Model Investigation of the Distribution of the Gas Flow in a Shaft Furnace

uniform gas distribution, while a decline in lump size causes a greater flow of the gas toward the periphery. The most uniform distribution of the gas flow results: a) When a 15-20 mm fraction is charged, which, allowing for the dimensions of the model, would represent 60-80 mm in an industrial furnace; and b) when larger lumps of charge are placed in the middle than at the periphery.

Ya. S.

1. Sintering furnaces--Operation 2. Gas flow--Analysis

LISOVSKIY, D.I.; VANYUKOV, A.V.; MARVSKIY, A.Yu.; SHAPIRO, Yu.L.

Investigating shaft furnace smelting of oxidezed nickel ores by freezing the furnace. Izv. vys. ucheb. zav.; tsvet. met. no.2: 55-70 '58. (MIRA 11:8)

1. Moskovskiy institut tsvetnykh metallov i zolota. Kafedra metallurgii tyazhelykh tsvetnykh metallov.
(Nickel--Metallurgy)

AUTHOR: Lisovskiy, D.I.

TITLE: Investigation of Reducibility and Stability of Gypsum During Smelting of Ores in a Shaft Furnace (Issledovaniye vosstanovleniya gipsa i yego ustoychivosti v usloviyakh shakhtnoy plavki rud)

SOV/149-58-4-10/26

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, 1958, Nr 4, pp 73-82 (USSR)

ABSTRACT: Oxidised nickel ores are smelted in shaft furnaces with an addition of gypsum, pyrite and limestone flux. Reduction, oxidation and decomposition of gypsum as well as the reactions occurring between this mineral and sulphides of various metals affect the formation of raw matte and, to a large extent, determine the yield and composition of the final product. Little is known about the kinetics of these processes and, so far, it has not been possible to control the yield of raw matte by adjusting the quantity of gypsum charged in the furnace. The results of the present investigation, whose object was to study the effect of various factors (composition

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Investigation of Reducibility and Stability of Gypsum During Smelting of Ores in a Shaft Furnace

of gypsum, grain size, temperature) on the behaviour of gypsum in both reducing and oxidising atmospheres, can be summarised as follows: Calcium sulphide (CaS) is not a direct product of reduction of gypsum: Its formation is preceded by formation of an intermediate product of the "calcium sulfite" ($CaSO_3$) type. (Fig.5 shows how the composition of the reduction products at 900°C changes with time: After 2 hours the $CaSO_3$ content is 70% as compared with 25% of CaS). The rate at which gypsum is reduced by a synthetic gas of a composition corresponding to the composition of the furnace gases is 4 times slower than the rate of reduction by pure CO. The presence of water of crystallisation slows down the rate of reduction at 700-900°C. The higher the temperature the faster is the rate of reduction. Lastly, with increasing size of the mineral grains, the rate of reduction process decreases. When heated in an oxidising atmosphere both naturally occurring and chemically pure gypsum are chemically stable up to 1200-1300°C. When

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naturally occurring, granulated gypsum is reduced by CO, some sulphur is lost in the exhaust gases: The smaller the size of the granules the lower the temperature at which dissociation of gypsum and evolution of sulphur bearing gases begins. However, the quantity of the evolved gases increases with increasing granule size and with decreasing rate of the reduction process. It is concluded from the results of thelaboratory experiments that the coarse-grained gypsum used in actual smelting practice is reduced very

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Investigation of Reducibility and Stability of Gypsum During Smelting of Ores in a Shaft Furnace

slowly and at very high temperatures, i.e. in the lower zones of the furnace. There are 8 figures, 5 tables and 2 Soviet references.

ASSOCIATION: Moskovskiy Institut Tsvetnykh Metallov i Zolota, Kafedra Metallurgii Tyazhelykh Tsvetnykh Metallov (Moscow Institute of Non-Ferrous Metals and Gold, Chair for Metallurgy of Heavy Non-Ferrous Metals)

SUBMITTED: 19th October 1957.

AZOS, S.; AREF'YEV, A.; ARTAMONOV, I.; BABINA, I.; BEREGOVSKIY, V.; BLOZHKO, V.; BRAVERMAN, A.; BYKHOVSKIY, Yu.; VINOGRADOVA, M.; GALANKINA, Ye.; GIL'DENGERSH, F.; GLOBA, T.; GREYVER, N.; GORDON, G.; GUL'DIN, I.; GULYAYEVA, Ye.; GUSHCHINA, I.; DAVYDOVSKAYA, Ye.; DAMSKAYA, G.; DERKACHEV, D.; YEVDOKIMOVA, A.; YEGUNOV, V.; ZABELYSHINSKIY, I.; ZAYDENBERG, B.; AZMOSHNIKOV, I.; ITKINA, S.; KARCHEVSKIY, V.; KLUSHIN, D.; KUVINOV, Ye.; KUZNETSOVA, G.; KURSHAKOV, I.; LAKERNIK, M.; LEYZEROVICH, G.; LISOVSKIY, D.; LOSKUTOV, F.; MALEVSKIY, Yu.; MASLYANITSKIY, I.; MAYANTS, A.; MILLER, L.; MITROFANOV, S.; MIKHAYLOV, A.; MYAKINENKOV, I.; NIKITINA, I.; NOVIN, R.; OGNEV, D.; OL'KHOV, N.; OSIPOVA, T.; OSTRONOV, M.; PAKHOMOVA, G.; PETKER, S.; PLAKSIN, I.; PLETENEVA, N.; POPOV, V.; PRESS, Yu.; PROKOF'YEVA, Ye.; PUCHKOV, S.; REZKOVA, F.; RUMYANTSEV, M.; SAKHAROV, I.; SOBOL', S.; SPIVAKOV, Ya.; STRIGIN, I.; SPIRIDONOVA, V.; TIMKO, Ya.; TITOV, S.; TROITSKIY, A.; TOLOKONNIKOV, K.; TROFIMOVA, A.; FEDOROV, V.; CHIZHIKOV, D.; SHEYN, Ya.; YUKHTANOV, D.

Roman Lazarevich Veller; an obituary. TSvet. met. 31 no.5:78-79 My '58. (MIRA 11:6)

(Veller, Roman Lazarevich, 1897-1958)

LISOVSKIY, D.I., prof.

Metal sulfidation during the principal stages of oxidized nickel ore processing. TSvet. met. 31 no. 7:44-50 Jl '58. (MIRA 11:8)

1. Mintsvetmetzoloto.
(Nickel--Metallurgy)

LISOVSKIY, D.I.; BUROVOY, I.A.

Investigating reverberatory copper smelting furnaces for the control and improvement of automatic control diagrams. Sbor. nauch. trud. GINTSVETMET no.15:403-419 '59. (MIRA 14:4)
(Copper--Metallurgy)(Smelting furnaces)(Automatic control)

LISOVSKIY, D.I.

Reducing the loss of cobalt in waste slags by replacing ferrous oxide by calcium oxide in their composition. Izv. vys. ucheb. zav.; tsvet. met. 2 no.3:52-59 '59. (MIRA 12:9)

1.Moskovskiy institut tsvetnykh metallov i zolota. Kafedra metallurgii tyazhelykh metallov.
(Cobalt) (Slag--Analysis)

18.5000

75383
SOV/149-2-5-9/32

AUTHORS: Krysenko, N. S., Lisovskiy, D. I.

