27898
S/078/61/006/010/005/010
B121/B101

21.41CC

AUTHORS: Galkin, N. P., Shubin, V. A., Krylov, A. S.

TITLE: Chemism of reduction of chemical uranium concentrates

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 6, no. 10, 1961, 2325-2328

TEXT: The authors deal with the problem of reducing uranium concentrates obtained by ion exchange (85 % U_3O_8) and containing Al and Fe impurities. They studied the reduction of ammonium and sodium uranyl sulfates with hydrogen in the presence of iron or aluminum oxides. The samples were prepared by reacting NH_4OH or NaOH with UO_2SO_4 at a pH of 7-8 and a temperature of 80°C, and by adding the relevant Al or Fe cation. The decomposition of ammonium uranyl sulfate in a hydrogen atmosphere at 350°C obeys the equation: $(NH_4)_2(UO_2)_2SO_4(OH)_4 \rightarrow UO_2SO_4 + UO_3 + 2NH_3 + 3H_2O$. At 550°C, the UO_3 formed continues to decompose according to the equation: $3UO_3 \rightarrow U_3O_8 + 1/2\ O_2$. UO_2 is formed from UO_3, U_3O_8, and uranyl sulfate by reduction with hydrogen: $UO_3 + H_2 \rightarrow UO_2 + H_2O$; $U_3O_8 + 2H_2 \rightarrow 3UO_2 + 2H_2O$;

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$UO_2SO_4 + 5H_2 \longrightarrow UO_2 + H_2S + 4H_2O$. The decomposition of sodium uranyl sulfate in a hydrogen atmosphere takes place according to the following equations: $Na_2(UO_2)_2SO_4(OH)_4 \longrightarrow UO_2SO_4 + 2NaOH + UO_3 + 2H_2O$; $2NaOH + 2UO_3 \longrightarrow Na_2U_2O_7 + H_2O$; $UO_2SO_4 + 2NaOH \longrightarrow Na_2SO_4 + UO_3 + H_2O$. The reduction of uranium (VI) from the ammonium salt takes place quantitatively, and uranium (VI) is reduced from the sodium salt in an amount of 52.6 % only. Sodium diuranate was reduced in order to study the effect of sodium on the reduction of uranium (VI) compounds. Sodium diuranate is reduced in two stages: $Na_2U_2O_7 + H_2 \longrightarrow 2NaUO_3 + H_2O$; $2NaUO_3 + H_2 \longrightarrow 2UO_2 + 2NaOH$. Moreover, reduction of the sulfates results in the formation of H_2S which forms Na_2S with NaOH. The presence of sodium and iron interferes with the reduction of uranium (VI). The reduction degree of uranium (VI) from ammonium uranyl sulfate in the presence of iron hydroxide at 550°C is 64.6 % after 1 hr. The phase composition of the reduction products in the presence of iron hydroxide was determined by x-ray analysis. UO_2, U_3O_8, uranyl sulfate, and iron monouranate were found in the radiogram after a

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reduction time of 15 min. At 550°C, uranium (VI) of iron-containing ammonium uranyl sulfate is almost entirely reduced by H_2 after 4 hr. UO_2, FeS, and metallic Fe were the end products. The formation of iron sulfide interferes with the reduction of ammonium uranyl sulfate in the presence of iron hydroxide. Aluminum hydroxide does not affect the reduction; it behaves like a mechanical impurity. On reduction, the compounds studied gave the same final compounds as are obtained by reduction of chemical concentrates. There are 1 figure, 2 tables, and 3 references: 2 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: Ch. D. Harringston, A. E. Ruehle. Uranium Production Technology, New York, 1959.

SUBMITTED: September 14, 1960

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89355

S/089/61/010/002/005/018
B102/B209

21.3300

AUTHORS: Galkin, N. P., Sudarikov, B. N., Zaytsev, V. A., Vlasov, D. A., Kosarev, V. G.

TITLE: An investigation of the properties of uranium hexafluoride in organic solvents

PERIODICAL: Atomnaya energiya, v. 10, no. 2, 1961, 143-148

TEXT: This is a report on investigations of the solubility and dissolution kinetics of uranium hexafluoride in carbon tetrachloride, chloroform, dichloro-methane, unsymmetric dichloro-ethane, symmetric tetrachloro-ethane, pentachloro-ethane, trifluoro-trichloro-ethane, symmetric trichloro-propane, and tetrachloro-propane. The investigations of solubility were made in a quartz container with a mixture of completely fluorinated hydrocarbons as sealing liquid, at ~140°C. The kinetics of dissolution was determined at 25° in all organic solvents, except in dichloro-ethane, where it was made at 10°C. In the majority of the solvents, equilibrium was reached after 1 hour, in chloroform and trichloro-propane only after 3 hours. The values

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of UF_6 solubility at 25°C in the different solvents are listed in Table 1 (in g/ml). Solubility increased monotonically with temperature, viz. linearly in the essential. The solubility of UF_4, UO_2F_2 and $3NaF \cdot UF_6$ in CCl_4 and $CHCl_3$ at 25°C was also investigated and it was found to be ≤15 mg uranium per liter; only $3NaF \cdot UF_6$ in CCl_4 had a solubility of 72 mg/l. The solution of UF_6 in trifluoro-trichloro-ethane was colorless, whereas all the other solutions were colored. In general, the color was intensified with rising UF_6 content. The stability of the solutions was determined at 20°C. After a time of storage of 7 and 14 days in the exsiccator the uranium content was determined; U IV was found in none of the cases. The results are compiled in Table 2. The stability in the case of a time of storage of 30 days (20°C) was examined, too. Table 3 shows the results. It was found that the U IV content was practically independent of the solvent and the initial UF_6 concentration. Reduction of U VI proceeded faster in chloroform and unsymmetrical $C_2H_4Cl_2$. After 7 days, 0.162 and 0.150 g U^{4+}, respectively, were found in 5 ml of solution (with 0.603 and 0.500 g UF_6

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initially). The degree of reduction was 27 % and/or 30%. Moreover, the temperature dependence of the degree of reduction was ascertained. Table 6 shows data on the degree of reduction of UF_6 (in %) at 60, 90, and 100°C in the individual solvents (3 ml solution, 0.48 g UF_6/ml), and Table 7 lists the reduction degree and U VI/U IV ratio for several solvents. The investigations yielded the following results: 1) The chlorine derivatives of methane are better solvents than the chlorine derivatives of ethane and propane. 2) The solubility of UF_6 and of uranyl fluoride in carbon tetrachloride and chloroform is very low. 3) At 20°C, the solutions of UF_6 in CCl_4, tetrachloro-ethane, pentachloro-ethane, and in trifluoro-trichloro-ethane are stable, those in chloroform and dichloro-ethane are unstable. 4) In the reaction of UF_6 with organic solvents, uranium pentafluoride forms, which first is reduced to intermediate uranium fluorides and then to uranium tetrafluoride. There are 4 figures, 7 tables, and 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc.

SUBMITTED: April 14, 1960

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GALKIN, N.P.; SUDARIKOV, B.N.; ZAYTSEV, V.A.

Methods of reducing uranium hexafluoride. Atom. energ. 10 no.2: 149-155 F '61. (MIRA 14:1)

(Uranium fluoride)

S/089/61/010/003/004/021
B108/B209

21.1230

AUTHORS: Galkin, N. P., Mayorov, A. A., Polonnikova, G. A., Shcherbakova, V. G., Utkina, L. V.

TITLE: Separation of uranium from impurities by means of ammonium carbonate

PERIODICAL: Atomnaya energiya, v. 10, no. 3, 1961, 233-237

TEXT: The authors investigated the dissolution of pure $(NH_4)_2U_2O_7$ in $(NH_4)_2CO_3$ and NH_4HCO_3, the separation of uranium in the form of $(NH_4)_4[UO_2(CO_3)_3]$, and the behavior of some impurities in the salting out of the crystals of this carbon complex. The dissolution involves the following processes:

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$$(NH_4)_2U_2O_7 + 6(NH_4)_2CO_3 + 3H_2O \rightleftarrows \rightleftarrows 2(NH_4)_4[UO_2(CO_3)_3] + 6NH_4OH; \quad (1)$$

$$(NH_4)_2U_2O_7 + 6NH_4HCO_3 \rightleftarrows \rightleftarrows 2(NH_4)_4[UO_2(CO_3)_3] + 3H_2O. \quad (2)$$

(1),

(2)

The experiments were made with a special vessel in a thermostat at 40 ± 0.1°C. Equilibrium was practically reached after one hour. The higher solubility of $(NH_4)_2U_2O_7$ in NH_4HCO_3 (Fig. 1) may be explained by the action of NH_4OH which shifts the equilibrium to the left (see reaction (1)). Dilute solutions containing $(NH_4)_2CO_3$ or NH_4HCO_3 in a stoichiometric ratio (according to (1) and (2)) may completely dissolve ammonium di-uranate without formation of the above carbon complex. The precipitation of small and large crystals was determined in order to study the influence of certain factors upon crystallization. Large

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crystals are called such of a size of 100 × 20 - 300 × 60 μ. The experiments were carried out as follows: $(NH_4)_2CO_3$ was added under stirring to the $(NH_4)_4[UO_2(CO_3)_3]$ solution until saturation was reached. After salting out had ceased, the solution with the crystals was stirred further on for some time. The crystals were then filtered off and subjected to sedimentation analysis. It was found that a temperature rise from 20 to 40°C and an increase of the time of admixing $(NH_4)_2CO_3$ lower the quantity of small crystals. The same holds for an increase in the speed of the stirrer from 60 to 180 rpm. However, a further increase has hardly any effect. Fig. 7 shows the uranium concentration in the solution during salting out of $(NH_4)_4[UO_2(CO_3)_3]$. The best conditions of crystallization are: temperature - 40°C; time of $(NH_4)_2CO_3$ admixture - 1 hour; uranium concentration in the initial solution - 30 g/l; speed of the stirrer - 180 rpm. The impurities to be investigated entered the initial $(NH_4)_4[UO_2(CO_3)_3]$ solution immediately before crystallization. The resulting ammonium di-uranate containing one kind of impurity was

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dissolved in a 5% NH_4HCO_3 solution. Under the above conditions, the carbon complex crystallized. The filtered crystals were rinsed with a saturated $(NH_4)_2CO_3$ solution. After drying they were oxidized by annealing. Table 1 shows that most of the elements are easy to separate from uranium. Table 2 shows the results of purification of ammonium di-uranate which contained several kinds of impurities. There are 7 figures, 2 tables, and 3 references: 2 Soviet-bloc.

