Alloys, Department of the Metallurgy of Nonferrous, Rare, and Radioactive Metals (Rokomendovana kafedroy metallovodeniya tsvetnykh, redkikh i radioaktivnykh metallov Moscovskogo instituta stali i splavov)

B

TITLE: Effect of alloying elements on the electric resistance of a tantalum-niobium alloy

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 4, 1966, 117-120

TOPIC TAGS: electric resistance, tantalum containing alloy, niobium containing alloy

ABSTRACT: The choice of a <sup>v1</sup> tantalum-niobium <sup>v1</sup> alloy was dictated by the fact that these metals have a resistance at 20° about 2.5 times greater than that of tungsten and molybdenum, and that they recrystallize without an increase in brittleness, since the solubility of gases in them is greater. In addition, tantalum and niobium have better industrial properties than tungsten and molybdenum; the ductility of a tantalum base alloy remains high with the introduction of any desired amount of niobium. A tantalum alloy with from 30 to 35% niobium has been found experimentally to have the highest specific resistance of any binary alloy of the Ta-Nb system. The electric resistance of this alloy at 20° is 20 microhm-cm, and at 1500°, 90 microhm-cm. Alloying

Card 1/2

UDC: 669.018.54

L 08193-67

ACC NR: AP6030502

16 6

elements were Mo, Re, V, Zr, and Ti, that is, metals which form solid solutions with tantalum and niobium. The alloying elements were added to the base alloy in the following amounts: 1-10% Re; 2-5% Mo; 2-10% V; 5-20% Zr; and 5-20% Ti. It was found that addition of molybdenum, rhenium, and vanadium in amounts corresponding to the chosen upper limits leads to a marked increase in brittleness. Experiments were carried out on the electric resistance of alloys containing rhenium, molybdenum, vanadium, and titanium. It was found that the highest specific resistance at 1500° was exhibited by an alloy containing 4% Re, and 3.5% V (105-110 microhm-cm). The overall conclusion is that these alloys show promise for use as heating elements in electric vacuum equipment. Orig. art. has: 4 figures and 1 table.

SUB CODE: 11/ SUBM DATE: 25Feb65/ ORIG REF: 001/ OTH REF: 001

electrical resistance alloys 15

Card 2/2 dda



ACC NR: APT002868 SOURCE CODE: UR/0149/66/000/006/0146/0149

AUTHOR: Levin, A.M.; Zhorova, L.P.

ORG: none

TITLE: Effect of alloying elements on the deformability of rhenium

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 6, 1966, 146-149

TOPIC TAGS: platinum containing alloy, yttrium containing alloy, vanadium containing alloy, rhenium base alloy, molybdenum containing alloy, tungsten containing alloy, zirconium containing alloy, titanium containing alloy, niobium containing alloy, tantalum containing alloy, alloy cold reduction, metal deformation, solid solution, solubility, hardness

ABSTRACT: Ingots of rhenium alloys containing 1.28 and 3.33% Mo, 1.08 and 9.31% W, 0.9 and 1.4% Nb, 0.5 and 1.14% Ta, 0.63 and 1.0% Zr, 2.94 and 27.3% Ti, 17.73 and 38.52% V, 0.3% Y, or 1.86 and 5.7% Pt were melted from 99.98% pure electrolytic rhenium powder in a nonconsumable electrode arc furnace in a helium atmosphere, and investigated to determine the effect of individual alloying elements on the alloy structure and deformability.