TITLE: Preparation of Oxidized Nickel Ores by Gaseous Reduction and Sulfidizing for Dressing or Smelting

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Tsvetnaya metallurgiya, 1959, Vol 2, Nr 5, pp 50-58 (USSR)

ABSTRACT: In 1935 Mostovich, V. Ya., proposed a reduction-sulfidizing melting of nickel ores with gypsum or pyrite. However, low temperature of the furnace in its zone between the charge hole and the tuyeres (450 to 600°) impairs the conversion of $CaSO_4$ into CaS. Pyrite is more advantageous as a sulfidizer, but it involves a contamination of the melt by additional iron. Gaseous sulfidizing is scantily studied, and there are no data on a simultaneous sulfidizing of Fe_2O_3, Fe_3O_4, FeO and $2FeO \cdot SiO_2$. The possibility of such sulfidizing

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Preparation of Oxidized Nickel Ores by Gaseous Reduction and Sulfidizing for Dressing or Smelting

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can be proved thermodynamically, and the values of isobar potentials and logarithms of equilibrium constants show that these reactions have a high negative isobar potential causing the formation of iron sulfides. Laboratory tests were made to study these reactions, and the following results were obtained: Iron oxides and silicate enter into a reaction with SO_2 at 900° and become sulfidized in the following proportions after a 1-hr treatment: Fe_2O_3, 40%; Fe_3O_4, 35.8%; FeO, 44.4%; $2FeO \cdot SiO_2$, 29.6%. Higher temperatures intensify the process with the given gas volume; for all practical purposes such sulfidizing is more than adequate, as in the subsequent electric smelting of oxidated nickel ores, 1.3 to 1.4% of sulfide sulfur must be present in the ore to permit the extraction of nickel and cobalt into the matte. During this process the action of a gas mixture containing

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Preparation of Oxidized Nickel Ores by Gaseous Reduction and Sulfidizing for Dressing or Smelting

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CO, CO_2, N_2 and SO_2 produces besides sulfidizing also a film of elementary sulfur. The presence of a neutral gas permits this elementary sulfur to sulfidize iron silicate at higher temperature. The apparent energy of activation in the interval between 600 and 900° is calculated to be 5358 cal. The above data on sulfidizing by gaseous phase permit the creation of new methods, especially in fluidized bed furnaces. Further work is done by the authors in this direction. It will permit the utilization of flue gases to intensify the extraction of nickel and cobalt from ores. There are 5 tables; 8 figures; and 10 Soviet references.

ASSOCIATION: Krasnoyarsk Institute of Nonferrous Metallurgy. Chair of Heavy Metals Metallurgy (Krasnoyarskiy institut tsvetnykh metallov. Kafedra metallurgii tyazhelykh

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Preparation of Oxidized Nickel Ores by Gaseous Reduction and Sulfidizing for Dressing or Smelting — 75383 SOV/149-2-5-9/32

metallov)

SUBMITTED: May 19, 1959

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LISOVSKIY, D.I.; ERYSENKO, N.S.

Reduction and sulfidized roasting of oxide nickel ores in a fluidized bed. Izv.vys.ucheb.zav.; tsvet.met. 2 no.6:60-65 '59. (MIRA 13:4)

1. Krasnoyarskiy institut tsvetnykh metallov. Kafedra metallurgii tyazhelykh tsvetnykh metallov.
(Ore dressing) (Fluidization)

18.3100

77720
SOV/149-60-1-9/27

AUTHOR: Lisovskiy, D. I.

TITLE: Metal Sulfidation Between Slag and Matte in Melting Cobalt Containing Charges

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Tsvetnaya metallurgiya, 1960, Nr 1, pp 64-72 (USSR)

ABSTRACT: Silicates, the main components of slags, consist of molecules, atoms, and simple and complex ions, rather than oxides. Ions carrying positive or negative charges assume a preponderant role in slag formation, especially at high temperatures. The crystal lattice is partially preserved in the liquid state. Silicates, aluminates, and ferrites dissociate to different degrees. As indicated by Acad. N. S. Kurnakov (Introduction into Physico-Chemical Analysis, 3rd Ed., 1936) the rate of dissociation is inversely proportional to the amount of heat generated at the formation of a chemical compound. With reference to slags this rule places monosilicates in the following series in proportion to

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their increasing dissociation constants

$$2CaO \cdot SiO_2;\ 2FeO \cdot SiO_2;\ 2CoO \cdot SiO_2;\ 2NiO \cdot SiO_2.$$

Metal distribution among slag and matte in liquid state depends on a multitude of reversible reactions. If one classified these reactions into groups, one would find that the dissocation of silicates and related compounds (ferrites, aluminates) consists in the formation of metal and silicon oxides. Simultaneously, complex sulfides dissociate into simple sulfides, while the latter dissociate into metal and sulfur, and the oxides, into metals and oxygen

$$K'_{MeO} = \frac{(Me)^2 p_{O_2(MeO)}}{(MeO)^2} \quad or$$

$$K'_{MeS} = \frac{[Me]^2 p_{S_2(MeS)}}{[Me_2S]^2}.$$

Dissociated sulfides and oxides enter into reactions of the type:

$$MeS + Me'O \rightleftarrows Me'S + MeO \qquad (1)$$

An equilibrium between slag and matte is achieved by the dissolution of sulfides in slag and of oxides in matte. A conditional dissociation constant at the boundary can be written as

$$K = \frac{[Me'S]\,(MeO)}{[MeS]\,(Me'O)} \qquad (2)$$

A. N. Vol'skiy (Basic Theory of Metallurgical Smelting, 1943) considers these processes as a result of the affinity of metals to oxygen and sulfur and indicates that all metals present in the charge must be also present in both slag and matte so as to achieve

equilibrium. As a result of mutual dissolution and chemical interaction, sulfides are formed in slag as a very fine suspension of colloidal nature. Fe and Co sulfides formed in Ni-Co smelting are such examples of dispersoids ranging in size from submicroscopic to coarse. The elimination of sulfides from slag into matte is promoted by low-viscosity slags which have a low dispersion rate and are poor solvents of sulfides. Tests have shown that slags contain cobalt in two forms: oxides (the major part) and sulfides. Matte consists of a metal sulfide alloy. In his tests, the author ascertained the total metal content in slag and matte without attempting to identify the actual forms of compounds in its content. Studies of this kind are complicated by the material of crucibles (platinum, iron, ceramics) entering into reactions with its content. Alundum crucibles are recommended. Typical for the tests was "hardening", a procedure consisting of keeping the melt at a given temperature, then rapidly cooling it on an iron plate. To begin with, an investigation of reactions between sulfides and oxides was made

$$FeO + CaS \rightleftarrows FeS + CaO. \quad (3)$$

The melt was settled at 1,450°. Results of chemical analyses are shown in Table 2. Dissociation constant K_1 versus slag content is plotted in Fig. 1. It is at its minimum when ratio CaO:FeO in the slag is equal to the molecular weight ratio of these oxides, and does not change with a further CaO increase in slag. Cobalt sulfide is formed by the following reactions

$$CoO + FeS \rightleftarrows CoS + FeO, \quad (4)$$

$$CoO + CaS \rightleftarrows CoS + CaO. \quad (5)$$

Metal Sulfidation Between Slag and Matte in Melting Cobalt Containing Charges

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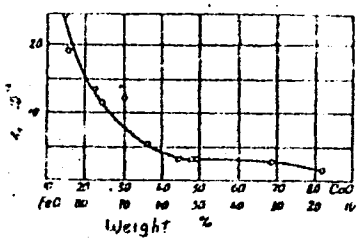

Fig. 1. Dependence of dissociation constant for FeO + Cas $\rightleftharpoons$ FeS + CaO at slag/matte boundary at 1,450° on FeO:CaO ratio in slag.

