

L 3759-66 EWI(m)/EWP(t)/EWP(b) IJP(c) JD

ACC NR: AP5027867

CZ/0034/65/000/001/0072/0072

AUTHOR: Patlicka, J. (Engineer); Bastecky, V.; Kloc, K.; Riha, V.; Vesely, V.;
Hadacek, B. (Engineer); Jolinkova, V. (Doctor of natural science); Strubl, R. (Doctor
of natural science)

TITLE: Method of treating manganese ores to obtain higher oxides of Mn

20
20

SOURCE: Hutnicke listy, no. 1, 1965, 72

TOPIC TAGS: metal melting, manganese, manganese compound, sulfuric acid

ABSTRACT: Article is an abstract of Czechoslovak Patent Applica-
tion Class 40a, 47/00, PV 421-64, dated 24 Jan 64. Solid sulfates,
preferably the monohydrate are exposed at 900°C to a mixture of
steam and nitric acid vapors. In the reactor Mn is oxidized, and
sulfuric acid regenerated. Reaction space vapors are cooled to
recover sulfuric acid as a condensate, while nitric oxides are
recovered in the usual manner. The advantage of the process is
that Mn is recovered as solid oxide suitable for metallurgical
uses, and sulfuric and nitric acids are regenerated.

ASSOCIATION: none

SUBMITTED: 24Jan64

ENCL: 00

SUB CODE: MM

NR REF SOV: 000

OTHER: 000

JPRS

Card 1/1

L. 3/1149-66

ACC NR: AP6026046

SOURCE CODE: CZ/0034/66/000/003/0226/0226

AUTHOR: Bastecky, V.; Petlicka, J. (Engineer); Hermova-Rosova, E.; Srbkova, V.

ORG: none

TITLE: Method for an economical treatment of solutions containing metal ions by means of ion exchangers

SOURCE: Hutnicke listy, no. 3, 1966, 226

TOPIC TAGS: ion exchange, metallurgy

ABSTRACT: The article is a summary of Czechoslovak Patent Application Class 40a, 9/02,40a, 47/00, PV 2792-64, dated 14 May 64. The invention is suitable preferentially for the treatment of highly concentrated solutions, such as may be found in treatment of ores, concentrates, slag, or chemicals, where a limitation of the recirculated liquid is an advantage. The basis of the invention consists in producing solutions at various levels of concentration, at recirculating them at suitable levels in a closed cycle, or using them for other purposes.

[JPRS: 36,646]

SUB CODE: 07,11/ SUEM DATE: none

Card 1/1

L 62733-65 EWP(t)/EWP(b) JD

ACCESSION NR: AP5021467

CZ/0034/64/000/011/0834/0834 14

AUTHOR: Hadacek, B. (Engineer); Petlicka, J. (Engineer); Bastecky, V.; Kloc, K.
Strubl, H. (Doctor of natural sciences) B

TITLE: Method of removing metals, forming products subject to hydrolysis from solutions

SOURCE: Hutnicke listy, no. 11, 1964, 834

TOPIC TAGS: metal extracting, hydrolysis, acid catalysis

Abstract: The article describes Czechoslovak Patent Application Class 40a, 3/00, PV 5726-63, dated 18 Oct 1963. The invention covers a method used in hydrometallurgical processes where the ores are first leached with acid, the solution heated and oxidized under pressure, and precipitated products are separated. The invention covers a process whereby the solution is mixed under pressure with such an amount of the untreated ore that all the acid components of the solution can combine with the metal contained in the untreated ore.

Card 1/2

L 62733-65

ACCESSION NR: AP5021467

ASSOCIATION: none

SUBMITTED: 18Oct63

NO REF SOV: 000

ENCL: 00

SUB CODE: MM

OTHER: 000

JPRS

zll

Card 2/2

L 63297-65

ACCESSION NR: AP5020876

CZ/0034/64/000/010/0720/0724

AUTHOR: Patlicka, Jaroslav (Engineer); Bastecky, Vladimir

TITLE: Detoxication and treatment of spent sulfate pickling baths

SOURCE: Hutnicke listy, no. 10, 1964, 720-724

TOPIC TAGS: pickling, sulfate, chemical neutralization, crystallization, sulfuric acid

ABSTRACT: Possibilities are discussed of detoxicating spent sulfate pickling baths by neutralizing and crystallizing ferrous sulfate hepta- and monohydrates, with subsequent treatment consisting mainly of sulfuric acid recovery. Utilization of the most important chemical and electrochemical treatment techniques as well as the use of ion exchangers is mentioned. Orig. art. has: 1 table, 8 formulas, 2 graphs.