Card 1/2

UDC: 669.849

ACC NR: AP7002868

All alloys contained about 0.01% O<sub>2</sub> and 0.005% H<sub>2</sub>. Alloys containing 9.31% W, 1.28% Mo, 5.7% Pt, 0.63% Zr or 0.3% Y were found to be single-phase solid solutions of these elements in rhenium. Alloys containing 0.9 and 1.4% Nb, 1.0% Zr, 1.14% Ta or 2.94% Ti had a two-phase structure. The solubility of W and Pt in rhenium reached 12 and 60%, respectively. Ta, Nb, Zr, Ti, and Mo had a low solubility in rhenium. Ti and Zr additions produced the highest increase in the hardness of the investigated alloys. Nb and Ta additions produced a somewhat lower hardness increase, while Mo, W and Pt additions, especially in small (up to 2%) amounts, produced almost no increase. Rhenium containing 0.01 O<sub>2</sub> and 0.005% H<sub>2</sub>, arc-melted in a pure helium atmosphere, sustained a cold reduction of about 9%. The addition of 1-9% W, 1.0% Zr or 1-3% Mo increased the permissible cold reduction to 23-26%, 19%, and 17-19%, respectively. Nb, Ta, V, Y, and Pt additions in amounts up to several percent have practically no effect on the deformability of rhenium. The majority of the investigated alloying elements increased the work hardening of rhenium in cold rolling, although no direct relationship between the work hardening and deformability was established. For complete stress relieving, work-hardened rhenium and its alloys should be annealed in a vacuum or in hydrogen at 1800C for 0.5-2 hr. [WA-88]  
[MS]

SUB CODE: 11, 13/ SUBM DATE: 14Mar65/ ORIG REF: 001/ OTH REF: 002  
ATD PRESS: 5114  
Card 2/2

L'VOVA, I.S.; LEVIN, A.M.

Ways of using phosphogypsum. Trudy NIIF no. 208:200-206  
'65. (MIRA 18:11)

LEVIN, A. M.

Mbr., Agrophysiological Dept., Ukr. Inst. Socialist Agriculture, Khar'Kov, 1940.

"Concerning the Nourishment of the Spring Wheat Melanopus 069 by Mineral Material  
Through the Leaves," Dok. AN, 28, No. 8, 1940.

LEVIN, A. M.

Oak

Vegetative propagation of the "cherry" oak by rooting slips. Les. khoz. 5 no. 6, 1952

9. Monthly List of Russian Accessions, Library of Congress, August, 1951, 2Uncl.

USSR/Cultivated Plants - Potatoes, Vegetables, Melons.

M-3

*LEVIN, A.M.*  
Abs Jour : Ref Zhur - Biol., No 3, 1958, 10862

Author : Levin, A.M.

Inst : Fruit and Vegetable Institute imeni Michurin

Title : Composition of the Preceeding Fertilizer Used on Melon Crops.

Orig Pub : Tr. Plodoovoshchn. in-ta im. I.V. Michurina, 1956, 9, 245-251

Abstract : In experiments conducted in the Fruit and Vegetable Institute from 1949 to 1952 it was determined that P<sub>2</sub>O<sub>5</sub>, when applied in the holes, has a positive effect (in 1952 the increase in cantaloupe yield comprised 55% above the 136.1 centners/hectare harvest achieved without fertilization). Adding N or NPK to the holes gave insignificant yield increases and caused some of the plants to fall

Card 1/2

2 f

LEVIN, A. M.

COUNTRY : USSR  
SUBJECT : Cultivated Plants - Potatoes, Vegetables, Cucurbits. #

DOC. NO. : Zhurnal., No. 12, 1953, No. 03112

AUTHOR : Levin, A. M., Yurkova, L. V.  
INST. : Fruit and Vegetable Institute Lenin L. V. Institute  
TITLE : Effect of organic-mineral mixtures and dressing on the yield and quality of Potatoes.

DOC. NO. : Tr. Plovdivsk. in-ta im. L. V. Kirova, 1953, 9, 253-264

ABSTRACT : In the trials on the chemozem in Plovdivskaya oblast', the yield increased by 20% with the application of organic-mineral mixture (10 t/a of manure & 2 t/a of P<sub>2</sub>O<sub>5</sub> dressing of the sprouts with nitrogen, and at the beginning of tillage with phosphorus-potassium fertilizers increased the yield by 14%. Simultaneous fertilization with a simultaneous application of P<sub>2</sub>O<sub>5</sub> and humus contributed to the increase of starch content in tubers by 1.7%. With the inclusion of potassium-ammonium phosphate in the second dressing, the starch content increased by 3.4%. -- L.V. Prokoshin

Part: 1/1

01

5(1)  
AUTHORS: Vol'kovich, S. I., Turchin, F. V., SOV/64-59-2-5/23  
Ioffe, Ya. A., Levin, A. M.