SUBMITTED: August 11, 1960

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S/089/61/010/003/018/021
B102/B205

21.3100

AUTHORS: Galkin, N. P., Polonnikova, G. A.

TITLE: Separation of uranium from impurities by means of ammonium sulfite

PERIODICAL: Atomnaya energiya, v. 10, no. 3, 1961, 277-279

TEXT: Though the possibility of using $(NH_4)_2SO_3$ for uranium separation has been known since 1843, there are no accurate methods available. The authors believe that this substance is particularly suited for laboratory work. The present "Letter to the Editor" deals with the conditions for the purification of ammonium diuranate. The authors studied the solubility of pure ammonium diuranate in ammonium-sulfite solution as dependent on various factors, as well as the conditions for the separation of uranium from an ammonium-sulfite solution. Specifically, they studied the effect of the concentration of $(NH_4)_2SO_3$, temperature, and the T : Ж ratio (T - weight of wet diuranate; Ж - weight of the ammonium-sulfite solution) upon the solubility of ammonium diuranate in the

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presence of $(NH_4)_2SO_3$. The dissolution took place according to the reaction equation $(NH_4)_2U_2O_7 + 4(NH_4)_2SO_3 + 3H_2O \rightleftarrows 2(NH_4)_2 [UO_2(SO_3)_2] + 6NH_4OH$. The experiments were carried out as follows: A weighed portion of pure ammonium diuranate of 56% moisture was introduced into thick-walled test tubes, and a certain amount of freshly prepared ammonium-sulfite solution was added. The tubes were stoppered and mounted on a disk which was placed in an air thermostat. By perpendicular rotation of the disk, the substance in the thermostat was intermixed. The dissolution took 2 hr. The graphically represented results show that the solubility of ammonium diuranate increases with an increase in temperature and in the ratio of ammonium sulfite to uranium. The highest uranium concentration in the solution reached in the experiments was 39.3 g/l at an ammonium sulfite/uranium ratio of 14. A further expansion of the volume of the $(NH_4)_2SO_3$ solution led to a complete dissolution of ammonium diuranate. The solubility of the diuranate can be increased by neutralizing the forming ammonia with the help of sulfurous acid.

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Addition of 0.5 M H_2SO_3 per mole of uranium increases the uranium content in the solution from 16 to 28 g/l, and addition of 1 M H_2SO_3 per mole of uranium increases it to 52 g/l (T:Ac = 1:2). Uranium can be separated from ammonium-sulfite solutions by boiling and keeping the volume of the solution constant. Deposits form at pH=6, one hour after the solution has begun boiling. The deposits consist of coarse, yellowish, transparent crystals. The ratio U : SO_3 : NH_3 in the deposit was determined to be 1 : 1.96 : 2.26. Optimum conditions for the dissolution process: saturated ammonium-sulfite solution (concentration of 320 g/l), temperature of 80°C, ammonium-sulfite to uranium ratio of 13.6, and T:Ac = 1:2. The unsoluble deposit is filtered off, and the solution is boiled for 5 hr. The resulting crystals are washed twice in 10% ammonium-sulfite solution, dried, and tempered at 800-900°C in order to obtain a mixed uranium oxide. Results of an analysis of the initial and the final product are contained in Table 3. There are 3 figures, 3 tables, and 3 references: 1 Soviet-bloc and 1 non-Soviet-bloc.

SUBMITTED: August 4, 1960

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Legend to Table 3:
1) Product. 2) Content, % by weight. 3) Initial ammonium diuranate.
4) Mixed uranium oxide.

Продукт (1)	Содержание, вес.% (2)									
	U	Fe	Mn	Cu	Al	P	Ca	Co	As	H_2O
(3) Исходный диуранат аммония . . .	36,0	11,2	0,15	0,06	1,4	0,34	0,40	0,006	0,3	61
Закись-окись урана (4)	83,3	0,045	0,006	0,01	0,01	0,02	0,1	<0,0001	0,1	—

Tab.3

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S/089/61/011/003/010/013
B102/B138

21.4100

AUTHORS: Galkin, N. P., Veryatin, U. D., Smirnov, Yu. V.

TITLE: Thermodynamics of the reduction of uranium tetrafluoride by calcium

PERIODICAL: Atomnaya energiya, v. 11, no. 3, 1961, 257-260

TEXT: The reaction $UF_4 + 2Me = U + 2MeF_2 + Q$ is generally used to obtain metallic uranium fluoride; Me = Mg or Ca. The case Me = Ca is considered here, and results are compared with those relative to reduction by means of Mg. The relation $\log K = -\Delta Z^o_T/4.576\,T$ holds for the equilibrium constant of this reaction. The change in the free energy of the reaction can be determined from the Gibbs-Helmholtz equation:

$$\Delta Z^o_T = \Delta H_o + \int_o^T \Delta C_p\,dT - T\Delta S_o - T\int_o^T \frac{\Delta C_p}{T}\,dT.$$

Numerical values for the thermal effect are listed in Table 3. As may be

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seen, the thermal effect of the reaction grows rapidly from the boiling point of UF_4 (1417°C) and that of calcium (1690°C). While the thermodynamic calculation yielded 2100°C for the reduction reaction, the measurement showed 2000°C, which is considerably higher than the melting point of the slag (1418°C). This means that sufficient heat is liberated both for the melting and for heating the melt, so that no charge preheating is required when Ca is used for the reduction of UF_4. The free energy, and, hence, also the equilibrium constant of the UF_4 reduction by Ca, diminishes with rising temperature. As may be seen from the data in Table 3, the reaction equilibrium has almost completely moved over to the righthand side of the reaction. Apart from the fact that magnesium is much cheaper, the reduction of UF_4 by calcium offers considerable advantages. There are 1 figure, 3 tables, and 9 references: 6 Soviet and 3 non-Soviet. The three references to English-language publications read as follows: Ref. 5: Metal Ind. 94, no. 7, 127 (1959); Ref. 7: O. Kubaschewski, E. Evans. Metallurgical Thermochemistry. London - New York, Pergamon Press, 1958; Ref. 9: A. Glassner. The Thermochemical Properties

Card 2/3

Thermodynamics of the reduction...

of the Oxides, Fluorides and Chlorides to 2500°K. New York, ANL-5750, 1958.

SUBMITTED: April 27, 1960

Legend to Table 3: (1) Temperature, (2) thermal effect, kcal/mole, (3) free energy, kcal/mole; (4) logarithm of equilibrium constant.

Температура, °K (1)	ΔH^0_T, ккал/моль (2)	ΔZ^0_T, ккал/моль (3)	lg K (4)
298	—137,6	—134,3 (—80,1)*	98,49
500	—137,64	—132,1 (—77,8)	57,72
723	—138,0	—129,6 (—74,1)	39,17
938	—135,7	—126,3 (—70,7)	29,42
1000	—135,5	—125,7 (—69,4)	27,46
1049	—134,1	—125,3 (—68,7)	26,11
1123	—138,3	—124,8 (—67,4)	24,29
1309	—149,8	—122,6 (—64,0)	20,47
1405	—147,0	—120,6 (—60,0)	18,76
1424	—144,7	—120,3 (—59,2)	18,46
1500	—147,3	—118,9 (—54,0)	17,32
1690	—197,3	—114,9 (—44,8)	14,85
1963	—275,0	—101,5	11,30
2000	—274,9	—98,3	10,74
2273	—274,1	—74,2	7,13
2500	—273,5	—54,3	4,74

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S/089/61/011/006/014/014
B101/B102

21.4200

AUTHORS: Galkin, N. P., Sudarikov, B. N., Zaytsev, V. A.

TITLE: Thermal decomposition of ammonium uranium pentafluoride

PERIODICAL: Atomnaya energiya, v. 11, no. 6, 1961, 554-555

TEXT: This report is a continuation of the authors' studies on the reaction of UF_6 with NH_3 (Atomnaya energiya, v. 8, no. 6, 530 (1960)). UF_6 is partly reduced by NH_3 at 100-200°C, with NH_4UF_5 being formed which contains up to 10% of free NH_4F. Thermographic analysis rendered three endothermic effects: at 220-280°C (loss in weight 9.4%), 320-360°C (loss in weight 5.9%), and 420-450°C (loss in weight 4.2%). The product calcined above 450°C is UF_4. This gradual separation of NH_4F was now investigated by analysis of the gases formed in thermal dissociation. Calcination was conducted 2 hr in an argon flow at 280, 360, and 460°C. Results: Free NH_4F is quantitatively eliminated at 280°C accompanied by partial NH_4UF_5 decomposition, NH_3 being liberated predominantly. At 360°C, almost no F

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but only NH_3 is liberated. At 460°C, mainly liberation of F can be observed. Thus, HUF_5, which is unknown in aqueous solution, should be stable between 280-460°C. There are 1 figure, 1 table, and 7 references: 1 Soviet and 6 non-Soviet. The three most recent references to English-language publications read as follows: J. Impe Van, Chem. Engng. Progr., 50, no. 5, 230 (1954); H. Bernhardt et al., Nucl. Sci. Abstrs, 10, 792 (1956); V. Dadape, N. Krishna Prasad, Paper no. 1688, submitted by India on the Second International Conference on the Peaceful Use of Atomic Energy (Geneva, 1958).