ASSOCIATION: Vyzkumny ustav uvalchtilych oceli, Prague (High-Grade Research Institute)

SUBMITTED: 00

ENCL: 00

SUB CODE: MN, GC

NR REF SOV: 000

OTHER: 017

JPRS

Card ^K 1/1

PETLICKA, Jaroslav, inz.; KREJCOVA, Vera, inz.

Outline of hydrometallurgic methods of manganese raw material processing. Hut listy 18 no.9:660-663 S'63.

1. Vyzkumny ustav uslechtilych oceli, Praha.

PETLICKA, Jaroslav, inz.; BASTECKY, Vladimir

Treatment of Chvaletice manganese raw materials by the hydrometallurgic method. Hut listy 19 no. 2: 117-122 F '64.

1. Vyzkumny ustav uslechtilych oceli, Praha.

PETLICHNA, L.I. [Petlychna, L.I.]; VVEDENSKIY, V.M. [Vvedens'kiy, V.M.];
TURKEVICH, M.M. [Turkevych, M.M.]

3-alkyl derivatives of rhodanine, their synthesis and properties.
Farmatsev. zhur. 16 no.4:7-9 '61. (MIRA 17:6)

1. Kafedra farmatsevticheskoy khimii L'vovskogo meditsinskogo
instituta.

TURKEVICH, N.M.; VVEDENSKIY, V.M.; PETLICHNAYA, L.I.

Synthesis of thiazolidone derivatives of biological interest.
Part 18: N,N'-tetramethylene-bis-rhodanine and its 5,5-diarylidene
derivatives. Zhur.ob.khim. 32 no.3:980-981 Mr '62.

(MIRA 15:3)

1. L'vovskiy meditsinskiy institut.

(Cyclobutane) (Rhodanine)

PETLICHNAYA, L.I.; TURKEVICH, N.M.; VVEDENSKIY, V.M.

Substitution in the azolidine ring. Part 15: Thiourethanes
as starting materials in the synthesis of derivatives of
2,4-thiazolidinedione. Ukr. khim. zhur. 29 no.2:170-171 '63.

1. L'vovskiy nauchno-issledovatel'skiy institut perelivaniya
krovi. (MIRA 16:6)

(Urethanes) (Thiazolidinedione)
(Substitution(Chemistry))

VVEDENSKIY, V.M.; TURKEVICH, N.M.; PETLICHNAYA, L.I.

Substitution in the azolidine ring. Part 16: Synthesis of
3-butylrhodanine and its 5-arylidene derivatives. Ukr. khim.
zhur. 29 no.2:175-176 '63. (MIRA 16:6)

1. L'vovskiy nauchno-issledovatel'skiy institut perelivaniya
krovi.

(Rhodanine)

ESTLICHDAYA, L.I. [Pollychna, L.I.]; TUREVICH, N.M. [Turkov N. M.]

Some properties of 3-aminohexamine. Dep. AN USSR no. 1601-1603 '65. (No. 10-1)

1. D'voyny m'itsinskly Institut. Submitted December , 1964.

TURKEVICH, N.M.; VVEDENSKIY, V.M.; PETLICHNAYA, L.M.

Substitution in the azolidine ring. Part 13: Method of preparing
pseudothiohydantoin and 2,4-thiazolidinedione. Ukr.khim.zhur.
27 no.5:680-681 '61. (MIRA 14:9)

1. L'vovskiy meditsinskiy institut.
(Hydantoin) (Thiazolidinedione)

I 18506-66 EWP(t) IJP(c) JD

ACC NR: AP6010253

SOURCE CODE: CZ/0034/65/000/003/0195/0199

AUTHOR: Petlicka, Jaroslav (Engineer); Vosatkova, Vera (Doctor of natural sciences)

ORG: Research Institute for Iron Metallurgy, Prague (Vyzkumny ustav hutnictvi zeleza)

TITLE: Treatment of manganese sulfate monohydrate to obtain the Mn sub 3 0 sub 4 oxide during regeneration of sulfuric acid

SOURCE: Hutnicke listy, no. 3, 1965, 195-199

31
B

TOPIC TAGS: manganese compound, sulfate, oxidation, nitric acid, sulfuric acid

ABSTRACT: Laboratory trials in treating $MnSO_4 \cdot H_2O$ are described. Mn_3O_4 and H_2SO_4 were produced. Oxidation by gaseous nitric acid was used. The product is very pure; the process described is a one step process. Lower N oxides are recovered, and returned to the process after their transformation into nitric acid. Other possible oxidation agents are discussed. Orig. art. has: 7 figures, 5 formulas, and 3 tables. [JPRS]