TITLE: Prospects of the Production and Application of Mineral Fertilizers  
in East Siberia (Perspektivy proizvodstva i primeneniya  
mineral'nykh udobreniy v Vostochnoy Sibiri)

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 2, pp 112-115 (USSR)

ABSTRACT: If all seed areas in East Siberia (ES) were to be supplied with  
mineral fertilizers (MF) in the normal dosage, a yearly amount  
of 408000 T of  $N_2$ , 426000 T of  $P_2O_5$ , and 514000 T of  $K_2O$  would be  
necessary. Data concerning this subject published by the Sovet po  
izucheniyu proizvoditel'nykh sil pri AN SSSR (SOPS) (Council for  
the Study of Productive Forces at the AS USSR (SOPS) are lower  
because woods and meadows were not taken into account. With respect  
to the industrial development in (ES) for the coming 7-10 years a  
yearly amount of 60000 T of  $N_2$ , 100000 T of  $P_2O_5$ , and 60000 T of  
 $K_2O$  would be necessary for a systematic supply and according to  
pre-calculations for the year 1975 (for 6600000 hectares)  
205000 T of  $N_2$ , 211000 T of  $P_2O_5$ , and 180000 T of  $K_2O$ . The

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Prospects of the Production and Application of Mineral  
Fertilizers in East Siberia

SOV/64-59-2-5/23

assortment of the (MF) should consist mainly of concentrated (MF) in order to reduce transportation costs. The high percentage of transportation costs in the price of simple superphosphate is illustrated in a table for 3 works of fertilizers (Table). Besides ammonium nitrate, urea (with 43% N<sub>2</sub>) is an important MF as well as

the combined nitrogen-phosphorus-potassium fertilizers are an important branch of production; in this connection nitric acid treatment of phosphates to nitrophos and nitrophoska is of special interest. For the development of a phosphorus fertilizer industry by extraction of phosphoric acid from natural phosphates only the remote Noril'sk complies with the corresponding prerequisites. The following deposits are taken into consideration for the production of MF in ES: The problem of exploitation of the gypsum deposits in the Irkutsk and other areas has still to be investigated. The phosphorite deposits at the Katanga, the area of the tributary of the Yenisey-Podkamennaya Tunguska (Ref 1), which are already being exploited, as well as the areas near Slyudanka and on the Lake Baykal, the phosphorite deposits between the Angara-III district and the Bratsk Electric-power Station as well

Card 2/3

Prospects of the Production and Application of Mineral  
Fertilizers in East Siberia

SOV/64-59-2-5/23

as the biggest phosphorite deposits of Khibiny and Kara Tau. The three power plants in Bratsk, Krasnoyarsk, and Yeniseyok are regarded as the basis of the production of concentrated fertilizers from electrothermal phosphoric acid, the capacity of which is computed. Potassium fertilizers will not be produced in ES before 1965, they will be supplied from Berezniki and Solikamsk. Borine fertilizers may be produced from the Kara Tau phosphorites containing 36%  $P_2O_5$  and 7-8%  $H_3BO_3$ . According to approximate calculations, capital investment for a complete supply of ES with nitrogen- and phosphorus fertilizers will be approximately 4 billion rubles. If potassium and phosphorus prospecting proves to be successful and the necessary industry will be built up in ES, the total sum of capital investment will rise to about 5,2 billion rubles. There are 1 table and 4 Soviet references.

Card 3/3

LEVIN, A.M.; TSYPIA, E.I.

Economic analysis of superphosphate production. [Trudy] NIUIP  
no.164:94-95 '59. (MIRA 15:5)  
(Phosphate industry)

LEVIN, A.M.; PIMENOVA, R.I.

Prospects for the production of sulfuric acid by the use of  
oxygen and high-concentration sulfur dioxide. [Trudy] NIUIF  
no.164:95-96 '59. (MIRA 15:5)

(Sulfuric acid industry)

LEVIN, A.M.; IVANOVA, T.N.