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77720, SOV/149-59-1-9/27

Table 2. Chemical analysis of slags and mattes.

№ of test	Wt. content, %				Slag, mol %						Matte, mol %		$K_1 = \frac{(FeO)\cdot[CaS]}{[FeS]\cdot(CaO)}$
	in slag		in matte										
	FeO	CaS	CaO	FeS	SiO_2	FeO	FeS	CaO	CaS	Al_2O_3	CaS	FeS	
1	85,1	0,44	14,9	99,56	36,63	46,73	2,39	10,35	0,07	3,83	0,53	99,47	$24,7 \cdot 10^{-3}$
2	84,9	0,34	15,1	99,66	39,81	43,18	2,67	9,89	0,08	4,37	0,44	99,56	$19,3 \cdot 10^{-3}$
3	77,3	0,43	22,7	99,57	45,69	35,72	2,20	13,17	0,11	2,81	0,51	99,49	$12,47 \cdot 10^{-3}$
4	74,3	0,44	25,7	99,56	31,93	42,03	3,61	19,15	0,22	3,06	0,53	99,47	$11,76 \cdot 10^{-3}$
5	69,3	0,57	30,7	99,43	41,07	32,60	3,95	18,52	0,21	3,65	0,69	99,31	$12,22 \cdot 10^{-3}$

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Table 2. Chemical analysis of slags and mattes (continued).

6	63,2	36,8	0,34	99,66	43,71	27,95	4,33	20,50	0,25	3,36	0,41	99,59	$5,61 \cdot 10^{-4}$
7	56,0	44,0	0,28	99,72	37,00	26,15	4,51	26,40	0,21	5,73	0,33	99,67	$3,28 \cdot 10^{-4}$
8	51,9	48,1	0,32	99,68	44,10	22,33	4,08	26,40	0,22	2,87	0,39	99,61	$3,27 \cdot 10^{-3}$
9	50,3	49,7	0,34	99,66	40,68	22,03	4,26	27,73	0,25	5,05	0,41	99,59	$3,27 \cdot 10^{-4}$
10	31,0	69,0	0,65	99,35	38,63	13,82	4,08	39,88	0,20	3,39	0,79	99,21	$2,76 \cdot 10^{-4}$
11	18,6	81,4	0,70	99,30	41,77	7,84	4,01	43,87	0,29	2,22	0,86	99,14	$1,55 \cdot 10^{-3}$

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Reaction (4) was studied, just as the previous one, by melting a charge in alundum crucibles in a nitrogen atmosphere at 1,350°. FeO, CaO, SiO_2, Al_2O_3, MgO, and elemental S additives to slag and matte in variable proportions as shown in Table 3 were introduced. A separation of plant matte by a permanent magnet showed that the ferromagnetic portion to contain more Co and less S than the paramagnetic portion. Hence, an introduction of sulfur would promote the formation of the paramagnetic component and intensify Co extraction into the ferromagnetic component. In drawing his conclusions from the data of the above tables, the author finds that charges con two tables, the author finds that charges containing CaO form slags and matte containing CaS. An increase in CaO and a decrease in FeO promotes CaS formation. A better Co extraction from slag into matte is achieved with calcium rich charges, and metallized matte. Metallized matte with low Co content is the active Co-extracting phase from slag. There are 4 tables; 2 figures; and 6 Soviet references.

Table 3. Contents of slags and mattes and equilibrium constant of the reaction $CoO + FeS \rightleftarrows CoS + FeO$

Nr of Test	Composition, mol/%								Ratio in Slag % by wt		Additive	$K_2 = \frac{(CoO)\cdot[FeS]}{[CoS]\cdot(FeO)}$
	Matte		Slag									
	CoS	FeS	CoO	SiO_2	CaO	FeO	Al_2O_3	MgO	CaO	FeO		
1	68,68	31,42	8,48	35,76	3,32	47,31	5,13	—	—	—	FeO	$8,20 \cdot 10^{-2}$
2	66,13	33,87	8,93	29,36	1,24	53,38	7,09	—	—	—	"	$8,57 \cdot 10^{-2}$
3	58,77	41,23	6,57	27,31	2,10	56,26	7,76	—	—	—	"	$8,19 \cdot 10^{-2}$
4	69,83	30,17	6,88	38,56	14,53	35,37	4,66	—	24,0	76,0	CaO	$8,41 \cdot 10^{-2}$
5	71,93	28,07	7,42	28,31	24,21	35,40	4,65	—	35,2	68,8	"	$8,20 \cdot 10^{-2}$
6	68,06	31,94	4,63	27,83	37,02	30,52	—	—	48,50	51,5	"	$7,12 \cdot 10^{-2}$
7	65,81	34,19	2,73	25,15	39,84	24,58	7,70	—	56,0	44,0	"	$7,08 \cdot 10^{-2}$
8	73,87	26,13	2,85	30,79	37,98	14,21	14,17	—	67,6	32,4	"	$7,10 \cdot 10^{-2}$
9	71,24	28,76	4,46	34,36	35,11	26,07	—	—	51,2	48,8	SiO_2	$6,91 \cdot 10^{-2}$
10	74,32	26,68	4,02	42,65	33,39	18,30	1,64	—	58,3	41,7	"	$7,86 \cdot 10^{-2}$
11	77,68	22,32	5,30	46,14	28,59	19,55	0,42	—	53,2	46,8	"	$7,75 \cdot 10^{-2}$
12	77,38	22,62	3,81	54,38	24,91	15,78	1,09	—	55,1	49,9	"	$7,07 \cdot 10^{-2}$

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Table 3. Contents of slags and mattes and equilibrium constant of the reaction $CoO + FeS \rightleftarrows CoS + FeO$ (continued)

13	73,99	26,01	4,41	37,02	30,54	21,50	6,53	—	58,7	41,3	Al_2O_3	$7,18 \cdot 10^{-2}$
14	70,42	29,58	3,70	30,07	32,99	20,58	12,66	—	61,3	38,7	"	$7,57 \cdot 10^{-2}$
15	71,48	28,52	3,50	26,81	30,40	15,46	23,83	—	66,2	33,8	"	$9,05 \cdot 10^{-2}$
16	60,11	39,89	3,91	40,53	1,75	30,57	8,82	14,85	4,7	95,3	MgO	$8,31 \cdot 10^{-2}$
17	60,41	39,59	3,97	40,38	0,56	28,62	4,07	22,40	1,9	98,1	"	$9,07 \cdot 10^{-2}$
18	74,32	26,69	4,02	42,65	33,39	18,30	1,64	—	59,3	41,7	S	$7,86 \cdot 10^{-2}$
19	63,12	36,88	4,64	39,83	26,31	28,39	0,83	—	48,0	42,0	"	$9,6 \cdot 10^{-2}$

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Metal Sulfidation Between Slag and Matte in Melting Cobalt Containing Charges

77720
SOV/149-60-1-9/27

ASSOCIATION: Krasnoyarsk Institute of Non-ferrous Metals. Chair of Metallurgy of Heavy Nonferrous Metals (Krasnoyarskiy institut tsvetnykh metallov. Kafedra metallurgii tyazhelykh tsvetnykh metallov)

SUBMITTED: May 18, 1959

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S/137/62/000/005/039/150
A006/A101

AUTHORS: Lisovskiy, D. I., Mikhaylenko, A. Ya.