SUB CODE: 07 / SUEM DATE: none / ORIG REF: 002 / OTH REF: 012
SOV REF: 001

Card 1/1 *gc*

UDG: 622.341.2: 622.775.1

2

L 18148-66 EWP(t) IJP(e) JD

ACC NR: AP6010383

SOURCE CODE: 07/0034/65/000/005/0356/0359

AUTHOR: Petlicka, Jaroslav (Engineer); Bastecky, Vladimir

39
B

ORG: Iron Metallurgy Research Institute, Prague (Vyzkumny ustav hutnictvi zeleza)

TITLE: Crystallization of ferrous sulfate monohydrate from spent pickling liquor at higher temperatures and pressures

SOURCE: Hutnicke listy, no. 5, 1965, 356-359

TOPIC TAGS: iron compound, sulfate, solubility, crystallization, temperature dependence, pressure effect

ABSTRACT: Ferrous sulfate^{v7} crystallizes with 7, 4 or 1 molecule of water. Its solubility in water decreases with increasing temperature from 64.4°C to 160°C. Effect of higher temperatures, pressures and acid concentrations upon the crystals is evaluated. Experimental apparatus is described. Close to 160° it is possible to remove from the liquor nearly all the Fe and therefore acid can be recycled. Possible uses of ferrous sulfate are discussed. The authors thank Stanislava Kaplanova for carrying out the chemical analysis. Orig. art. has: 3 figures and 3 tables. [JPRS]

SUB CODE: 07, 20 / SUMM DATE: none / ORIG REF: 003 / O/H REF: 001

Card 1/1 vmb

2

L 35944-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6027384

SOURCE CODE: CZ/0034/65/000/009/0680/0680

INVENTOR: Petlicka, J. (Engineer); Bastecky, V.; Hadacek, B. (Engineer);
Jelinkova, V. (Doctor of natural sciences); Kloc, K.; Vesely, V.

31

ORG: none

3

TITLE: Process for treating manganese or ferro-manganese²⁷ raw materials under simultaneous regeneration of sulfuric acid. Class 40a, No PV 1562-64

SOURCE: Hutnicke listy, no. 9, 1965, 680

TOPIC TAGS: manganese, ferromanganese, sulfuric acid, metallurgic process, chemical decomposition, calcination

ABSTRACT: The article is an abstract of Czechoslovak Patent Application Class 40a, 47/00, PV 1562-64, dated 18 March 64. The raw materials treated may be ores, concentrates, sludges, slags, or byproducts. The process is of a hydrometallurgical character; manganese or both manganese and iron are dissolved as sulfates, and these sulfates are treated according to the invention in such a manner that higher oxides of the respective metals are obtained under conditions of a simultaneous regeneration of the sulfuric acid. The sulfate is subjected to an attack by hydrochloric acid, or gaseous hydrogen chloride, or both of these at the same time; sulfuric acid is expelled, and the resulting chlorides of metals are precipitated as solids from the concentrated solution. The chlorides are decomposed by calcination and the regenerated HCl is returned to the process. [JPRS]

SUB CODE: 11, 16 / SUBM DATE: none

Card 1/2

L 34146-66

ACC NR: AP60260,9

SOURCE CODE: CZ/0034/66/000/003/0227/0227

AUTHOR: Petlicka, J. (Engineer); Vesely, V.

ORG: none

TITLE: Method of treatment of carbonate pyrites bearing manganese ores

SOURCE: Hutnicke listy, no. 3, 1966, 227

TOPIC TAGS: manganese compound, pyrite, chemical reaction

ABSTRACT: The article is a summary of Czechoslovak Patent Application Class 40a, 47/00, PV 215-65, dated 12 Jan 65. The basis of the invention is that in a single step the pyrites is oxidized and decomposed into iron oxide and sulfuric acid, which immediately dissolves Mn; Mn is in the solution while the remaining ore and the hydrolyzed iron oxide are present as solids. In the presence of phosphorus, iron phosphate would also be formed as a solid. The solution contains a relatively pure manganese sulfate. The oxidizing agent is preferably oxygen in gaseous form.

[JPRS: 36,646]

SUB CODE: 07 / SUBM DATE: none

Cord 1/1 11/65

0716 1076

L 34432-66 EWP(t)/ETI IJP(c) JD

ACC NR, AP6026200

SOURCE CODE: CZ/0034/65/000/011/0800/0804

AUTHOR: Petlicka, Jaroslav--Petlichka, I. (Engineer); Vesely, Vladimir--Veselyy, V.