. Technical and economic comparison of different forms of applying  
and methods of preparing toxic agricultural chemicals. [Trudy]  
NIUIF no.164:99-101 '59. (MIRA 15:5)  
(Insecticides)

LEVIN, A.M.; IVANOVA, T.N.; GOLOVANEVA, A.N.

Prospects for the production of arsenic agricultural chemicals.  
[Trudy] NIUIF no.164:101-103 '59. (MIRA 15:5)  
(Arsenic) (Agricultural chemicals)

LEVIN, A.M., kand.sel'skokhozyaystvennykh nauk; SOKOLOVA, Ye.P., kand.  
biologicheskikh nauk

Effect of fertilizer application during planting on corn development.  
Agrobiologiya no.2:290-292 Mr-Apr '62. (MIRA 15:4)

1. Plodoovoshchnoy institut imeni I.V.Michurina, Michurinsk.  
(Corn (Maize)—Fertilizers and manures)

ROZOVSKIY, I.L.; LEVIN, A.M.

Compressible gas flow without separation in a diffuser at subsonic velocities. Dop.AN URSS no.4:50-55 '48. (MLBA 9:9)

1. Institut gidrologii i gidrotekhniki Akademii nauk Ukrain's'koi RSR.  
Predstavleno diysnim chlepom AN URSS G.F. Proskuroyu.  
(Gas flow) (Diffusers)



LEVIN, A.M.

0  
0  
0

1 522. LEVIN, A. M., Position of the breakaway point in plane  
diffuser. *Trudy Akad. Nauk SSSR (N.R.)* 87, 5,  
705-707, Dec. 1952.

States that investigations, described in existing literature, on  
diffusers do not clearly answer the question concerning the location of the point of  
breakoff for various angles of widening and that most exptl works show that breakoff  
occurs for a certain value of the angle widening in a diffuser and do not indicate  
at what distance from the point section breakoff occurs at this angle. Solves the  
problem. Presented by Acad A. I. Nekrasov 14 Jul 1952

2547100

LEVIN, A.H.

Method of calculating the accumulative capability of gas piping  
"RABOTA I KONSTRUKTSIYA GAZOVYKH PECHEI" (Operation and Construction of Gas Ovens),  
Academy of Sciences, Ukrainian SSR, 1953, p. 28.



LEVIN, A.M., kandidat tekhnicheskikh nauk.

Method for calculating the storage capacity of gas pipes.  
Trudy Inst.isp.gaza AN URSR 1:28-29 '53. (MIRA 9:6)  
(Gas pipes)

LEVIN, A.M., kandidat tekhnicheskikh nauk; SIGAL, I.Ya., inzhener.

Effect of furnace draft on the operation of gas injector blow pi-  
pes. Gor.khoz.Mosk. 28 no.9:25-27 S '54. (MLBA 7:10)  
(Burners) (Boilers)

LEVIN, A. M.

USSR/Engineering - Hydromechanics

Card : 1/1

Authors : Levin, A. M.

Title : Hydraulic jump and boundary layer separation

Periodical : Dokl. AN SSSR, 96, Ed. 6, 1121 - 1124, June 1954

Abstract : It was experimentally established that the transition of a flow from turbulent state into stable is a favorable condition for the origination of the complex phenomenon called the hydraulic jump. If the free surface of the stream increases sharply and the pressures are nonuniformly distributed in depth then we have a hydraulic jump with surface roller even during calm condition of the stream prior and after the hydraulic jump. Three references.

Institution : Acad. of Sc. Ukr-SSR, Institute for Utilization of Gas

Presented by : Academician A. I. Nekrasov, March 17, 1954

SOV/124-57-3-2923

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 3, p 41 (USSR)

AUTHOR. Levin, A. M.