SUBMITTED: February 1, 1961

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X

S/830/62/000/001/012/012
E111/E192

AUTHORS: Tikhomirov, V.B., Galkin, N.P., and Fedorov, V.D.

TITLE: Investigation of mass exchange in a plate extraction column with air mixing

SOURCE: Ekstraktsiya; teoriya, primeneniye, apparatura. Ed. by A.P. Zefirov and M.M. Senyavin. Moscow, Gosatomizdat, 1962, 213-216

TEXT: The object of the investigation was to study the separating capacity of a plate column with air mixing, on a system: water - nitric acid - uranyl nitrate - 20% solution of tri-butyl phosphate in paraffin. Columns 50-200 mm in diameter with working sections 1000-3900 mm high were used. The sieve plates were without overflow tubes (at 100-mm spacings, free cross sectional area 0.25 m^2/m^2, hole diameter 4-5 mm). The total liquid flow was 20-24 m^3/m^2 hour; with a 2 : 1 organic : aqueous liquid ratio. A maximum efficiency (minimum height equivalent of theoretical stage, HETS) was found for each set of operating conditions below the flooding value. With the total liquid flow of 24 m^3/m^2 hour an air flow of about 65 m^3/m^2 hour gave maximum efficiency,

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Investigation of mass exchange in ... S/830/62/000/001/012/012
E111/E192

corresponding to an HETS of 900 mm. At lower liquid flows HETS values of about 600-700 mm were obtainable. Air mixing increased the efficiency 4-5 times to values characteristic of pulsating columns. Sampling at various levels in the columns indicated that air mixing gives a more uniform extraction efficiency over the whole column height.
There are 3 figures.

Card 2/2

GALKIN, N.P.; SHUBIN, V.A.; SENATOV, A.D.; KRYLOV, A.S.

Thermal decomposition of waste waters containing a nitrate ion. Khim. prom. no.2:87-91 F '63. (MIRA 16:7)

(Sewage--Purification) (Nitrates)

GALKIN, N.P.; SHUBIN, V.A.; KRYLOV, A.S.

High temperature hydrolysis of silicon tetrachloride in decomposition products of silicohydrofluoric acid. Khim.prom. no.9:635-637 S '62. (MIRA 15:11)

(Silicon chloride) (Hydrofluoric acid) (Hydrolysis)

S/064/62/000/009/001/001
B106/B186

AUTHORS: Galkin, N. P., Shubin, V. A., Krylov, A. S.

TITLE: High-temperature hydrolysis of silicon tetrafluoride in the decomposition products of fluosilicic acid

PERIODICAL: Khimicheskaya promyshlennost', no. 9, 1962, 11-13

TEXT: With a view to the preparation of hydrofluoric acid from fluorine-containing waste gases of the phosphoric acid fertilizers industry, an investigation was made of the high-temperature hydrolysis of silicon tetrafluoride in the decomposition products of fluosilicic acid by way of the reaction $SiF_4 + 2 H_2O \rightleftharpoons 4 HF + SiO_2$. According to Ref. 6 (F. A. Lenfesty, T. D. Farr, J. C. Brocher, Ind. Eng. Chem., 44, no. 6, 1448 (1952)), the equilibrium constant of this reaction obeys the equation $\log K_p = 5.547 - 6383/T$. Using that equation it was established that the degree of hydrolysis of silicon tetrafluoride during the thermal decomposition of fluosilic acid of different concentrations increases with decreasing concentration of the initial fluosilicic acid and with rising reaction temperature. When 5% fluosilicic acid is decomposed, a virtually

High-temperature hydrolysis of... S/064/62/000/009/001/001
B106/B186

quantitative hydrolysis of SiF_4 starts from 600°C, whereas in the case of 35% fluosilicic acid it does not occur below 1100°C. Decomposition of 50% H_2SiF_6 at 900-1000°C gives a gas mixture containing approximately 40 mole% HF and approximately 57% H_2O. After the hydrolysis of SiF_4 the gas mixture (HF, H_2O, SiF_4) was conducted over glowing coal at temperatures exceeding 800°C, whereby the water vapor was reduced. The HF concentration in the gas phase increased from 19.2 to 27.3 mole% as the temperature of SiF_4 hydrolysis and the temperature of reduction increase from 800 to 1050°C, while the concentrations of water vapor and of silicon tetrafluoride drop from 5.4 to 0.7, and from 4.1 to 1.6%, respectively. The concentrations of hydrogen (approximately 37.5%) and CO (approximately 30%) remain virtually constant while the CO_2 content decreases from 5.1 to 2.6%. These laboratory data are close to the calculated equilibrium values. This indicates that the temperature dependence of the hydrolysis constant of silicon tetrafluoride as used here holds also for temperatures above 800°C. There are 3 figures and 3 tables. The English-language reference is: A. H. Stuewe, Chem. Eng. News, 36, no. 51, 34 (1957).

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S/064/62/000/010/002/002
D214/D307

AUTHORS: Galkin, N.P., Shubin, V.A. and Krylov, A.S.

TITLE: Thermodynamic analysis of the interaction reactions between hydrofluoric acid vapors and carbon

PERIODICAL: Khimicheskaya promyshlennost', no. 10, 1962, 750-53

TEXT: The recommended method for dehydrating HF is to reduce its aqueous vapors with C. To evaluate this method, a thermodynamic analysis of the reactions of HF with C and the reduction products of water (CO, CO_2, H_2, CH_4) were undertaken. Calculations of the thermodynamic equilibrium constants of all the possible reactions (with COF_2 and $CH_{4-n}F_n$, where n = 1-4, as the possible products) show that HF is inert w.r.t. all the components. At all initial HF concentrations, the CO_2 and CH_4 contents of the resulting equilibrium gas mixture fall sharply as the reduction temperature is increased. The H_2 and CO contents increase correspondingly. At temperatures > 1200°K the gas mixture consists of HF, CO and H_2 only. There are 6 tables.

Card 1/1

STEPANOV, M.A.; GALKIN, N.P.

Solubility product of basic uranium (IV) sulfate. Zhur.neorg.-khim. 7 no.5:983-986 My '62. (MIRA 15:7)
(Uranium sulfate) (Solubility)

TANANAYEV, I.V.; GALKIN, N.P.; SAVCHENKO, G.S.; SUTYAGIN, V.M.

Interaction of UCl_4 and $U(SO_4)_2$ with NaF in aqueous solutions. Zhur. neorg.khim. 7 no.7:1675-1680 Jl '62. (MIRA 16:3)
(Uranium chloride) (Uranium sulfate) (Sodium fluoride)

S/089/62/012/006/015/019
B102/B104

AUTHORS: Galkin, N. P., Veryatin, U. D., Karpov, V. I., Braverman, I. B., Fedoseyev, I. V.

TITLE: Thermodynamics of the reduction of uranium oxides and uranyl fluoride by certain reducing agents

PERIODICAL: Atomnaya energiya, v. 12, no. 6, 1962, 531-533

TEXT: The reduction reactions of UO_2F_2 and higher uranium oxides were calculated, and the reducibility of several reducing agents was assessed. The reaction potentials were determined for the range 373-1173°K, using the relation $\Delta Z_T = \Delta H_{298} - T\Delta S_{298} + \int_{298}^{T} \Delta c_p dT - \int_{298}^{T} \frac{\Delta c_p}{T} dT$.

The results are tabulated. UO_3 is reduced more easily than U_3O_8. ΔZ_T is greatest when NH_3 is used as reducing agent. The reducibility of CO decreases with temperature. UO_2F_2 cannot be reduced by CO, but is reduced

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Thermodynamics of the reduction ... S/069/62/012/006/015/019
B102/B104

by H_2 or NH_3. There are 2 figures and 2 tables.

SUBMITTED: September 11, 1961

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L 10603-63 BDS

ACCESSION NR: AP3000944 S/0064/63/000/003/0030/0032

AUTHOR: Galkin, N. P.; Shubin, V. A.; Kry*lov, A. S. 46

TITLE: Several possible methods for the production of hydrogen fluoride

SOURCE: Khimicheskaya promyshlennost', no. 3, 1963, 30-32

TOPIC TAGS: hydrogen fluoride, HF

ABSTRACT: This is a literature survey on methods of making HF. No original work is reported.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQD: 31May63 ENCL: 00

SUB CODE: 00 NO REF SOV: 005 OTHER: 014

Card 1/1 lln/dj

GALKIN, N. P.; SHUBIN, V. A.; KRYLOV, A. S.

Some possible methods of producing hydrogen fluoride. Khim. prom. no.3:190-192 Mr '63. (MIRA 16:4)

(Hydrofluoric acid)

GALKIN, N.P.; SHUBIN, V.A.; SENATOV, A.D.; KRYLOV, A.S.

Removal of nitrogen oxides from tail gases of chemical industries.
Khim. prom. no.6:424-426 Je '63. (MIRA 16:8)

(Gases—Purification) (Nitrogen oxides)

GALKIN, N.P.; SHUBIN, V.A.; KRYLOV, A.S.; SENATOV, A.D.

Thermodynamic analysis of the process of condensation of hydrogen fluoride from its mixture with water vapor, hydrogen, and carbon monoxide. Khim.prom. no.9:686-690 S '63. (MIRA 16:12)

GALKIN, N.P.; SHUBIN, V.A.; KRYLOV, A.S.; SENATOV, A.D.

Ammonium fluorides and the recovery of fluorine from waste gases. Khim. prom. no.10:752-754 O '63. (MIRA 17:6)

GAIKIN, N.F.; SVDARIKOV, P.N.; ZAITSEV, V.A.