TITLE: Melting of charges with coal-plaster briquets in an electric arc furnace

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 21, abstract 5G129 ("Sb. nauchn. tr. In-t tsvetn. met. im. M. I. Kalinina", 1960, v. 33, 67 - 82)

TEXT: The use of coal-plaster briquets as sulfurizers in the melting of charges in electric furnaces, ensures high Co extraction into the matte. On a laboratory scale a method was developed of preparing briquets from raw and partially dehydrated plaster and coking coal. It is recommended to carry out semi-industrial checkings of the use of plaster-coal briquets in the melting of charges in experimental water-jacket and electric-arc furnaces. There are 7 references.

G. Svodtseva

[Abstracter's note: Complete translation]

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S/149/61/000/006/001/003
A006/A101

AUTHORS: Lisovskiy, D. I., Kuz'michev, G. V., Krysenko, N. S.

TITLE: Investigating the sulfurizing of iron, nickel and cobalt in silicate melts

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Tsvetnaya metallurgiya, no. 6, 1961, 38 - 42

TEXT: The authors studied sulfurizing of iron, nickel and cobalt with calcium sulfide in silicate melts, depending on the amount of the sulfidizing agent and the content of these metals in the melt. The thermodynamical calculations of the isobaric-isothermal potential and the equilibrium constants in the sulfidizing reaction did not establish the effect of various factors on the sulfurizing of metal oxides in the slag. Therefore, equimolar mixtures of three silicates corresponding to a $2MeO \cdot SiO_2$ composition, were prepared, which were sulfurized with different amounts of CaS. The oxides (NiO, CoO, FeO), contained in the mixtures in equal amounts, showed their individual capacities of sulfide formation in the melts under equal conditions. The amount of NiO and CoO was reduced in respect to FeO by a factor of 20, 40 and 60 in order to establish experimental conditions si-

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Investigating the sulfurizing of...

milar to industrial ones and to determine the effect of a decrease in Ni and Co in the silicates on the sulfurizing process with calcium sulfide. The following initial materials were used: artificially prepared silicate of ferric oxide (69% FeO, 31% SiO_2), nickel oxide (98% NiO), cobalt oxide (92% CoO), calcium sulfide (84.3% CaS), and quartz. The experiments were performed in a hermetic tubular furnace with carborundum heaters in nitrogen atmosphere, with a 25 g batch, at 1,350°C. The experiments showed the different behavior of Fe, Ni and Co during sulfurizing with calcium in silicate melts: nickel, having a considerably greater ability of sulfide formation than iron, sulfurized first of all. Small amounts of nickel and cobalt contained in ferric slags, can be sulfurized selectively by the addition of small amounts of calcium sulfide to the slag. Due to the individual properties revealed in nickel silicate, i.e. to sulfurize selectively with calcium sulfides from slags with low Ni content, this property may possibly be used for impoverishing waste slags of nickel industry outside the furnace. There are 2 tables, 3 figures and 4 Soviet-bloc references.

ASSOCIATION: Krasnoyarskiy institut tsvetnykh metallov (Krasnoyarsk Institute of Non-Ferrous Metals); Kafedra metallurgii tyazhelykh tsvetnykh metallov (Department of Metallurgy of Heavy Non-Ferrous Metals)

SUBMITTED: November 18, 1960

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APPROVED FOR RELEASE: 06/20/2000 CIA-RDP86-00513R000930120007-9"

LISOVSKIY, D.I.; KUZ'MICHEV, G.V.; KRYSENKO, N.S.

Studying the sulfidizing of iron, nickel, and cobalt in molten silicates. Izv. vys. ucheb. zav.; tsvet. met. 4 no.6:38-42 '61. (MIRA 14:12)

1. Krasnoyarskiy institut tsvetnykh metallov, kafedra metallurgii tyazhelykh tsvetnykh metallov.
(Nonferrous metals—Metallurgy)
(Ore dressing)

LISOVSKIY, D.I.; KUZMICHEV, G.V.

Method of preparing calcium sulfide from gypsum for purposes of its use in metallurgy. Sbor. nauch. trud. GINTSVETMET no.33:83-88 '60. (MIRA 15:3)

(Calcium sulfide) (Gypsum)

LISOVSKIY, D.I.

"Steigerung des nickelausbringens aus oxidischen erzen in einer sulfidisch-metallischen phase."

Report submitted to the 11th Congress on Mining and Metallurgy, Freiberg, GDR 13-16 June 1962

VIKTOROVICH, G.S.; LISOVSKIY, D.I.; MALEVSKIY, A.Yu.

Studying the interaction of nickel oxide with iron in the solid phase. Izv. vys. ucheb. zav.; tsvet. met. 5 no.4:86-94 '62. (MIRA 16:5)

1. Moskovskiy institut stali, kafedra metallurgii i fizicheskoy khimii tsvetnykh metallov.
(Nickel oxide) (Iron oxide) (Phase rule and equilibrium)

LISOVSKIY, D.I.; MALEVSKIY, A.Yu.; VIKTOROVICH, G.S.

Interaction of the components of the system Fe - Ni - O in solid phases. Izv. vys. ucheb. zav.; tsvet. met. 5 no.6: 50-56 '62. (MIRA 16:6)

1. Moskovskiy institut stali i splavov, kafedra metallurgii i kompleksnogo ispol'zovaniya polimetallicheskikh rud.
(System(Chemistry))
(Phase rule and equilibrium)

ASHIMOV, A.; LISOVSKIY, D.I.

Mathematical model of the active heat exchange zone in shaft furnaces for purposes of the automatic smelting of oxide nickel ores. Izv. vys. ucheb. zav.; tsvet. met. 6 no.3:151-156 '63. (MIRA 16:9)

1. Moskovskiy institut stali i splavov, kafedra avtomatizatsii proizvodstva redkikh i radioaktivnykh metallov.
(Nickel—Metallurgy)
(Metallurgical furnaces—Mathematical models)

IVANOV, V.A.; LISOVSKIY, D.I.; SHAPIROVSKIY, M.R.

Controlling the process of drying a charge mixture in rotary kilns with the use of a prediction model. Izv. vys. ucheb. zav. ; tsvet. met. 7 no. 4:150-160 '64 (MIRA 19:1)

1. Moskovskiy institut stali i splavov, kafedra avtomatizatsii proizvodstva redkikh i radioaktivnykh metallov.

LISOVSKIY, D.I.; ZABELIN, V.L.

Automating the analysis of solutions in the hydrometallurgy of zinc. TSvet. met. 37 no.11:46-50 N '64. (MIRA 18:4)

IVANOV, V.A.; LISOVSKIY, D.I.; TEKIYEV, V.M.

Mathematical model of a periodic cementation process. Izv.vys.ucheb.zav.; tsvet.met. 8 no.2:159-166 '65. (MIRA 19:1)

1. Kafedra avtomatizatsii proizvodstva redkikh metallov Moskovskogo instituta stali i splavov. Submitted March 5, 1964.

IVANOV, V.A.; LISOVSKIY, D.I., prof.; SHAPIROVSKIY, M.R.

A method of constructing a high-quality system of automatic control of delay-time metallurgical equipment. Izv. vys. uchet. zav.; tsvet. met. 8 no.4:144-151 '65. (MIRA 18:9)

1. Kafedra avtomatizatsii proizvodstva redkikh i radioaktivnykh metallov Moskovskogo instituta stali i splavov.

IVANOV, V.A.; LISOVSKIY, D.I.; SHAPIROVSKIY, M.R.