ORG: Institute of Ore Research, Prague (Ustav pro vyzkum rud)

TITLE: Pressure leaching of manganese ores with the use of pyrite

SOURCE: Hutnicke listy, no. 11, 1965, 800-804

TOPIC TAGS: manganese, pyrite, sulfuric acid

23
B

ABSTRACT: The article describes a technique in which pyritic sulfur in the treated carbonaceous manganese ore is present in such amount as to be capable of fixing almost all manganese of the ore as manganese sulfate. It permits combining the production of sulfuric acid from the pyrite, the leaching of manganese from the ore, and the removal of iron from the leach residue into one operation. Orig. art. has: 2 figures, 9 formulas and 4 tables. [Based on authors' Eng. abstract] [JPRS: 33,732]

SUB CODE: 08, 11 / SUBM DATE: none / ORIG REF: 001 / OTH REF: 003

Card 1/1 *gls*

UDC: 622.341.2: 622.791

0916 1748

L 18510-66 EWP(t) IJP(c) JD

ACC NUM: AF6010257

SOURCE CODE: CZ/0034/65/000/003/0219/0219

AUTHOR: Hadacek, B. (Engineer); Strubl, R. (Doctor of natural sciences); Riha, V.;
Kloc, K.; Vesely, V.; Bastecky, V.; Petlicka, J. (Engineer)

ORG: none

TITLE: Method for treating phosphorus containing ferromanganese ores

SOURCE: Hutnicke listy, no. 3, 1965, 219

TOPIC TAGS: sulfuric acid, phosphorus, ferromanganese, oxidation

34
B

ABSTRACT: The article is an abstract of Czechoslovak patent application Class 18a 1/04 PV 6186, dated 9 Nov. 1963. The ore is repeatedly leached by sulfuric acid; the solution obtained has a pH of 1 - 3, and the reaction mixture is heated to 60 - 100°C, and at the same time oxidized by hydrogen peroxide; the oxidation is continued until the bulk of phosphorus is eliminated, when a new amount of ore is added, corresponding to the remaining P content in the ore. The content of Fe can be adjusted by addition of iron ore. The iron content in the filtrate may be adjusted by an oxidizing agent, such as a peroxide of manganese or hydrogen.

[JFRS]

SUB CODE: 07, 11 / SUBM DATE: none

Card 1/1

2

BASTECKY, Vladimir; PETLICKA, Jaroslav

Heat pressure filtering installations. Chem prum 14 no.8:437
Ag '64.

1. Research Institute of High-Quality Steels, Prague.

PETLICKA, Jaroslav, inz.; BASTECKY, Vladimir

Detoxication and processing of pent sulfatic pickling
baths. Hut listy 19 no.10:720-724 0 '64.

1. Research Institute of High-Quality Steels, Prague.

RYZHOV, L., kand.tekhn.nauk; MEYER, N., inzh.; PETLITSKIY, Yu., inzh.

Results of testing automatic linkages. Rech. transp. 20 no.5:18-
22 My '61. (MIRA 14:5)

(Towing)

Perlov, Fedor

BANNIKOV, A.G.; TYUMENETS, Vasilii; PETLIN, Ivan; BAIKOV, Fedor

[First Russian travelers in Mongolia and Northern China] Pervye
russkie puteshestvenniki v Mongoliiu i Severnyi Kitai: Vasilii
Tiumenets, Ivan Petlin, Fedor Baikov. [Izd. 2.] Moskva, Gos. geo-
graficheskoe izd-vo, 1954. 52 p. (MLRA 8:11)
(Mongolia--Description and travel) (China--Description and travel)

CV 110-11-0-1-1-1-1

Translation from: Referativnyy zhurnal, Elektrotehnika, 1958, Nr 18, p 104 (USSR)

AUTHOR: Petlin, M.I.

TITLE: On Non-Primitive Circuits

PERIODICAL: V sb.: Probl. kibernetiki., Nr 1, Moscow, Gos. izd-vo fiz.-matem. lit., 1958, pp 23 - 45

ABSTRACT: Circuits are investigated, having n inputs $x^1 \dots x^n$ and p outputs $f^1 \dots f^p$, each of which may at any fixed moment be in one of two states (S). If the S of outputs is uniquely determined by the states of inputs at a given moment, such a circuit is called primitive. If there are s delay lines in the circuit (this may particularly be the case with electromagnetic relays) the S of outputs at the moment $t + 1$ will depend also on the S of the circuit. $\phi_t = (\varphi_t^1, \dots, \varphi_t^s)$, where φ_t^j is the S of delay line j ($j = 1, 2, \dots, s$) at the preceding moment t . The simplest example of such a circuit which is called non-primitive is the trigger. The non-primitive circuit is characterized by the square matrix of S of the order 2^s :

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$$\Lambda (X_{t+1}) = \left\| a_{ij} (x_{t+1}^1, \dots, x_{t+1}^n) \right\|.$$