Thermal effect of the interaction between uranium hexafluoride and ammonia. Trudy MKHTI no.43:64-66 '63.

(MIRA 17:10)

[redacted], M.P.; [redacted], B.A.; [redacted], Ya.D.; [redacted], V.

Interaction of metallic uranium with hydrogen. Trudy [redacted] no.43:67-7[redacted] '63. (MIRA 17:10)

GALKIN, N.P.; TUMANOV, Yu.N.; TARASOV, V.I.; SHISHKOV, Yu.D.

Zirconium tetrafluoride vapor pressure. Zhur.neorg.khim. 8 no.9: 2021-2023 S '63. (MIRA 16:10)

L 41872-65 EWT(1)/EWT(m)/EPF(n)-2/EWP(t)/EWP(b) Pu-4 IJP(c) ES/JD/WW/
JG/GW

ACCESSION NR AM5004510 BOOK EXPLOITATION S/

Galkin, N. P. (Doctor of Technical Sciences); Sudarikov, B. N.; (Candidate of Chemical Sciences); Veryatin, U. D.; Shishkov, YU. D.; Mayorov, A. A.

Technology of uranium (Tekhnologiya urana), Moscow, Atomizdat, 1964, 308 p. illus., biblio. 273, 650 copies printed.

TOPIC TAGS: uranium, uranium compound, geochemistry, nuclear fuel

PURPOSE AND COVERAGE: The book is intended for training engineers in the specialty "technology of natural radioactive elements". In the course that is offered in the Moscow Order of Lenin Chemical Engineering Institute imeni D. I. Mendeleyev. The description of the technological processes is preceded by a section covering the history of the uranium industry, the use of uranium, the chemical and physical-chemical properties of metallic uranium and its most important compounds, and some problems of the geochemistry of uranium. The technological processes for processing uranium or to obtain metallic uranium and its compounds used for nuclear fuel are presented in sequence, beginning from the ore beneficiation plant and ending in the specialized plants producing the finished product. Basic attention in this text is given to the chemical and physical-chemical bases of the processes and their equipment.

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L 41872-65
ACCESSION NR AM5004510

TABLE OF CONTENTS [abridged]:

SUBMITTED: 28Oct64 SUB CODE: MM, GC

NO REF SOV: 010 OTHER: 002

Card 2/2

GALKIN, N.P., doktor tekhn. nauk; SUDARIKOV, B.N., kand. khim. nauk; VERYATIN, U.D.; SHISHKOV, Yu.D.; MAYOROV, A.A.; BABUSHKINA, S.I., red.; TARASENKO, V.M., red.

[Uranium technology] Tekhnologiia urana. Moskva, Atomizdat, 1964. 395 p. (MIRA 17:12)

L 26923-65 EWI(m)/EPF(c)/EPF(n)-2/EPR/EWP(t)/EWP(b) Pr-4/Ps-4/Pu-4 IJP(c)
ES/JD/WW/JW/JG/IM

ACCESSION NR: AP5004003 S/0089/65/018/001/0040/0045

AUTHORS: Gagarinskiy, Yu. V.; Khanayev, Ye. I.; Galkin, N. P.; Anan'yeva, L. A.; Gabuda, S. P.

TITLE: On the crystal hydrate $UF_4 \cdot 0.75H_2O$

SOURCE: Atomnaya energiya, v. 18, no. 1, 1965, 40-45

TOPIC TAGS: crystal hydrate, uranium fluoride, dehydration, crystal syngony, water of crystallization, phase transition

ABSTRACT: X-ray diffraction, refractometry, ir spectroscopy, nuclear magnetic resonance, and thermography are used to investigate a new hydrated form of uranium tetrafluoride with composition $UF_4 \cdot 0.75H_2O$, and the product of its dehydration. The results have shown that this form is a hitherto unknown crystal hydrate of uranium tetrafluoride of monoclinic syngony. The water is retained in this crystal

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hydrate by the hydrogen bond with fluorine. Depending on the strength of the bond, the water molecules can be subdivided into three groups, corresponding to three peaks in the absorption bands of the valence and deformation vibrations of the O-H bond. Dehydration of the investigated crystal hydrate proceeds in two stages. The syngony of the initial crystal hydrate is conserved at least down to the $UF_4 \cdot H_2O$ core. With further dehydration (to 0.5 H_2O), the substance experiences a phase transformation accompanied by a change in the structure. The crystal lattice of the phase produced is quite close to that of the crystal hydrate of cubic syngony. "The authors thank S. S. Batsanov for refractometric investigations, taking the ir spectra, and a discussion of the results, and also L. A. Khripin for taking the thermograms. Orig. art. has: 4 figures and 3 tables.

ASSOCIATION: None

L 26923-65
ACCESSION NR: AP5004003

SUBMITTED: 24Jul64 ENCL: 00 SUB CODE: SS, AF

NR REF SOV: 004 OTHER: 002

Card 3/3

GALKIN, N.S.

Fastenings. Standartizatsiia 26 no.6:25-28 Je '62.
(MIRA 15:7)
(Fastenings—Standards)

GALKIN, N.S.

Nut wrenches. Standartizatsiia 26 no.8:47-48 Ag '62.
(MIRA 15:8)
(Wrenches--Standards)

LUGOVOY, P.A., inzhener; GALKIN, N.V., inzhener; TSYPIN, L.G., inzhener.

Determining the length of locomotive runs in using electric and diesel traction. Zhel. dor. transp 38 no.8:5-15 Ag '56. (MLRA 9:10)

(Railroads--Management)

GALKIN, N.V.

Optimum length of the sections of locomotive turnover trips and of the haul distances for locomotive crews. Zhel. dor. transp. 45 no.6:24-28 Je '63. (MIRA 16:7)

1. Glavnyy tekhnolog Gosudarstvennogo instituta tekhniko-ekonomicheskikh izyskaniy i proyektirovaniya zheleznodorozhnogo transporta Ministerstva putey soobshcheniya.
(Railroads—Management)

VERTSMAN, G.Z., kand. tekhn. nauk; PANTELEYEV, P.I., kand. tekhn. nauk; GOMOLYAKO, I.M.; TAL', K.K.; GUSEVA, K.G.; LUGOVOY, P.A.; MASSAN, A.M.; GALKIN, N.V.; SAPYGINA, G.M.; CHESNOKOV, D.S.; DROZDKOV, V.I.; IZYUMOV, P.S.; ZAK, B.O.; KOROGID, P.Ye.; MAKSIMOVICH, L.N.; ZBOROVSKAYA, M.I.; PAVLOVSKAYA, S.A.; BORISOV, A.V.; SELIVANETS, N.Ye.; ITKES, V.M.; YATSKEVICH, Ya.D.; KOZYRSKIY, N.P.; NIKITIN, V.D.; NEKLEPAYEVA, Z.A., inzh., red.; MEDVEDEVA, M.A., tekhn.red.

[Design and planning of railroad stations and junctions] Proektirovanie zheleznodorozhnykh stantsii i uzlov; spravochnoe i metodicheskoe proizvodstvo. Moskva, Transzheldorizdat, 1963. 443 p. (MIRA 16:12)

1. Nauchno-issledovatel'skiy institut transportnogo stroitel'stva (for Guseva). 2. Gosudarstvennyy institut tekhniko-ekonomicheskikh izyskaniy i proyektirovaniya zheleznodorozhnogo transporta (for Zak). 3. Kiyevskiy gosudarstvennyy proyektno-izyskatel'skiy institut (for Kozyrskiy). 4. Moskovskiy institut inzhenerov zheleznodorozhnogo transporta Im. I.V. Stalina (for Nikitin).

(Railroad engineering)

GALKIN, N. Ya.

Topography of Botallo's duct; preliminary communication. Khirurgiia, Moskva no. 11:17-20 Nov. 1951 (CLML 21:3)

1. Junior Scientific Associate. 2. Of the Laboratory of Operative Surgery (Head -- Prof. B. V. Ognev, Corresponding Member of the Academy of Medical Sciences USSR), Institute of Surgery imeni A. V. Vishnevskiy of the Academy of Medical Sciences USSR (Director -- Prof. A. A. Vishnevskiy).

GALKIN, N.Ya. (Moskva, G-170, 2-ya Poklonnaya ul., d.18, kv.1)

Rare case of aneurysm of the ductus arteriosus. Nov.khir. arkh. no.4:107-108 Jl-Ag '59. (MIRA 12:11)

1. Kafedra klinicheskoy anatomii i operativnoy khirurgii (zav. - chlen-korrespondent AMN SSSR prof.B.V.Ognev) TSentral'nogo instituta usovershenstvovaniya vrachey.
(DUCTUS ARTERIOSUS) (ANEURYSMS)

GALKIN, N.Ya.

Role of ductus arteriosus in collateral circulation in certain vascular defects. Khirurgiia 35 no.1:132 Ja '59.
(MIRA 12:2)

1. Iz kafedry klinicheskoy anatomii i operativnoy khirurgii (zav. - chlen-korrespondent AMN SSSR prof. B.V. Ognev) TSentral'nogo instituta usovershenstvovaniya vrachey (dir. - prof. V.P. Lebedeva).
(DUCTUS ARTERIOSUS)
(BLOOD--CIRCULATION, DISORDERS OF)

GALKIN, N.Ya.

Botallo's duct in children. Pediatriia 37 no.12:55 D '59.
(MIRA 13:5)

1. Iz kafedry klinicheskoy anatomii i operativnoy khirurgii TSentralnogo instituta usovershenstvovaniya vrachey Ministertva zdravookhraneniya SSSR.