TITLE: Investigation and Design Calculation of Ejector-type Gas Burners for Industrial Furnaces (Issledovaniye i raschet inzhektsionnykh gazovykh gorelok dlya promyshlennykh pechey)

PERIODICAL: Tr. In-ta ispol'zovaniya gaza AN SSSR, 1955, Nr 3, pp 67-101

ABSTRACT: A hydraulic method of design calculation is described for ejectors equipped with a cylindrical mixing chamber for subsonic velocities of gas flow. The results of an experimental investigation of a gas-injection nozzle cited in the paper agree very well with the calculations. A nomogram designed for a natural-gas-and-air-mixture injection nozzle is included to facilitate the solution of the pertinent equations for the ejection flow. Bibliography: 18 references.  
Yu. A. Lashkov

Card 1/1

LEVIN, O.M.

Increasing the capacity of low pressure gas-pipe systems and saving metal in their manufacture. Visnyk AN URSR 26 no.2:53-55 F '55.  
(Gas pipes) (MIRA 8:4)



LEVIN, A.M.

Calculated gas pressure in low pressure systems. Gas.prom no.1:24-  
30 Ja '56. (MIRA 10:1)  
(Gas distribution)

LEVIN, A.M.

LEVIN, A.M.; GRECHUKHA, G.M.

Utilizing of methane from mines. Gaz.prom.no.8:31-34 Ag '57.  
(MIRA 10:7)

(Methane)

LEVIN, A. M., (Cand. Tech. Sci.)

"Combustion of Gas in Atmospheric Burners"

(Theory and Practice of Gas Combustion; Transactions of a Scientific and Technical Meeting) Leningrad, Gostoptekhnizdat, 1958. 343 p.

*LEVIN, A.M.*

LEVIN, A.M.; FURBAYEV, V.M.; MARKOVSKIY, A.V.

Changing bathroom water heaters from hard-fuel to gas operation.  
(MIRA 11:2)

Gas. prom. no.2:20-23 P '58.  
(Water heaters)

LEVIN, A.H.

Utilization of gas in municipal economy. Trudy Inst. isp. gaza  
AN URER no.6:3-15 '58. (MIRA 12:8)  
(Gas burners)

AUTHORS: Levin, A.M. and Baum, V.A. SOV/21-58-10-8/27

TITLE: The Dimensions of the Recirculation Zone in the Abrupt Enlargement of the Flow (Razmery retsirkulyatsionnoy zony pri vnezapnom rasshirenii potoka)

PERIODICAL: Dopovidi Akademii nauk Ukrain's'koi RSR, 1958, Nr 10, pp 1064 - 1066 (USSR)

ABSTRACT: The authors investigated the length of a recirculation zone originated in discharging water from a cylindrical nozzle into a circular cylinder of a larger diameter. The water discharge varied from 0.5 to 10 cu m per hr. With an increase in Reynold's number from  $Re = 10,000$  to  $Re = 50,000$ , the length of the zone increases, first rapidly and then more gradually. At  $Re > 50,000$  the length of the recirculation zone is independent of the  $Re$ -value. The authors derive an empirical equation which shows the dependence of the relative length of the recirculation zone on the ration of diameters:

$$\frac{D-d}{d} : \frac{l}{d} = 8.8 \sqrt{\frac{D-d}{d}}$$

Card 1/2

SOV/21-58-10-8/27

The Dimensions of the Recirculation Zone in the Abrupt Enlargement of the Flow

Experimental data agrees closely with the curve constructed according to this formula. There are 2 graphs and 1 table.

ASSOCIATION: Institut ispol'zovaniya gaza AN UkrSSR (Institute for Utilization of Gas of the AS UkrSSR)

PRESENTED: By Member of the AS UkrSSR, N.N. Dobrokhotov

SUBMITTED: April 22, 1958

NOTE: Russian title and Russian names of individuals and institutions appearing in this article have been used in the transliteration.

1. Fluid flow--Reynolds number effect
2. Nozzles--Performance
3. Mathematics

Card 2/2

LEVIN, A.M., kand. tekhn. nauk.; DANILEVICH, Yu. I., inzh.; NAYDENOV, G.F., inzh.