Limits for the use of automatic control systems in the operation of rotary kilns for the drying of copper-zinc concentrates. Izv. vys. ucheb. zav.; tsvet. met. 8 no.3:164-167 '65.
(MIRA 18:9)

1. Moskovskiy institut stali i splavov, kafedra avtomatizatsii proizvodstva redkikh i radioaktivnykh metallov.

LISOVSKIY, D.I., prof.; TASHEVSKAYA, V.M.

Mathematical model of the process of metal reduction by carbonaceous fuel from liquid slag. Izv. vys. ucheb. zav.; tsvet. met. 8 no.4:152-161 '65. (MIRA 18:9)

1. Kafedra avtomatizatsii proizvodstva redkikh i radioaktivnykh metallov Moskovskogo instituta stali i splavov.

AYZENSHTEYN, A.G.; IVANOV, V.A.; LISOVSKIY, D.I.

Measuring the deposition rate of pure metals from the vapor phase.
TSvet. met. 38 no.9:65-66 S '65.
(MIRA 18:12)

LISOVSKIY, D.I.; MIKHAYLENKO, A.Ya.

Melting an electric arc furnace charge mixture with coal-gypsum briquets. Sbor. nauch. trud. GINTSVETMET no.33:67-82 '60. (MIRA 15:3)

(Electrometallurgy) (Briquets)

LISOVSKIY, D.V.; NAUMOV, N.V.

Pressing crown magnesite bricks with blind holes. Ogneupory 21 no.5:229-230 '56. (MLRA 9:10)

(Firebrick)

L 28523-66 RO

ACC NR: AP6012332 (A) SOURCE CODE: UR/0317/65/000/006/0057/0057

AUTHOR: Lisovskiy, E. (Engineer, Lieutenant colonel); Sviontnitskiy, M. (Reserve Captain in the Polish Army)

ORG: None:

TITLE: A reconnaissance motor vehicle of the Polish Army

SOURCE: Tekhnika i vooruzheniye, no. 6, 1965, 57

TOPIC TAGS: motor vehicle, radiation detecting device, cw detection equipment /GAZ-69 motor vehicle

ABSTRACT: The authors describe a GAZ-69 motor vehicle equipped for reconnaissance missions in areas contaminated by radioactive sources or chemical agents. The vehicle was equipped with roentgenmeter, radiometer, gas detector, chemical laboratory utensils, etc. The vehicle also carried a radio station, storage battery and a set for meteorological observations. Two sets of 15 warning signs were fixed to the vehicle body. They were actuated by a powder charge detonated by means of the storage battery. The arrangement of the equipment inside the vehicle was described. Orig. art. has: one figure.

SUB CODE: 13, 18/ SUBM DATE: None

Card 1/1 CC

ALIMOV, O. D.; BASOV, I. G.; MALIKOV, D. N.; LISOVSKIY, E. I.

Results of trials performed by a test crew on the RUP-2 coal chute widener. Ugol' 38 no.4:41-43 Ap '63. (MIRA 16:4)

(Coal mining machinery—Testing)

LISOVSKIY, F. M.

37589. Primeneniye platifillina V diagnostike kardiospazma. Trudy tomskogo med. in-ta. im. Molotova, T XV, 1949, S. 182-85.

SO: Letopis' Zhurnal'nykh Statey, Vol. 37, 1949

LISOVSKIY, F. M.

Lisovskiy, F. M.

"Duodenal Stasis in Lambliasis and Opisthorchosis." Tomsk State Medical Inst imeni V. M. Molotov. Tomsk, 1955. (Dissertation for the Degree of Candidate in Medical Science)

So: Knizhnaya letopis', No. 27, 2 July 1955

L 32208-66 FBD/EWT(1)/EEC(k)-2/T/EWP(k) IJP(c) WG
ACC NR: AP6020793 SOURCE CODE: UR/0386/66/003/012/0476/0480

58
56
B

AUTHOR: Lisovskiy, F. V.; Monosov, Ya. A.

ORG: Institute of Radio Engineering and Electronics, Academy of Sciences USSR (Institut radiotekhniki i elektroniki Akademii nauk SSSR)

TITLE: Retarded nonstationary reradiation of electromagnetic signals by a parametrically regenerated ferrite

SOURCE: Zhurnal eksperimental'noy i toereticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 3, no. 12, 1966, 476-480

TOPIC TAGS: parametric amplifier, ferrite, parametric oscillator

ABSTRACT: The authors report observation, for the first time, of nonstationary parametric amplification of electromagnetic oscillations half the pump frequency in magnetized ferrite. The instant of emission of the amplified signal was delayed somewhat relative to the pump front. The experiments were made with single-crystal yttrium-iron-garnet samples of 1-3 mm size and of various shapes (unfinished chips, discs, spheres). They were placed in a cavity with Q ~ 600 tuned to the pump frequency f = 9340 Mcs. The signal of 4670 Mcs was applied and extracted with a coupling loop. The pump power was 0.2-1.3 W, which is higher than the threshold for parametric excitation of spin waves but insufficient for noticeable

Card 1/2

parametric regeneration of magnetostatic oscillations in the ferrite. The non-stationary amplification took place at several fixed values of the magnetic field, ranging from 1000 to 2700 Oe. The tests show that there exists a certain active time interval during which retarded reradiation at the same frequency takes place in the presence of a signal of frequency f/2. No reradiation is observed if the input signal lies outside this active interval. Inside the interval, reradiation took place at a delay of about 80 μsec, in the form of a radio pulse with carrier f/2 and a steep leading front. To observe the effect it is necessary that the pump be turned on continuously. The least interruption of the pump prevents reradiation. The power gain, defined as the ratio of the maximum aplitude of the reradiated radio pulse to the amplitude of the input signal, fluctuated with the pump power from 4 to 25 db, the maximum gain corresponding to a pump power of 0.35 watts. The authors thank Professor V. V. Migulin for continuous interest in the work and useful advice, and V. M. Mikhaylov for help with the experiments. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 14Apr66/ OTH REF: 001

ACC NR: AP7003530 SOURCE CODE: UR/0386/67/005/001/0003/0006

AUTHOR: Lisovskiy, F. V.; Monosov, Ya. A.

ORG: Institute of Radio Engineering and Electronics, Academy of Sciences SSSR (Institut radiotekhniki i elektroniki Akademii nauk SSSR)

TITLE: Echo pulses in yttrium iron garnet

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 5, no. 1, 1967, 3-6

TOPIC TAGS: yttrium iron garnet, ferrite, radar echo, microwave component

ABSTRACT: The authors present results of experiments aimed at observing echo pulses in an axially magnetized ferrite parallelepiped, and indicating that the observed effect is nonlinear. A single-crystal yttrium iron garnet in the form of a parallelepiped was used in the experiments. The microwave signals were fed and picked-off by coupling loops comprising continuations of the internal conductors of coaxial cables. The experiments were made at 1 GHz and the microwave-signal peak power ranged from fractions of a milliwatt to hundreds of milliwatts. The ferrite sample was glued to a brass plate, on the opposite side of which was secured an electroacoustic converter to apply lateral elastic oscillations to the ferrite. The magnetizing field was directed along the largest axis of the parallelepiped. When the magnetizing field was varied from 350 to 370 Oe, echo pulses are observed in addition to the exciting microwave pulse. The observed echo-pulse duration does not depend on the duration of the