✓

SCV/112-59-18-38/44

On Non-Primitive Circuits

This matrix shows that the inputs $X_{t+1} = (x_{t+1}^1, \dots, x_{t+1}^n)$ for which $a_{ij} = 1$, stipulate the transfer of the non-primitive circuit from S i into S j. If $a_{ij} = 0$ at any input X_{t+1} , the transfer of the circuit from i-state into j-state is impossible, and if $a_{ij} = 1$ the transfer takes place independently of the S of inputs. The changes of S of the non-primitive circuit can be expressed in the following form:

$$\phi_{t+1} = \phi_t^A (X_{t+1})$$

The dependence between the S of the inputs \tilde{X}_{t+1} and of the outputs \tilde{F}_{t+1} are determined by the reaction matrix $L(\phi)_t$, having 2^n lines and 2^n columns. The elements of this matrix are functions of the S of the delay lines. At any fixed S ϕ_t of the non-primitive circuit exactly one element equal to 1 is contained in each line of the matrix, but the rest are zeros. The element equalling to 1 shows which will be the S of outputs at the given S of inputs and of the circuit. The states of the outputs are determined by:

$$\tilde{F}_{t+1} = \tilde{X}_{t+1} L(\phi)_t$$

The rules for the determination of the elements of the matrices of S and of the reactions are given as well as the operations with the matrices. With the aid of examples the application of matrices of S and of reactions for the analysis and synthesis of non-



On Non-Primitive Circuits

SOV/112-59-18-3, 1974

primitive circuits is shown. For complex non-primitive circuits it is recommended to break them down into sub-circuits. The relations between the elements of the matrices of the subcircuits and those of the whole circuit are shown. 16 illustrations, 16 references.

V.N.R.

✓

Card 3/3

PETLIN, S.; MUSTAFAYEV, S., inzh.-mekhanik

Processing earcorn in the production of mixed feeds. Mak.-elev.
prom. 27 no.11:15-19 N '61. (MIRA 14:12)

1. Fenzenskoye upravleniye zagotovok (for Petlin).
zavod po obrabotke semyan kukuruzy (for Mustafayev).
(Corn(Maize))
(Feed mills.--Equipment and supplies)
2. Kakhskiy

FETLIN, S.

Movable scraper conveyor. Muk.-elev. prom. 26 no.9:21 S '60.
(MIFA 13:9)

1. Glavnyy inzhener Penzenskogo upravleniya khleboproduktov.
(Conveying machinery)

PETLITSKIY, V.; SIDOROV, S.

Automobiles with small carrying capacity. Avt.transp. 37 no.3:
59-60 Mr '59.

(Mototrucks)

(MIRA 12:4)

PETL'OVICHNY, V.

Truby igraiat zaiu [Burles play reveille]. Moskva, Voennoe Intel'istvo, 1953.
219 p.

SO: Monthly List of Russian Accessions, Vol 6 No 4, July 1953

SOV/133-59-3-25/32
AUTHORS: Petrenko, A.G., Kurtova, L.A., Petlyakov, M.M. and Belyakov, A.I.

TITLE: Heterogeneity of Magnetic Properties of Cold-rolled Transformer Steel (Neodnorodnost' magnitnykh svoystv kholodnokatancy transformatornoy stali)

PERIODICAL: Stal', 1959, Nr 3, pp 267 - 268 (USSR)

ABSTRACT: During the production of cold-rolled transformer steel on the Novosibirsk Works, some lots of sheets possessed unsatisfactory magnetic properties. On inspection of the surface of rejected sheets, zones with a fine-grain structure were noticed. Metallographic investigations indicated that in the fine-grain zones the edge of the cube [100] of nearly each individual grain formed an angle with the direction of rolling while in the remaining metal practically all grains were orientated along the rolling direction. The absence of the necessary texture was also confirmed by magnetic anisotropy (Figure 1). Re-annealing at 1 200 °C in hydrogen of faulty sheets did not improve their magnetic properties. The presence of the above fine-grain zones can be explained either by their higher carbon content (from traces of grease films from rolling which

Card1/2

Heterogeneity of Magnetic Properties of Cold-rolled Transformer Steel

carburised the affected spots) or small amounts of Mn, Cu, Ni or N or by the presence of non-metallic inclusions. It is concluded that in order to obtain good quality transformer steel without fine-grain zones, it is necessary to prevent the contamination of the metal and a more complete decarburisation of steel.

There are 2 figures, 1 table and 6 references, 5 of which are Soviet and 1 English.

ASSOCIATIONS: TsNIICHM and Novosibirskiy metallurgicheskiy zavod (Novosibirsk Metallurgical Works)

Card 2/2

BURNOV [BOURNOV] (K. S.) & PATLYUK (P. T.). *Dolichus striatella*
Fallen as vector of the virus disease 'askookhivanie' in grains.—
C.R. Acad. Sci. U.R.S.S., N.S., xxvi, 5, pp. 483-486, 1940.