(DUCTUS ARTERIOSUS)

GALKIN, N.Ya. (Moskva, G-170, 2-ya Poklonnaya ul., 18, kv.1)

Problem of the origin of Botallo's duct. Arkh.anat.gist.i embr. 38 no.4:99-100 Ap '60. (MIRA 14:5)

1. Kafedra klinicheskoy anatomii i operativnoy khirurgii (zav. - chlen-korrespondent AMN SSSR prof. B.V.Ognev) TSentral'nogo instituta usovershenstvovaniya vrachey Ministerstva zdravookhraneniya SSSR.
(DUCTUS ARTERIOSUS)

HALKIN, O.O.; SYNEL'NYKOV, K.D., diysnyy chlen.

Superconductors with frequency of $3.5--4.5 \cdot 10^{10}$ hertz. Dop.AN URSR no.6:453-454 '52. (MLRA 6:10)

1. Akademiya nauk Ukrayins'koyi RSR (for Synel'nykov). 2. Fizyko-tekhnichnyy instytut Akademiyi nauk Ukrayins'koyi RSR (for Halkin).

(Electric conductivity)

GALKIN, O.; SHKLYAREVS'KIY, I.M.

Change in the optical constants of tin during transition into a state of superconductivity. Dop.AN URSR no.6:445-447 '54. (MLRA 9:9)

1.Fiziko-tekhnichniy institut AN URSR i Kharkivs'kiy derzhavniy universitet. Predstaviv diysniy chlen AN URSR K.D.Sinel'nikov.
(Tin--Optical properties)

GALKIN, O.O.; BEZUGLIY, P.A.

New method for the determination of the topography of high frequency fields in hollow-space oscillators. Ukr.fiz.shur. 1 no.4:382-388 O-D '56. (MLRA 10:2)

1. Fiziko-tekhnichniy institut AN USSR, Kharkiv.
(Stilbene--Optical properties) (Dichroism)

USSR/Electronics - Radar and Navigation FD-2676

Card 1/1 Pub. 90-8/12

Author : Yastrebtseva, T. N., and Galkin, O. P.

Title : A method of damping the natural oscillations of quartz

Periodical : Radiotekhnika, 10, 69-73, Jul 55

Abstract : The problem of damping quartz crystal oscillations arises from the necessity of obtaining exact calibration marks on radar range indicators, when radiated pulses lack strict periodicity. An experimental investigation is described of a rapid method of damping natural oscillations of quartz (Q of several tens of thousands and frequency 8×10^5 cps), by connecting the electrodes of the crystal to the input of a negative feedback circuit at the right time. In the experimental apparatus natural oscillations were shifted 180° and fed into the feedback channel (for which an amplification factor of 700 was chosen), producing full damping in less than 100 cycles. Diagram, oscillograms. One English reference.

Institution :

Submitted : June 26, 1954

S/046/60/006/01/03/033
B008/B011

AUTHORS: Galkin, O. P., Grigor'yev, V. S.

TITLE: On a Device for Plotting Refracted Rays

PERIODICAL: Akusticheskiy zhurnal, 1960, Vol. 6, No. 1, pp. 23 - 29

TEXT: The paper under review deals with the basic principles of designing automatic continuous-motion devices serving for the calculation and the plotting of path-of-rays diagrams. One and the same basic circuit diagram can be used for purely electrical (electronic), purely mechanical or electromechanical machines. The present paper deals with devices used for a medium consisting of plane layers, in which the sound velocity depends only on the perpendicular coordinate (Fig. 1). From among the large number of possible modifications of electronic devices, four with especially remarkable features are sorted out (Figs. 2 - 7), and some mechanical and electromechanical beam recorders (postroitel' luchey) (Figs. 8 - 10) are submitted to a close examination. When checking several varieties the authors reached the following

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B

On a Device for Plotting Refracted Rays

S/046/60/006/01/03/033
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conclusion: Electronic devices reproducing the rays on an electron-ray indicator are better suited for high-speed recorders of a relatively low accuracy. Electromechanical integrators reproducing the system of rays in the form of curves are better suited for low-speed high-precision recorders. There are 10 figures.

ASSOCIATION: Akusticheskiy institut AN SSSR, Moskva
(Institute of Acoustics, AS USSR, Moscow)

SUBMITTED: July 31, 1959

V B

Card 2/2

GALKIN, P.

Observation duty of a vessel. Voen.znan. 29 no.9:14 S '53. (MLRA 6:12)
(Optical instruments) (Naval art and science)

SOV/92-58-7-24/37

AUTHOR: Galkin, P., Mechanic of the Petroleum Base at Kama

TITLE: The 4004 Loader is Powered by an Electric Welding Generator (Pogruzchik 4004 rabotayet ot elektrosvarochnogo generatora)

PERIODICAL: Neftyanik, 1958, Nr 7, p 26 (USSR)

ABSTRACT: The author states that serious difficulties must be overcome in in loading operations carried out at petroleum bulk plants and terminals. A wide variety of loaders of different types have to be used for this purpose. However, loaders are not always supplied to bulk plants in the quantity needed, and the latter often have to use their own specially adjusted machinery to serve the purpose. In order to facilitate the loading of barrels on trucks, one of the petroleum bases in the Perm' oblast started to use an electrically powered loader of the 4004 type with 750 kg. capacity, which can lift a load to 1,600 mm. Under the severe winter conditions which exist in the Ural region, the electrolyte of the accumulator often freezes. In view of this fact, it has been decided to operate the

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loader with the aid of a d-c welding generator, which is driven by an a-c electric motor. The electrical system is shown by the author in a diagram.

ASSOCIATION: Kamskaya neftebaza (Petroleum Base at Kama)

1. Cargo vehicles--Loading 2. Containers--Handling 3. Industrial equipment--Operation 4. Accumulators--Climatic factors 5. Electric motors--Performance 6. Generators--Applications

KESSEL', N.K.; OVCHINNIKOV, E.V.; KUCHUR, Ye.S.; GALKIN, P.A.; MOLIBOSHKO, V.A., red.

[Equipment and devices for assembling structural elements] Oborudovanie i prisposobleniia dlia montazha stroitel'nykh konstruktsii. Minsk, Redaktsionno-izdatel'skii otdel BPI im. I.V.Stalina, 1960. 48 p. (MIRA 14:6)

(Building—Tools and implements)
(Precast concrete construction)

VASHCHENKO, Petr Pavlovich; SLYUSAR', V., kand. ekon. nauk, retsenzent (Kiyev); STEPANOV, T., retsenzent (Chernovtsy); GALKIN, P.D., red.

[Soviet Bukovina] Sovetskaia Bukovina. Moskva, Uchpedgiz, 1963. 119 p. (MIRA 17:7)

POLOVINKIN, A.A., professor; GALKIN, P.D., redaktor; SAKHAROVA, N.V., tekhnicheskiy redaktor.

[Methods for teaching physical geography] Metodika prepodavaniia fizicheskoi geografii. Izd. 3-e. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR, 1953. 350 p.(MLRA 7:10)
(Physical geography--Study and teaching)

BODNARSKIY, M.S.; GALKIN, P.D., redaktor; SAKHAROVA, N.V., tekhnicheskiy redaktor.

[Dictionary of geographic names] Slovar' geograficheskikh nazvanii. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR, 1954. 368 p. [Microfilm] (MLRA 7:12)
(Geography--Dictionaries)

GALKIN, P. D.

ALAMPIYEV, P.M., kandidat geograficheskikh nauk, dotsent; GRIGOR'YEV, A.L., kandidat ekonomicheskikh nauk; ZHMUYDA, V.B., kandidat ekonomicheskikh nauk, dotsent; LOYTER, M.N., kandidat tekhnicheskikh nauk; LYALIKOV, N.I., kandidat geograficheskikh nauk, dotsent; NIKITIN, N.P., professor; TUTYKHIN, B.A., kandidat geograficheskikh nauk, dotsent; CHERDANTSEV, Gleb Nikanorovich, doktor ekonomicheskikh nauk, professor; DZHAVAKHISHVILI, A.A., professor; GVELESIYANI, G.G., dotsent; GALKIN, P.D., redaktor; RODIONOVA, F.A., redaktor; SAKHAROVA, N.V., tekhnicheskiy redaktor.

[Economic geography of the U.S.S.R.; Soviet Socialist republics; Ukrainian, Moldavian, White Russian, Lithuanian, Latvian, Estonian, Karelo-Finnish, Georgian, Azerbaijan, Armenian, Kazakh, Uzbek, Kirghiz, Tajik, turkmen] Ekonomicheskaia geografiia SSSR; Sovetskie sotsialisticheskie Respubliki: Ukrainskaia, Moldavskaia, Belorusskaia, Litovskaia, Latviiskaia, Estonskaia, Karelo-Finskaia, Gruzinskaia, Azerbaidzhanskaia, Armianskaia, Kazakhskaia, Uzbekskaia, Kirgizskaia, Tadzhikskaia, Turkmenskaia. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR, 1954. 426 p. [Microfilm]

(Geography, Economic) (MLRA 8:1)

SUSLOV, Sergey Petrovich, professor; MESTERGAZI, M.M., redaktor; GALKIN, P.D., redaktor; MAKHOVA, N.N., tekhnicheskiy redaktor

[Physical geography of the U.S.S.R.; Asiatic part] Fizicheskaia goegrafiia SSSR; Aziatskaia chast'. 2-e izd., perer. i dop. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshchenija RSFSR, 1954. 711 p. (MLRA 8:1)

(Siberia--Physical geography)

VOLOSTNOVA,M.B.; GAIKIN,P.D., redaktor; PETROVA,M.D., tekhnicheskiy redaktor

[Dictionary of Russian transcription of geographical names] Slovar' russkoi transkriptsii geograficheskikh nazvanii. Moskva, Gos.uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR. Pt. 1. [Geographical names of the territory of the U.S.S.R.] Geograficheskie nazvaniia na territorii SSSR. 1955. 132 p. (Names, Geographical) (MLRA 9:3)

MUZAFAROV,Valey Galeyevich; GALKIN,P.D., redaktor; GRYUNBERG,G.Yu., redaktor; SAKHAROVA,N.V., tekhnicheskiy redaktor

[Mineralogy and petrography] Mineralogiia i petrografiia. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR, 1955. 166 p. (MLRA 9:2)
(Mineralogy) (Petrology)

SHUVALOV, Yakov Arkad'yevich; GALKIN, P.D., redaktor; MAKHOVA, N.N., tekhnicheskiy redaktor.