ACC NR: AP7003530

exciting pulse (if the latter exceeds 1 μsec) and amounts to approximately 1 μsec. The echo-pulse delay time does not change when the duration of the exciting pulse is varied from 1 to 20 μsec. The delay time depends on the peak power of the exciting pulse, rising from 1 to 4 μsec as the power is multiplied 50-fold. The observed echo pulses are strongly influenced by lateral elastic hf signals (f ≈ 300 kHz). By properly choosing the frequency of the external signal, the amplitude of the first echo pulse can be increased by 10 - 15 db. A number of the observed characteristics (range of magnetization fields in which the echo pulses are observed, strong dispersion, character of dependence of the delay time on the magnetizing field) are similar to those of magnetostatic echo pulses, but other characteristics (independence of echo-pulse duration of the duration of the exciting pulse, shift of echo pulse with change in duration of the exciting pulse following its trailing edge) are unusual. It is possible that the anomalous behavior of the observed echo signals is due to the same causes as the nonstationary delayed re-emission. The authors thank Professor V. V. Migulin for interest in the work and useful advice, and G. S. Mikhin for help with the experiments and preparing the mock-up. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 27Sep66/ ORIG REF: 002/ OTH REF: 002

Card 2/2

ACC NR: AP6037054 SOURCE CODE: UR/0056/66/051/005/1288/1291

AUTHOR: Lisovskiy, F. V.; Monosov, Ya. A.

ORG: Institute of Radio Engineering and Electronics, Academy of Sciences SSSR (Institut radiotekhniki i elektroniki Akademii nauk SSSR)

TITLE: Nonstationary delayed re-emission of electromagnetic signals from a ferrite in the case of parametric regeneration

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 51, no. 5, 1966, 1288-1291

TOPIC TAGS: ferrite, parametric converter, yttrium iron garnet, microwave oscillator, spin wave

ABSTRACT: This is a continuation of earlier work (ZhETF Pis'ma v. 3, 476, 1966) reporting observation of nonstationary retarded re-emission of electromagnetic signals by parametrically regenerated ferrites. The present article describes the experiments in greater detail and presents the dependence of the time characteristics of the process on the pump power. It is noted that there exists an "active" time interval after turning on the pump frequency, in which the presence of a signal at half the pump frequency gives rise to re-emission. The experiments were made with single-crystal yttrium iron garnet (YIG) with saturation magnetization 1750 G and a resonance-curve width 2 - 3 Oe. The ferrite samples had various shapes and were placed in a resonator tuned to the pump frequency f = 9340 MHz. Nonstationary delayed re-emission of the

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ACC NR: AP6037054

electromagnetic oscillations by the ferrite was observed at several definite values of the constant magnetic field, the range of variation of which was 1000 - 2700 Oe, and in a wide range of pump power levels. The pump power level was somewhat higher than the threshold of parametric excitation of the spin waves and much lower than the threshold of the excitation of magnetostatic oscillations in the ferrite. A selection phenomenon was observed, wherein the active interval was delayed relative to the pump front by 1 - 5 μsec, and the instant of the appearance of the re-emission relative to the active interval was delayed by 5 - 50 μsec. The results have also shown that the application of an elastic force on the sample affected the duration of the active interval and the delay times. The authors thank Professor V. V. Migulin for continuous interest in the work and useful advice, and also B. M Mikhaylov for help with the experiment. Orig. art. has: 5 figures.

SUB CODE: 20/ SUBM DATE: 07May66/ ORIG REF: 003/ OTH REF: 005

Card 2/2

LISOVSKIY, G.A. [Lisovs'kyi, H.A.], tekhnik-mekhanik; NIKIFOROV, G.V. [Nikiforov, H.V.], tekhnik-mekhanik

Coupling for connecting damaged hose. Mekh.sil'.hosp. 10 no.12:26 D '59. (MIRA 13:3)
(Hose couplings)

STORCHAK, I.M., inzh.; LISOVSKIY, G.A. [Lisovs'kyi, H.A.], tekhnik-mekhanik

Repair of R-40/75 hydraulic distributors. Mekh. sil'. hosp. 11 no.6:20-22 Je '60. (MIRA 13:11)

(Tractors--Engines--Valves)

GONCHAR, I.S.[Honchar, I.S.], nauchnyy s otrudnik; STORCHAK, I.M., nauchnyy sotrudnik; LISOVSKIY, G.A. [Lisovskiy, H.A.], mekhanik

Special aspects of repairing NSh gear pumps. Mekh. sil'. hosp. 11 no.10:9-12 O '60. (MIRA 13:9)

1. Ukrainskiy nauchno-issledovatel'skiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva.
(Gear pumps--Maintenance and repair)

SOV/127-59-4-6/27

18

AUTHORS: Akimov, Ye. T. and Lisovskiy, G.D., Mining Engineers

TITLE: A Comparison of the Exploitation Qualities of a Sifting Grate With a Reinforced Concrete Slab With a Slot. (Sravneniye ekspluatatsionnykh kachestv grokhotnoy reshetki i zhelezobetonnoy plity s propusknoy shchel'yu.)

PERIODICAL: Gornyy zhurnal, 1959, Nr 4, pp 35-37 (USSR)

ABSTRACT: Sifting grates installed on ore-chutes in underground galleries were usually put out of order after a short time by falling pieces of ore. Their repair caused serious losses of working time. VNIItsvetmet proposed to cover these ore-chutes with slotted reinforced concrete slabs which permit only pieces of ore of the prescribed size to pass. Their installation was more expensive than that of sifting grates, but on

Card 1/2

A Comparison of the Exploitation Qualities of a Swifting Grate With a Reinforced Concrete Slab With a Slot.

the whole they proved to be more economical, as no repairs were required for a long time. This method is used in many mines abroad. Different types of sifting grates were proposed by: M.I. Agoshkov, M.Ye. Mukhin and G.G.Petrenko. There is 1 photo, 1 set of diagrams and 2 Soviet references.

ASSOCATION: VNIItsvetmet, Ust'-Kamenogorsk.

SHABEL'NIKOV, G.P., kand.tekhn.nauk; LISOVSKIY, G.D., gorn.inzh.; LUDENKO, A.M., gorn.inzh.; LEDYAYKIN, S.D., gorn.inzh.

Single-state inclined top slicing and caving system. Gor.zhur. no.6: 23-26 Je '60. (MIRA 14:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tsvetnykh metallov, Ust'-Kamenogorsk (for Shabel'nikov, Lisovskiy). 2. Salairskoye rudoupravleniye (for Ludenko, Ledyaykin).
(Mining engineering)

AKIMOV, Ye.T., inzh.; LISOVSKIY, G.D., inzh.

New methods for roofing ore chutes. Bezop. truda v prom. 4 no. 5:22 My '60. (MIRA 14:5)
(Mining engineering)

SHABEL'NIKOV, G.P.; LISOVSKIY, G.D.; STANKEVICH, I.M.; RUDENKO, A.M.; LEDYAYKIN, S.D.; ZEMLYANOV, V.P.

Testing a system of sublevel caving with breaking and drawing of the ore in inclined layers. Gor. zhur. no.6:23-24 Je '62. (MIRA 15:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tsvetnykh metallov, Ust'-Kamenogorsk (for Shabel'nikov, Lisovskiy, Stankevich). 2. Salairskiy rudnik (for Rudenko, Ledyaykin, Zemlyanov).