Gas dryer. Gor. khoz. Mosk. 32 no.10:23-25 0 '58. (MIRA 11:11)

1. Institut ispol'zovaniya gaza AN USSR.  
(Drying apparatus)



LEVIN, A.M.

1510

AUTUMN

TITLE

PERSONALS

ABSTRACT

Kuznetsov, A. E., Potemkin, P. S. 807/97-99-1-9/12  
Conference of Young Specialists (Konferentsiya molodogo  
spetsialistov)

September, 1979, Nr 1, 99 47-47 (USSR)

Title conference of young specialists of the Technology  
Institute engineers (All Union Institute of Refrigeration) with  
was held in Moscow on November 13-14, 1979. The  
the participation of representatives of the young specialists  
and the Technology Institute engineers (Participants  
of Refrigeration). The conference dealt primarily  
ahead of young engineers and technicians. It is noted the work  
head of the Institute, outlined in the opening by considering  
of young specialists of various special branches are mentioned  
it as a priority. Further, the following reports are mentioned:  
V. G. "Reports speak about manufacturing methods of evaporative  
plants";  
N. V. "Machikhina reported on test results of the properties  
of suspension solutions on liquid films";  
I. V. "Vikhrovskiy (USSR) reports on the dynamic action of  
determination of the modulus of elasticity at temperatures  
of 100-1400";  
G. B. "Mikhovskiy reports about the examination of the changes  
of these properties of current refractory magneto-thermo  
products";  
E. T. "Kozlov reported on elaboration results of spectroscopic  
methods for the alcohol content in types of oil";  
V. G. "Blazhko reported on the causes of bar fracture of the press  
CH-143 by means of tomographic";  
G. A. "Kaba used tomographic transmitter for the automatic  
control of melt charging at the press SM-12"; the design for  
V. E. "Lobov reported on the design of a new system,  
V. I. "Kaba reported on the design of water supply and distribu-  
tion";  
A. E. "Kuznetsov reported on the design of air dust collection";  
E. B. "Pavlov reported on the design of a water supply and  
distribution for the foundation of a boiler with  
A. E. "Verbitskiy reported on the design of a rotary furnace  
installation of a rotary furnace at the Party, mainly subject  
As a principle, design it was stated that part of the young  
specialists are still insufficiently familiar with the  
production. The measures provided for by the Party and  
Government to reform the education and to strengthen the  
relations between the specialists and to improve the training of  
specialists.

Card 1/3

Card 2/3

ASSOCIATED: Technology Institute engineers (All-Union Institute of  
Refrigeration)

Card 3/3

LEVIN, A.M.

Increasing the gas pressure with contribute to a saving of metal  
in pipes. Gaz. prom. 4 no.11:29-31 '59. (MIRA 13:2)  
(Gas, Natural--Pipelines)

LEVIN, A.M.; MARKOVSKIY, A.V.

Flameless radiation injector burners. Gas.prom. 5 no.3:  
20-24 Mr '60. (MIRA 13:6)  
(Gas burners)

S/128/61/000/003/004/008  
A054/A127

AUTHORS: Levin, A. M., and Bryukhanov, O. N.

TITLE: Drying cores by means of infra-red gas burners

PERIODICAL: Liteynoye proizvodstvo, no. 3, 1961, 10

TEXT: In drying small-size cores, tests were made to replace the electric infra-red lamps by infra-red gas burners, (ГММ-3 /GII-3/ type, 400 l/h capacity, 3,320 kcal/h temperature load, 57 - 60% of the total radiation heat produced by the burners is reflected from ceramic plating heated to 800-900°C). Infra-red gas burners are more reliable than electric lamps and have also a higher radiation capacity (9 kcal/sq cm), while the drying costs are reduced 6 - 10 times. However, when placing the test specimen (made of sand-clay mix, with a 8.5% humidity content, and D = 66 mm, H = 22 mm) at a distance of 200 mm from the burners, under a gas pressure of 156 - 172 mm water column, with a surface temperature of 220°C, for a period of 20 minutes, the core center was not dried. Upon raising drying time, the core-edges got burnt. Better results were not obtained even when

Card 1/2