[Fundamentals of topography] Osnovy topografii. Izd. 2-oe, Moskva, Gos.uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR, 1955. 343 p. (MLRA 9:1)
(Topographical surveying)

SEVERIN, Nikolay Aleksandrovich; GALKIN, P.D., redaktor; KOSLOVSKAYA, M.D., tekhnicheskiy redaktor

[Russian travelers and explorers] Otechestvennye puteshestvenniki i issledovateli. Moskva, Gos.uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR, 1956. 300 p. (MLRA 9:8)
(Explorers, Russian)

YEFIMOVA, Aleksandra Afanas'yevna; KORINSKAYA, Valentina Aleksandrovna; GALKIN, P.D., red.; YUZEF'OVICH, Ye.F., red.; LAUT, V.G., tekhn. red.

[Methods of teaching physical geography of the continents; grade 6] Metodika prepodavaniia fizicheskoi geografii chastei sveta; VI klass. Moskva, Izd-vo Akad. pedagog. nauk RSFSR, 1957. 242 p. (MIRA 11:5) (Physical geography--Study and teaching)

BIBIK, Antonina Yefimovna.; GALKIN, P.D., red.; TARASOVA, V.V., tekhn. red.

[Methods of teaching the economic geography of foreign countries in the 8th grade] Metodika prepodavaniia ekonomicheskoi geografii zarubezhnykh stran; VIII klass. Moskva, Izd-vo Akad. pedagog. nauk RSFSR, 1958. 229 p. (MIRA 11:12)
(Geography, Economic--Study and teaching)

MATRUSOV, Ivan Stepanovich; NIZOVA, Alla Mikhaylovna; GALKIN, P.D., red.; SOKOLOVA, R.Ya., tekhn.red.

[Methods of teaching the physical geography of the U.S.S.R.; sixth grade] Metodika prepodavaniia fizicheskoi geografii SSSR, VII klass. Moskva, Izd-vo Akad.pedagog.nauk RSFSR, 1958. 277 p. (Physical geography--Study and teaching) (MIRA 12:1)

GALKIN, P.D.

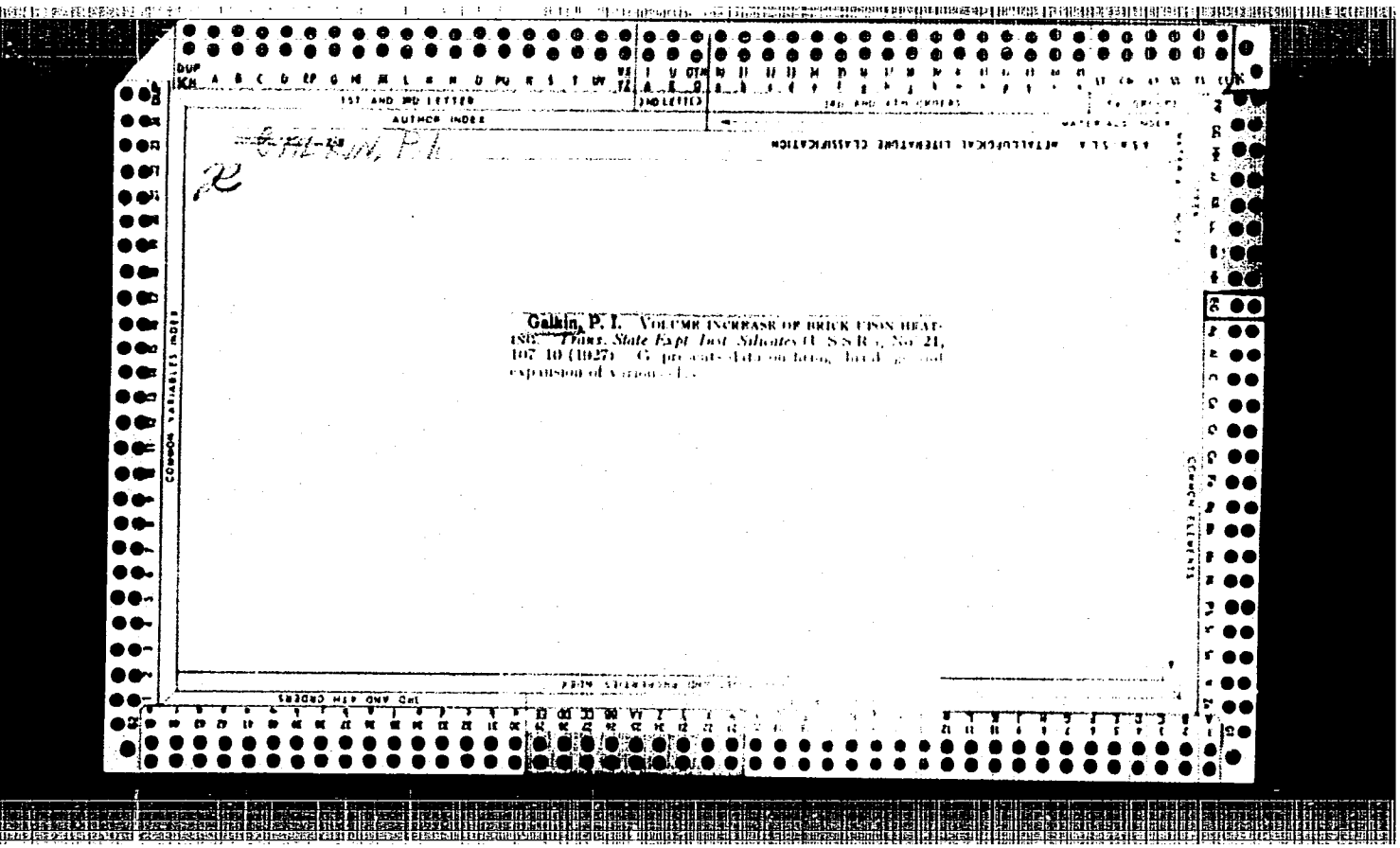
GERASIMOVA, Tat'yana Pavlovna; ZASLAVSKIY, I.I., red.; GALKIN, P.D., red.; TARASOVA, V.V., tekhn. red.

[Methods of teaching an elementary course in physical geography in the fifth grade] Metodika prepodavaniia nachal'nogo kursa fizicheskoi geografii v V klasse. Moskva, Izd-vo Akad. pedagog. nauk RSFSR, 1958. 335 p. (MIRA 11:7)
(Physical geography--Study and teaching)

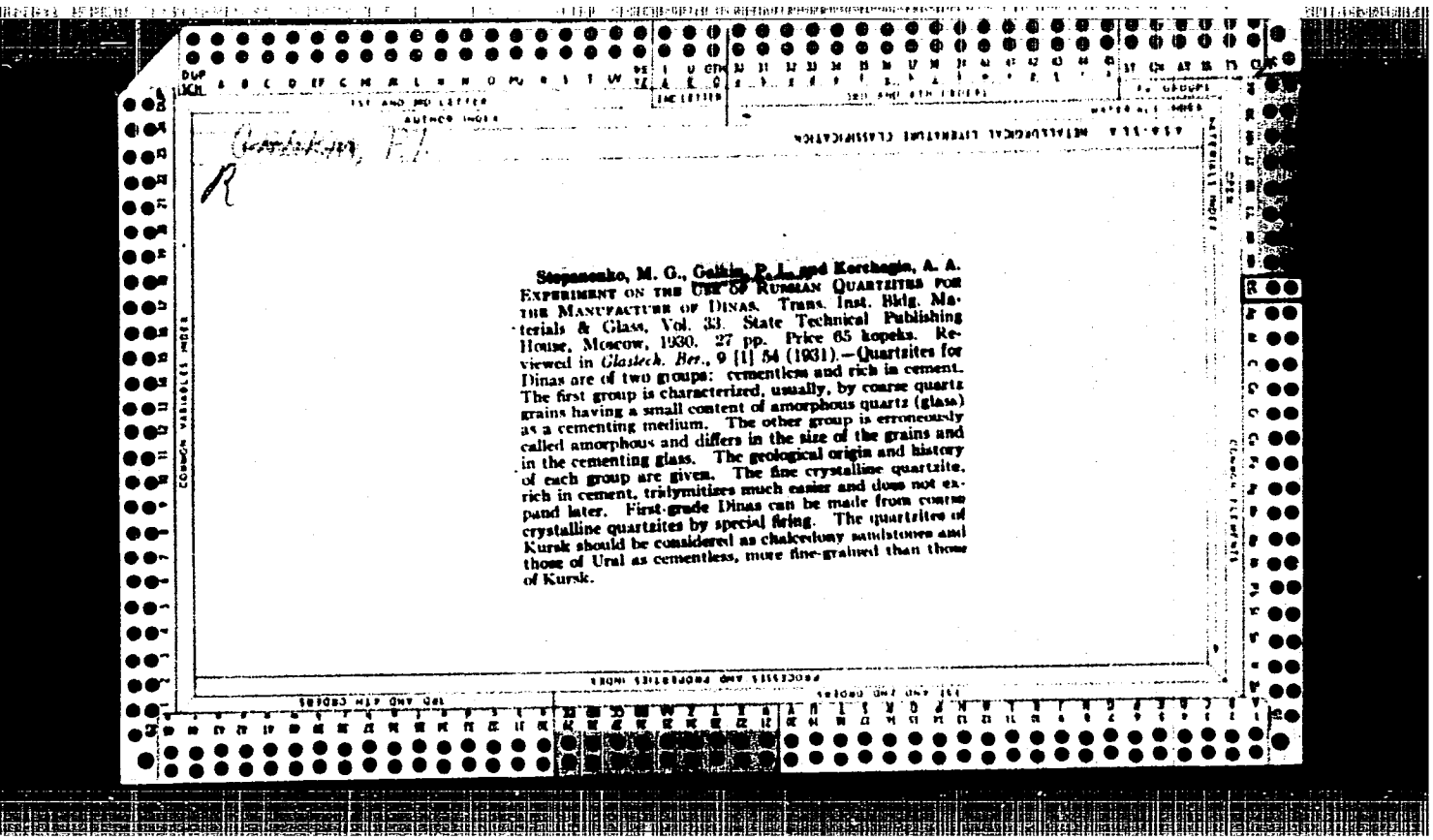
ANTROPOVA, M.V., red.; ZAVAD'YE, A.S., red.; GALKIN, P.D., red.; NOVOSKLOVA, V.V., tekhn.red.