Investigations into the life habits of the vector of 'askookhivanie' (pupation disease: see preceding abstract), *Dolichus* (*Dolichoceros*) *striatella*, showed that the larvae of this insect overwinter on weeds and grasses in field boundaries and meadows adjoining oat and other cereal fields harvested the preceding year. More larvae were found near the boundaries of the fields than further away from them, and as far as could be ascertained, the insects followed the direction of the wind. An oat field protected by a gauze fence 2 m. high escaped infection and no insects were found in it; unprotected oat fields, on the other hand, were infected to an extent of 17 per cent. It is suggested that live hedges may provide

PETLIUK, P. T.

SURKOV, K. S., and PETLIUK, P. T. "On the Question of the Role of the Vector in the Virus Disease 'Zakakliivanie' in Grains," Comptes Rendus (Doklady) de l'Académie des Sciences de l'URSS, vol. 26, no. 5, 1940, pp. 483-486. 511 P444

So: SIRA SI-90-53, 15 Dec. 1953

PETLIUK, P. T.

Petliuk, P. T. [Co-author] See: Sukhov, K. S. "Delphax striatella fallen as a
vector of the Virus Disease 'Zakukliwanie' in Grains," 1940.

So; SIRA - Si-90-53, 15 Dec 1953

PETLYAK, A.T.

Improving signaling on curves. Avtom., telem. i sviaz' no.1:38-39
Ja '57. (MLA 10:4)

1. Zamestitel' nachal'nika distantsii signalizatsii stantsii Kiyev-
-passazhirskiy. (Railroads--Signaling)

PETLYAKOV, M.M., inzh.; SHAPOVALOV, A.P., inzh.; GUSAKOV, A.N., inzh.;
UDOVICHENKO, R.V., inzh.; BESPALOV, V.N., inzh.; KUZNETSOV, D.K.,
inzh.; SUKHANOV, L.F., inzh.

Obtaining a flat sheet of transformer steel. Stal' 25 no.12:
1132-1134 D '65. (MIRA 1:12)

1. Novolipetskiy metallurgicheskiy zavod i Tsentral'nyy nauchno-
issledovatel'skiy institut chernoy metallurgii imeni I.P. Bardina.

PETLYUK, B.A., inzh.

**Necessary strength of construction joints between wall panels in
frameless apartment houses and public buildings. *Biul. tekhn.*
inform. 3 no.10:39-40 0 '57. (MIRA 10:12)
(Structures, Theory of) (Building blocks)**

PETLYUK, F.B.; PLATONOV, V.M.

Solving a general problem of approximation by the method of
steepest descents. Zav. lab. 29 no.10:1221 '63. (MIRA 16:12)

1. Nauchno-issledovatel'skiy institut sinteticheskikh smol i
organicheskikh produktov.

FETLYUK, F.B.; PLATONOV, V.M.; GIRSANOV, I.V.

Calculation and design of optimum rectification stages. Khim.
prom. no.6:445-453 Je '64. (MIRA 18:7)

PETLYUK, F.B.; PLATONOV, V.M.

Thermodynamic reversible multicomponent rectification. Krim.
prom. 40 no.10:723-725 0 '64. (MIRA 18:3)

FLATONOV, V.M. (Moskva); PETLYUK, F.B. (Moskva); GIRSANOV, I.V. (Moskva)

Minimum work function of separation during rectification of a binary mixture in a real column. Zhur. vych. mat. i mat. fiz. 3 no.3: 594-598 My-Je '63. (MIRA 16:5)
(Isotope separation) (Plate towers)

PLATONOV, V.M.; PETLYUK, F.B.; GIRSANOV, I.V.

Optimum designing of a rectification apparatus by means of
a digital computer. Khim.prom. no.10:764-769 0 '62.
(Distillation apparatus) (MIRA 15:12)

PETLYUK, V.

Subject : USSR/Aeronautics AID P - 412
Card 1/1 Pub. 135, 8/17
Author : Petlyuk, V., Lt. Col.
Title : Special features of fighter navigation at night
Periodical : Vest. vozd. flota, 9, 42-45, S 1954
Abstract : The author begins with a description of the visibility of ground orientation points at night. He underlines the necessity of relying on instrument flying, light signals, and radio communication during night flights. Examples of orientation of jet aircraft during night flights are given. Names of officers are mentioned.
Institution : None
Submitted : No date

PETLYAKOV, M.M., inzhn. PRAVILINA, T.I., inzhn. ALIAYEVA, S.M., inzhn.,
ALYSHOVA, Ye.I., inzhn.