(Salair region—Mining engineering)

SHKABARNYA, B.M., inzh.; SOLOV'YEV, G.A., inzh.; STANKEVICH, I.M., inzh.; LISOVSKIY, G.D., inzh.

Using reduced diameter boreholes. Gor. zhur. no.8:74 Ag '64. (MIRA 17:10)

1. Salairskiy rudnik (for Shkabarnya, Solov'yev).
2. Vsesoyuznyy nauchno-issledovatel'skiy institut tsvetnoy metallurgii (for Stankevich, Lisovskiy).

IOFIN, S.L., kand.tekhn.nauk; MIL'CHENKO, D.V., kand.tekhn.nauk; LISOVSKIY, G.D., kand.tekhn.nauk; MIKHAYLOV, V.V., gornyy inzh.; RODIONOVA, N.P., gornyy inzh.

Reviews and bibliography. Gor.zhur. no.1:78-80 Ja '65. (MIRA 18:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tsvetnoy metallurgii, Ust'-Kamenogorsk (for all except Rodionova). 2. Izdatel'stvo "Nedra" (for Rodionova).

LISOVSKIY, G. M.

"Agrobiological Characteristics of the Poppy in Relation to Its Selection." Cand Agr Sci, Bashkir Agricultural Inst, Min Higher Education USSR, Ufa, 1955. (KL, No 17, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

M

Country : USSR
Category: Cultivated Plants. Commercial. Oil-Bearing. Sugar-Bearing.

Abs Jour: RZhBiol., No 11, 1958, No 49056

Author : Lisovskiy, G.M.
Inst : Bashkir Agric. Inst.
Title : Biology of Florescence in the Poppy in Bashkiria.

Orig Pub: Tr. Bashkirsk. s.-kh. in-ta, 1956, 7, 99-107.

Abstract: Results from observations and tests, carried out in the years 1951-1953 at the uchkhoz of the Bashkir Agricultural Institute with the following poppy varieties: Chishminskiy 171 (for oil) and Tarbagatayskiy 20 (for opium production). The poppy flowers always open in the morning hours.

Card : 1/3

Country : USSR
Category: Cultivated Plants. Commercial. Oil-Bearing. Sugar-Bearing.

Abs Jour: RZhBiol., No 11, 1958, No 49056

The opening of all plants takes 1-2 hours in clear weather conditions, it lasts about 3 hours in cloudy weather. 3-4 hours after the full opening, the anthers no longer contain pollen and the arrival of insects almost stops. Towards the evening, the petals are closed. They open again the next morning and start to fall off at the same time. The flowering of a single flower lasts 12-14 hours under dry weather conditions; 36-40 hours in humid weather and sometimes up to 60 hours. For the whole plant, the corresponding number is 4-6 days. The main stem flower of a plant is the first to open, then the flowers on the side stems open in turn from the top

Card : 2/3

M-132

LISOVSKIY, G.M.

LISOVSKIY, G.M.

Abnormalities in the perianth structure of Papaver somniferum L.
Bot.zhur.42 no.8:1282-1285 Ag '57. (MLRA 10:9)

1. Bashkirskiy sel'skokhozyaystvennyy institut, Ufa.
(Poppy) (Inflorescence) (Abnormalities (Plants))

LISOVSKIY, G.M., kand.sel'skokhoz.nauk

More about working up mathematical data from field experiments. (MIRA 12:11)
Zemledelie 7 no.9:87-88 S '59.

1. Krasnoyarskiy sel'skokhozyaystvennyy institut.
(Agriculture--Experimentation)

NIKIFOROV, G., i LISOVSKIY, G.

Sharpening knoves of the cutter cylinder of SK-2,6 combines.
Tekh. v sel'khoz. 20 no.7:45-47 Jl '60. (MIRA 13:9)
(Combines (Agricultural machinery)--Maintenance and repair)

LISOVSKIY, G.M., kand.sel'skokhozyaystvennykh nauk; KONDRAT'YEV, R.B., kand.sel'skokhozyaystvennykh nauk

Conditions for determining volume weight in the evaluation of grain quality. Zemledelie 23 no.9:74-76 S '61. (MIRA 14:12)

(Grain)

LISOVSKIY, G.M., kand.sel'skokhozyaystvennykh nauk

Hard seeds in forage beans. Agrobiologiia no.1:147-148 Ja-F '62. (MIRA 15:3)

1. Krasnoyarskiy sel'skokhozyaystvennyy institut.
(Beans)

LISOVSKIY, G.M., otv. red.

[Controlled cultivation of microalgae] Upravliaemoe kul'tirovanie mikrovodoroslei. Moskva, Nauka, 1964. 151 p. (MIRA 17:11)

1. Akademiya nauk SSSR. Sibirskoye otdeleniye. Institut fiziki.

L 11549-66

ACC NR: AP6005027 SOURCE CODE: UR/0105/65/000/001/0090/0090

AUTHOR: Aleksandrov, B. K.; Derman, B. A.; Drozdov, N. G.; Dubinskiy, L. A.; Zalesskiy, A. M.; Kamenskiy, M. D.; Kozlov, M. D.; Lisovskiy, G. S.; Sinelobov, K. S.; Trebulev, P. V.; Uspenskiy, B. S.; Kheyfits, M. D.; Shvetsov, M. A.

ORG: none

TITLE: Nikolay Nikolayevich Krachkovskiy

SOURCE: Elektrichestvo, no. 1, 1965, 90

TOPIC TAGS: electric power engineering, electric engineering personnel

ABSTRACT: Brief biography of subject, a senior scientific associate of the Institute of Power Engineering AS USSR, on the occasion of his 75th birthday on 16 Dec 64. He was graduated from the Leningrad Polytechnical Institute in 1916. Worked for a number of years in the planning, surveying, construction and operation of the first HV transmission lines and substations. From 1922 to 1926, participated in the planning and construction of the first Soviet hydroelectric station (Volkov GES im. Lenin) and 110 kv transmission line. In 1927-1932, designed transmission lines at the GET (State Electrical Engineering Trust) and the Leningrad branch of Dneprostroy. Chief of electric power and transmission section at Sverdlovsk, Volgostroy and Leningrad Energoproyekt (1932-1938); simultaneously studied 100-cycle current for AS USSR and participated in planning the Kuybyshev GES - Moscow transmission line. Worked at Leningrad Gidroproyekt until 1947, and at Moscow Gidrenergoproyekt until 1955. Among the first to propose

UDC: 621.31

Card 1/2

L 11549-66

ACC NR: AP6005027

converting the Kuybyshev - Moscow line from 400 to 500 kv. An ardent advocate of d-c for HV and EHV transmission. Authored over 75 scientific and technical articles, and two inventions. Awarded the Order of the Red Banner of Labor and other decorations. Orig. art. has: 1 figure. [JPRS] 14

SUB CODE: 09 / SUBM DATE: none

MW

Card 2/2

LISOVSKIY, G. S.

AID P - 4104

Subject : USSR/Electricity

Card 1/2 Pub. 27 - 15/24

Author : Lisovskiy, G. S., Eng., Leningrad

Title : Electric connection diagrams of hydroelectric power stations. (Discussion of the article of N. N. Krachkovskiy, this journal, No. 11, 1953 and Nos. 1 and 5, 1955).

Periodical : Elektrichestvo, 11, 77-80, N 1955

Abstract : The author is of the opinion that the selection of the right kind of electric connection diagram of a hydroelectric power station is one of the most vital elements in designing such a station. He goes into the details of various types of connection diagrams and discusses the merits and demerits of those presented by the author of the article and of those presented in the discussion. Tabulated data with types of connection diagrams and 3 connection diagrams are given.