[Daily schedule for children and adolescents] Rezhim dnia detei i podrostkov. Pod red. M.V.Antropovoi. Moskva, 1959. 114 p. (MIRA 12:12)

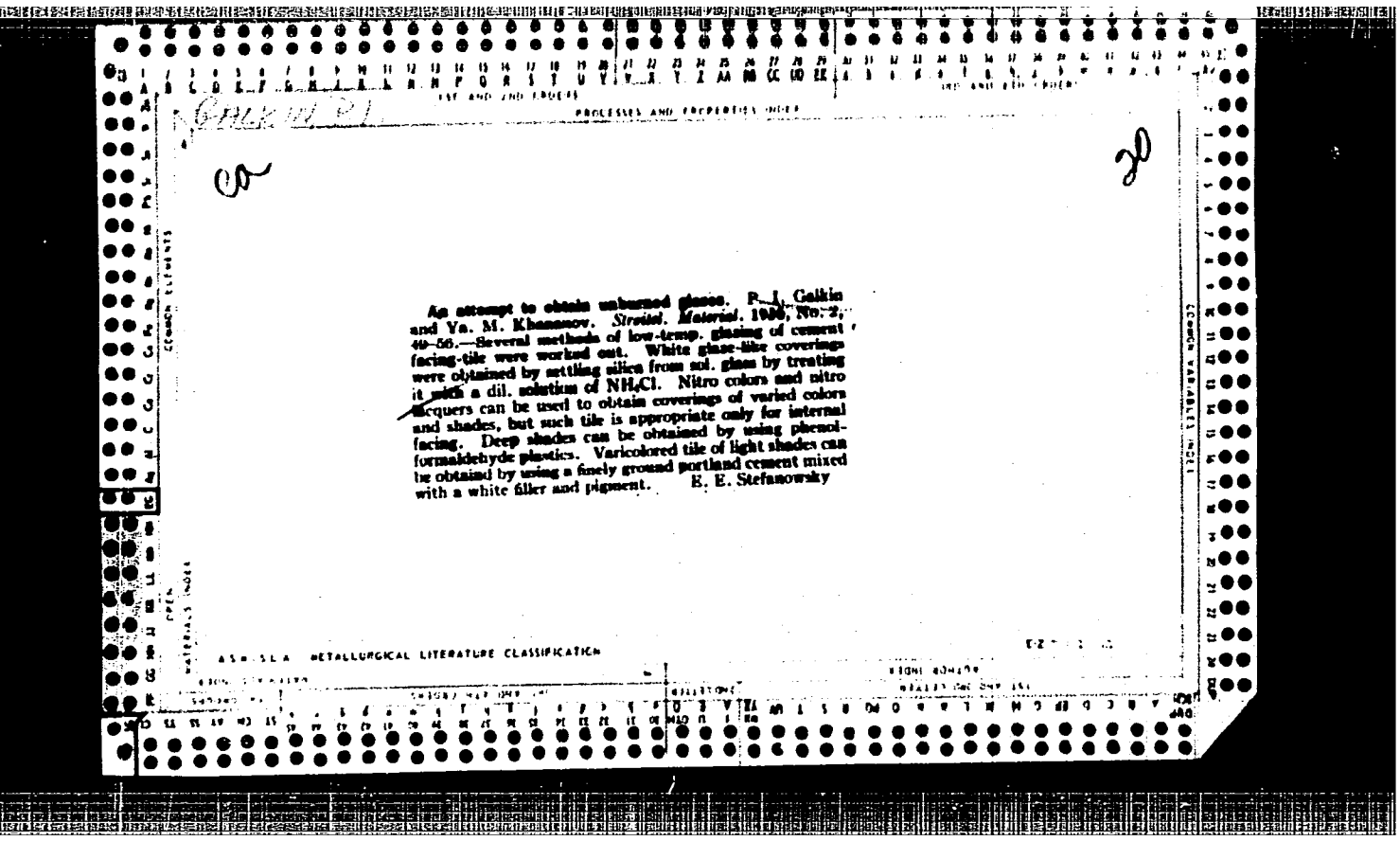
1. Akademiya pedagogicheskikh nauk RSFSR, Moscow. Institut fizicheskogo vospitaniya i shkol'noy gigiyeny.
(Children--Care and hygiene)



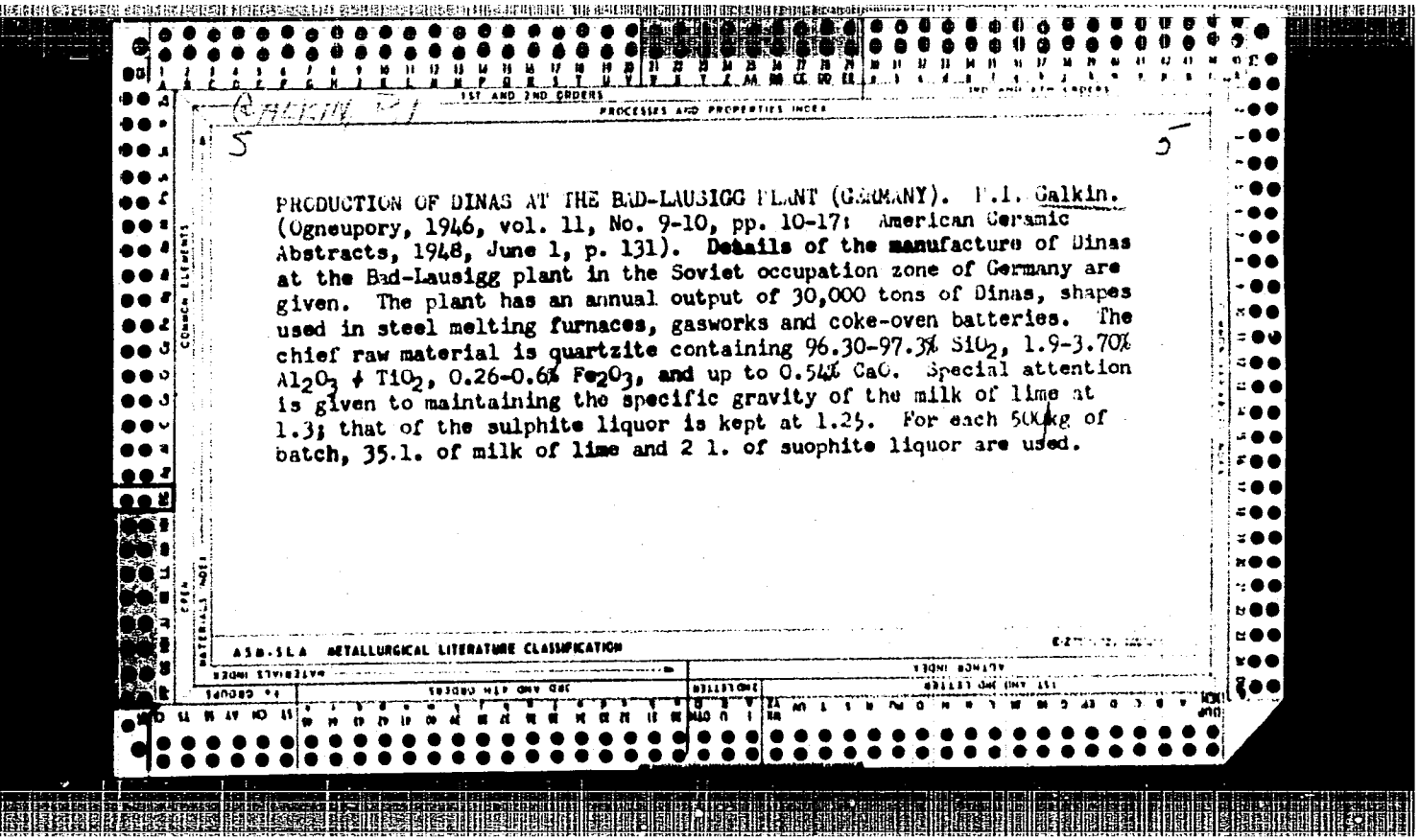
Galkin, P. I. Volume increase of brick upon heating. *Trans. State Expt. Inst. Silicates U.S.S.R.*, No. 21, 107–10 (1927). Gives results of tests on heating, [illegible] and expansion of [illegible].