Effect of the atmosphere of high-temperature annealing on the
properties of transformer steel. Stal' 24 no. 2:170-171, 1964,
(MIRA 17:3)

1. Novolipetskiy metalurgicheskiy zavod.

PETLJAKOV, V. M.

Aviation progress under the Soviet. A description of the work of the Russian Central Aero-Hydro-Dynamic Institute with some of its practical results. (Aviation, 1930, v. 28, no. 3, p. 108-112, illus., map).

DLC: TL501.A8

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

PETLYUK, F.B.; PLATONOV, V.M.; SLAVINSKIY, D.M.

Thermodynamic optimum method for the separation of multicomponent mixtures. Khim. prom. 41 no.3:206-211 Mr '65. (MIRA 18:7)

NOSOV, Nikita Alekseyevich; TSYUPKO, Grigoriy Ivanovich; PETLYUK, Vladimir Iosifovich; BABAY, G.A., polkovnik, redaktor; MEDVEDEV, I.M., gvardii mayor, redaktor; MYASHNIKOVA, T.F., tekhnicheskiy redaktor

[Flying a single-seater plane] Vozhdenie odnomestnogo samoleta. Pod red. G.A.Babay. Moskva, Voen.izd-vo Ministerstva obor. SSSR, 1956.
247 p. (MIRA 9:11)

(Airplanes--Piloting)

PETLYUK, Yekaterina Alekseyevna.

My commander. Tankist no.2:18 F '58. (MIRA 11:3)
(World War, 1939-1945--Personal narratives)

PETNEHAZY, Zalan

Remark about Ferenc Kadar's article on radar navigation. Kozleked
kozl 19 no.36:607-609 8 S '63.

PETNEY, L. V.

8 (C)
AUTHORS:

Gubanov, E. V., Ter-Machaturov, A. Ia. 507/105-59-6-26/28
Kotlyar, A. K., Sveshchanskij, A. D., Fetisov, A. V.,
Filippov, E. M., Petser, L. E. and O'NEYS

TITLE:

Professor G. A. Sirovyan (Professor G. A. Sirovyan)
On His 60-th Birthday (k 60-letiyu so dnya rozhdeniya)

PERIODICAL:

Elektrichestvo, 1959, Nr 6 p 94 (USSR)

ABSTRACT:

Grigory Artem'yevich Sirovyan began his scientific career at the Tsentralnyy elektromekhanicheskiy institut (All-Union Institute of Electromechanics) in 1917. He worked as a scientist and senior teacher at the Chair of General and Theoretical Electrical Engineering at the Gruninskij Politehnicheskij Institut in Kirov (Gorkum Politechnic Institute, Kirov). At the same time he works as an engineer at the Grushevro. From 1937 he devoted himself to electrothermal processes and theoretical electrical engineering. He solved a number of problems connected with the processes occurring in the electrical part of large ferro-alloy and carbide furnaces. In 1946 he was promoted Doctor of Technical Sciences. His Dissertation dealt with the electrical phenomena in the bath

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of an arc-smelting furnace. In 1954 he published a monograph on the theory of electromagnetic field distribution in arc smelting furnaces. He also published a number of articles on problems of electrothermal processes in the periodicals "Dial" and "Elektrichestvo". He has been awarded the "Medal of Distinction". There is 1 figure.

Card 2/2

PERMY, L.V. (ING.)

Electric Circuit Breakers

Possibility of a reactor shunt. *Atom. energ.* 9, no. 6, 1959.

Monthly List of Russian Accessions, Library of Congress, September 1952, UNCLASSIFIED

PETO, E.;SOLYMOSS, B.

Role of liver function tests in the preoperative preparations of thyroid patients. Orv. hetil. 94 no.11:291-294 15 Mar 1953. (CML 24:4)

1. Doctors. 2. Surgical Department (Head Physician -- Dr. Erno Peto, Director) and Central Laboratory (Head Physician -- Dr. Bela Solymoss), Szombathely County Hospital.

JANCSO, Tibor, okleveles vegyeszmernok; LAKLIA, Tibor, okleveles vegyeszmernok; PETO, Edit, dr., okleveles kozgazdasz; SCHILL, Ottmar, okleveles gepeszmernok; SIPOTZ, Istvan, dr., okleveles kozgazdasz; TURKOVICS, Gyorgy, okleveles banyamernok

General economic aspects of transporting crude oils, oil products and natural gas through pipelines. Bany lap. 97 no.9:626-634 S '64.