ALEKSANDROV, B.K.; DERMAN, B.A.; DROZDOV, N.G.; DUBINSKIY, L.A.; ZALESSKIY, A.M.; KAMENSKIY, M.D.; KOZLOV, M.D.; LISOVSKIY, G.S.; SINELOBOV, K.S.; TREBULEV, P.V.; USPENSKIY, B.S.; KHEYFITS, M.D.; SHVETSOV, M.A.

Nikolai Nikolaevich Krachkovskii, 1889- ; on his 75th birthday. (MIRA 18:7)
Elektrichestvo no.1:90 Ja '65.

LISOVSKIY G.S.

4-4

PHASE I BOOK EXPLOITATION 284

Soveshchaniye elektrikov po voprosu proyektirovaniya elektricheskoy chasti gidrostantsiy, Moscow, 1956

Novoye v proyektirovanii elektricheskoy chasti gidroelektrostantsiy (Materialy soveshchaniya po proyektirovaniyu i ekspluatatsii) (New Developments in the Design of Electric Equipment for Hydro-electric Power Plants (Data of the Conference on Design and Operation)) Moscow-Leningrad, Gosenergoizdat, 1957, 222 p. 4,500 copies printed.

Sponsoring agencies (of Conference): Vsesoyuznyy trest po proyektirovaniyu gidroelektrostantsiy i gidroelektrouzlov; Moskovskoye otdeleniye nauchno-tekhnicheskogo obschchestva energopromyshlennosti, Moskovskiy energeticheskiy institut.

Ed.: Demkov, Ye. D.; Tech. Ed.: Fridkin, A.M.; Ed. of the Collection: Kheyfits, M.E., Engineer.

PURPOSE: These collected reports are addressed to engineers engaged in the design, construction, operation and maintenance of electric power plants, as well as to students at power

Card 1/9

New Developments in Design of Electric Equipment (Cont.) 284

engineering and electrical engineering vuzes.

COVERAGE: A conference of electrical engineers engaged in the design, construction, operation and maintenance of hydroelectric power plants and electric power distribution systems was held in Moscow from May 16th to May 24, 1956. The conference was organized by Gidroenergoproyekt (All-Union Trust for the Design and Planning of Hydroelectric Power Plants and Developments) in collaboration with MONTOEP (Moscow Branch of the Scientific and Technical Society of the Electrical Industry) and the Moskovskiy energeticheskiy insitut (Moscow Power Engineering Institute). Several related design organizations, as well as the Ministries of the Electrical Industry, of Electric Power Plants and of Electric Power Plant Construction also participated. The reports in this collection reflect the latest views on the design and planning of the electrical equipment of hydroelectric stations and on their requirements for equipment. Special attention is given to problems of automation and remote control of stations and systems. These reports are concerned to a very great extent with the description and appraisal of considerable quantities of

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Soviet-produced electrical equipment. There is a list of Soviet personalities and organizations which took part in the conference (pp. 205-215). In several of the reports reference is made to Soviet power engineers who have made important contributions in the field. There are 34 references, of which 27 are Soviet (pp. 157, 169, 197 and 205), three English, two Italian, one French and one Swedish (p. 196).

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AVAILABLE: Library of Congress (TK1081.S651956)

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On the article "Arrangement of the main step-up transformers in hydroelectric power stations." Elek. sta. 30 no.3:91-93 Mr '59. (MIRA 12:5)

(Electric transformers)

LISOVSKIY, Grigoriy Semenovich; UMANSKIY, Boris Zinov'yevich; USPENSKIY, Boris Sergeyevich; KHEYFITS, Mikhail Emmanuilovich; SHUMILOVSKAYA, I.P., red.

[Electrical section of hydroelectric power stations; principal schematics of electrical connections] Elektricheskaia chast' gidroelektrostantsii; glavnye skhemy elektricheskikh soedinenii. Moskva, Energiia, 1965. 367 p. (MIRA 18:7)

LISOVSKIY, I., inzh.

Pickup stacker for placing hay on drying racks. Tekh. v sel'khoz. 20 no.7:27-28 Jl '60. (MIRA 13:9)

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(Hay--Drying) (Loading and unloading)

VELIKOVSKAYA, Ye.M.; VELIKOVSKIY, D.S.; PEGANOV, A.A.; DOBRYAKOVA, L.I.; KUROCHKINA, Z.V.; LISOVSKIY, I.I.

Synthetic drying oils. Patent U.S.S.R. 77,050, Dec.31, 1949. (CA 47 no.19:10244 '53)

CHUGUNOV, L.F., inzh.; LISOVSKIY, I.I., inzh.; YARMIZIN, V.A., inzh.; KUMEKHOV, B.S., inzh.; VERGUS, N.G., inzh.; KRIVENKOV, N.A., kand. tekhn. nauk

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1. Tyrnyauzskiy vol'framo-molibdenovyy kombinat (for Chugunov, Lisovskiy, Yarmizin, Kumekhov, Vergus). 2. Institut gornogo dela im. A.A.Skochinskogo (for Krivenkov).

KOBAKHIDZE, V.N.; LISOVSKIY, I.I.

Work and plans of the miners of Tyrnyauz. Gor. zhur. no.12:7-10 D '61. (MIRA 15:2)

1. Direktor Tyrnyauzskogo kombinata (for Kobakhidze). 2. Nachal'nik rudnika "Molibden" Tyrnauzskogo kombinata (for Lisovskiy).
(Tyrnyauz Region--Mining engineering)

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[Safety engineering in agriculture] Tekhnika bezopasnosti v sel'skom khoziaistve. [Leningrad] Leningradskoe gazetno-zhurnal'noe knizhnoe izd-vo, 1955. 46 p. (MLRA 9:11)
(Agriculture--Safety measures)

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(Agriculture--Safety measures)

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GILENKO, A.; LISOVSKIY, K., red.; MEYSAK, N., red.; PADERIN, G., red.; POSPELOV, G., red.; SEL'KINA, D.G., red.; GOSTISHCHEVA, Ye.M., tekhn. red.

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[Stars of distant roads; travelogues] Zvezdy dal'nikh dorog; putevye ocherki. Krasnoiarsk, Krasnoiarskoe knizhnoe izd-vo, 1964. 70 p. (MIRA 18:4)

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[Siberia's morning] Utro Sibiri. Moskva, Profizdat, 1959. 117 p. (MIRA 14:1)

(Siberia--Description and travel)

LISOVSKIY, L. P.

Inst. Physics, Moscow State Univ., Lab Oscillations, -1939-.

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E140/E455

AUTHOR: Lisovskiy, L.P.

TITLE: Experimental Study of a Backward-Wave Tube with Inhomogeneous Delay System

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol.5, No.9, pp.1442-1447

TEXT: Experimental work was carried out to determine the possibility of employing inhomogeneous delay systems to broaden the band of oscillation of backward-wave tubes. The work also indicated, for example, the required precision of production of the delay system. The double-comb delay system studied is indicated in Fig.1. A ribbon electron beam passed through the system in a longitudinal solenoidal focusing field and was almost completely located on the delay system. The z-varying parameter was the height of the tube h. Four experiments were carried out: 1. A BWT with constant tooth-height h_0. 2. In the same tube the combs were machined so that the tooth-height at the end near the gun remained as before, while the remaining teeth decreased linearly