Stepanenko, M. G., Gelkin, P. L. and Korchagin, A. A. Experiment on the Use of Russian Quartzites for the Manufacture of Dinas. Trans. Inst. Bldg. Materials & Glass, Vol. 33. State Technical Publishing House, Moscow, 1930. 27 pp. Price 65 kopeks. Reviewed in *Glastech. Ber.*, 9 [1] 54 (1931).—Quartzites for Dinas are of two groups: cementless and rich in cement. The first group is characterized, usually, by coarse quartz grains having a small content of amorphous quartz (glass) as a cementing medium. The other group is erroneously called amorphous and differs in the size of the grains and in the cementing glass. The geological origin and history of each group are given. The fine crystalline quartzite, rich in cement, trislymitizes much easier and does not expand later. First-grade Dinas can be made from coarse crystalline quartzites by special firing. The quartzites of Kursk should be considered as chalcedony sandstones and those of Ural as cementless, more fine-grained than those of Kursk.



An attempt to obtain unburned glazes. P. I. Galkin and Ya. M. Khananov. *Stroitel. Material.* 1956, No. 2, 49–56.—Several methods of low-temp. glazing of cement facing-tile were worked out. White glaze-like coverings were obtained by settling silica from sol. glass by treating it with a dil. solution of NH_4Cl. Nitro colors and nitro lacquers can be used to obtain coverings of varied colors and shades, but such tile is appropriate only for internal facing. Deep shades can be obtained by using phenol-formaldehyde plastics. Varicolored tile of light shades can be obtained by using a finely ground portland cement mixed with a white filler and pigment. E. E. Stefanovsky



PRODUCTION OF DINAS AT THE BAD-LAUSIGG PLANT (GERMANY). P.I. Galkin. (Ogneupory, 1946, vol. 11, No. 9-10, pp. 10-17; American Ceramic Abstracts, 1948, June 1, p. 131). Details of the manufacture of Dinas at the Bad-Lausigg plant in the Soviet occupation zone of Germany are given. The plant has an annual output of 30,000 tons of Dinas, shapes used in steel melting furnaces, gasworks and coke-oven batteries. The chief raw material is quartzite containing 96.30-97.3% SiO_2, 1.9-3.70% Al_2O_3 + TiO_2, 0.26-0.6% Fe_2O_3, and up to 0.54% CaO. Special attention is given to maintaining the specific gravity of the milk of lime at 1.3; that of the sulphite liquor is kept at 1.25. For each 500 kg of batch, 35 l. of milk of lime and 2 l. of suophite liquor are used.

GALKIN, P. I.

Mechanical equipment for factories of the refractory industry

Moskva, Gos. nauchno-tekhn. iad-vo lit-ry po chernoi i tsvetnoi metallurgii, 1952.

607 p. (54-18417)

TN677.B2

AUTHOR: Galkin, P.I.

131-23-5-14/16

TITLE: Bibliography (Bibliografiya). On the Book by Ya.M.Zetserov "The Complex Mechanization in Plants Producing Refractories" (O knige Ya.M. Zetserova "Kompleksnaya mekhanizatsiya na ogneupornykh zavodakh")

PERIODICAL: Ogneupory, 1958, Vol. 23, Nr 5, pp. 238-240 (USSR)

ABSTRACT: The author gives a detailed review of the above book which was published by the State Publishing House for Scientific and Technical Literature on Ferrous and Nonferrous Metallurgy in 1957 and which was completed and edited by S.F.Kas'yanov.

AVAILABLE: Library of Congress

1. Metallurgy - Bibliography 2. Refractory materials - Production 3. Machines - Characteristics

Card 1/1

AUTHOR: Galkin, P. I.

131-58-6-12/14

TITLE: Some Data on the Power Consumption in Enterprises of the Industry for Refractory Products (Nekotoryye dannyye elektro-ispol'zovaniya na predpriyatiyakh ogneupornoy promyshlennosti)

PERIODICAL: Ogneupory, 1958, Nr 6, pp. 285 - 287 (USSR)

ABSTRACT: In the table the parameters of the power consumption of a series of enterprises are mentioned for the year 1956. In the table the demand coefficient is given as well as the power consumption per laborer, and also that per ton of output. By constructing filters in the power transformers in order to continuously regulate the oil regeneration the consumption can essentially be decreased. Such filters can be seen in figures 1,2 and 3. Such filters are used in the Borovichi Kombinat, the department for refractory materials of the metallurgical Kombinate of Nizhniy-Tagil, as well as in the "Magnesit" works. They are to be introduced more widely. There are 3 figures and 1 table.

1. Industrial plants--Power 2. Refractory materials--Production

Card 1/1

GALKIN, P.I.

About V.M. Nikulin's book "Second use of refractories."
Ogneupory 28 no.5:239-240 '63. (MIRA 16:6)

(Refractory materials)

SEMENOV, A.I., podpolkovnik meditsinskoy sluzhby; GALKIN, P.Ye., podpolkovnik meditsinskoy sluzhby

Dynamics of the content of lipoproteins in the blood serum of atherosclerosis patients during sanatorium treatment. Voen. med. zhur. no.10:63-64 O '65. (MIRA 18:11)

GALKIN, R.

Combined barometer-thermometer-hygrometer used at the Oloneshty Grain receiving Station in Moldavia. Muk.-elev.prom. 26 no.5:25 My '60. (MIRA 14:3)

1. Zamestitel' direktora po kachestvu Oloneshtskogo khlebopriyemnogo punkta Moldavskoy SSR.
(Meterorological instruments)
(Oloneshty—Grain elevators—Equipment and supplies)

S/169/62/000/003/094/098
D228/D301

3.9110

AUTHORS: Galkin, R. M. and Delarov, A. I.

TITLE: Determining the declination in different fields of the horizontal component

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 3, 1962, 31, abstract 3G213 (V sb. Probl. Arktiki i Antarktiki, no. 8, L., Morsk. transport, 1961, 91-93)

TEXT: It is pointed out that in ascertaining the declination under expedition conditions by a magnet suspended on a quartz thread (with the QHM device) the summary correction, which is determined on checking the instruments in the magnetic observatory before and after field operations, is not constant if the quartz thread, instead of being untwisted ideally, is changed as H varies in relation to the size of the angle of the thread's unavoidable twisting. The authors indicate that satisfactorily precise results can be obtained under field conditions when corrections are introduced for the thread's twisting. They confirm this by their observations ob-

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Determining the declination ... S/169/62/000/003/094/098
D228/D301

tained on a quartz thread with those on instruments of the magnetic observatories at Tiksi, Cape Chelyuskin, Cape Shmidt and Kheysa Island. [Abstracter's note: Complete translation.]

Card 2/2

GA LKIN, R. N.

Increase of immersion of self-propelled vessels during movement. Rech. transp. 12, no 2, 1952.

GALKIN, Rostislav Nikolayevich; RENSKIY, Nikolay Mikhaylovich; SADOVSKIY, G.L., retsenzent; SUKHAREV, S.I., retsenzent; ANTONOV, B.S., red.; ALEKSEYEV, V.I., red.izd-va; YERMAKOVA, T.T., tekhn.red.

[Manual for sailors of inland transportation] Posobie dlia rabotnikov sudokhodnoi obstanovki. Moskva, Izd-vo "Rechnoi transport," 1959. 258 p. (MIRA 12:8)
(Electricity on ships)

GALKIN, R.N., inzh.

Electronics in the operation of navigation aids. Rech. trans. 18 no.8: 41-43 Ag '59. (MIRA 12:12)
(Electronics in navigation) (Aids to navigation)

GALKIN, Rostislav Nikolayevich, inzh.; SHMERLING Iosif Yefimovich, inzh.; KOSTIN, M.Ye., retsenzent; GRIGOR'YEV, S.N., retsenzent; GOLOVUSHKIN, M.P., red.; LOBANOV, Ye.M., red.izd-va; RIDNAYA, I.V., tekhn. red.

[Automatic devices for beacons and buoys] Avtomaticheskie ustroistva v sudokhodnoi obstanovke. Moskva, Izd-vo "Rechnoi transport," 1963. 91 p. (MIRA 16:9)
(Aids to navigation) (Automatic control)

GALKIN, S.

Valuable reference book ("English-Russian dictionary on petroleum" by E. IU. Izraileva. Reviewed by S. Galkin). Neft. khoz. 38 no.4:71-72 Ap '60. (MIRA 14:8)
(English language dictionaries--Russian language)
(Petroleum--Dictionaries)
(Izraileva, E.IU.)

OREL, V., red.; BELOV, V., red.; GALKIN, S., red.; KRAMIKOV, A., red.; SMIRNOV, K., red.; SHOSTAKOVSKIY, V., red.; SIDNEVA, N., red.

[Virgin-land planet] Planeta TSelina. Moskva, Molodaia gvardiia, 1965. 157 p. (MIRA 18:4)

GALKIN, S.I.

1(3); 14(10) PHASE I BOOK EXPLOITATION SOV/2606

Voprosy rascheta elementov aviatsionnykh konstruktsiy; raschet trekhsloynykh paneley i obolochek. Sbornik statey, No. 1 (Problems in Calculating Aircraft Structural Elements; Calculating of Sandwich Panels and Shells. Collection of Articles, No. 1) Moscow, Oborongiz, 1959. 169 p. Errata slip inserted. 2,600 copies printed.

Ed.: A.Ya. Aleksandrov, Doctor of Technical Sciences, Professor; Ed. of Publishing House: T.A. Valedinskaya; Tech. Ed.: V.P. Rozhin.

PURPOSE: This collection of articles is intended for engineers and scientific workers concerned with stress analysis of aircraft structural elements.

COVERAGE: The articles in this collection discuss problems in the structural analysis of sandwich panels with light cores, such as problems of the stability of curved panels, design of cores with consideration of transversal tension (tear-off) and the results of panel-strength tests. In addition, problems in the calculation of torsion and bending of a

cylindrical shell reinforced by bulkheads are covered and the calculation of unsteady temperatures in an I-beam element is considered.

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