1. Petroleum and Gas Industry Planning Enterprise, Budapest.

PETO, Gabor

Whom should we "encourage" to make innovations and in what way? *Musz*
elet 16 bo.5:6 Mr '61. (EEAI 10:4)
(Hungary--Industrial management)

PETO, Gabor

Carbon dioxide: our friend and enemy. Elet tud 15 no.48:
1514-1516 27 N '60.

PETO, Gabor Pal

102,103,104,105,106,107??? The August 26, 1964 report y the
Soviet Atomic Energy Commission. Elet tud 20 no.11:508-512 19
Mr '65.

PETO, Gabor

"Household chemistry" by Robert Forbath. Reviewed by Gabor Peto.
Elet tud 16 no.15:460 9 Ap '61.

FETO, Gabor Pal

Style and society. Munka 13 no.2:17 F '63.

1. "let es Tudomány" munkatarsa.

KOVACSICS, Janos, dr.; PETO, Gyulane

Experiences and problems concerning organized employment for
new physicians and pharmacists. Nepegeszssegugy 45 no.5:129-135
My'64.

PETO, J.

PETO, J. - Water need of retrocooling condensational power plants.
p. 302, Vol. 9, no. 8, Aug. 1956
Magyar Energlagazdasag - Budapest, Hungary

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957

PETO, Jozsef

"Questions relating to the economy and design of the Blaenau Ffestiniog pumped-storage system" by E.S.Both et al. Reviewed by Jozsef Peto. Energia es atom 13 no.4/5:140-145 Ap-May '60.

1.EROTERV.

PETO, Marton, okleveles kozgazdasz

Concentration and specialization of foundries. Kch lap 98
no.3:Suppl:Ontode 16 no.3:49-59 Mr '65.

HAJOS, K.; PETO, M.; POGANY, I.

Fungus sensitivity examinations of allergic (asthmatic) patients.
Orv. hetil. 93 no. 36:1025-1030 7 Sept 1952. (GIML 23:5)

1. Doctors. 2. Szovetseg-utcai Hospital, Internal Department.

PETO, J.

137. The proper selection of the characteristics of cooling towers in carbolic power plants - *Hűtőtornyok jellemzőinek gazdaságos megválasztása hőerőműekben* - M. Csul and J. Peto, (Hungarian Power Economy - *Magyar Energetika*) - Vol. 6, 1953, No. 3, pp. 134-141, 4 figs., 3 tabs.)

In up-to-date cooling towers the water is recirculated to a lower temperature than in the older type towers. The application of mechanical draft is constantly gaining ground. Investigations on the economical operation of cooling towers established that the total cost is influenced by the following factors: (1) heat consumption of the turbines, (2) the function of the temperature of the recirculated water, (3) amortization and interest, (4) power consumption of the auxiliary plants, (5) wages of the service personnel. After describing a method for estimating economy, the question is illustrated by a concrete example. The conclusion may be drawn that in order to obtain greater economy the cooling water in the turbines must be recirculated to a much lower temperature than practiced formerly. The economy limit for natural draft towers is 18° C, for mechanical draft towers 16° C. Under Hungarian conditions mechanical draft cooling towers seem to be more economical.

M. S.

2000. Manton

Sand molding or die casting? See Ser. 2000, no. 2 (Suppl. 1) 1968-71
no. 243-44. P. 165.

HAJOS, K.; PETO, M.; POGANY, I.

Hypersensitivity to moulds and fungi in allergic (asthmatic) patients.
Acta med. hung. 4 no.2:143-155 1953. (CML 25:1)

1. Of the Medical Department of Szovetseg-utca Hospital, Budapest.

HAJOS K., PETO M. and FOGANY I. Med. Dept., Szovetseg-utca Hosp., Budapest
Hypersensitivity of moulds and fungi in allergic (asthmatic) patients Acta med.
Acad. Scient. hung. (Budapest) 1953, 4/2 (143-155) Tables 4
Fungi are important in the causation of allergic diseases. Hypersensitivity to Trichophyton occurs frequently. The passive transfer of hypersensitivity to Trichophyton (Epidermophyton, Mucor and Aspergillus) could be easily demonstrated. It was detected that there are many cases of hypersensitivity to moulds in bronchial asthma. In such cases specific desensitisation resulted in a symptom-free interval lasting, 13-14 months. This procedure represents a new approach to the causal treatment of bronchial asthma.
Mosonyi - Budapest

SO: EXCERPTA MEDICA, Vol. 8 No. 2, Section VI. February 1954

PETO, Marton, oklovaes kozgardasz

Effect of the change in labor-consuming processes on the efficiency
of iron casting production. Koh lap:Suppl.:Ontode 14 no.8:178-
184 Ag '63.

PETO, Marton, okleveles közgazdász

Structure and volume of casting production in different
countries. Koh lap 97 no. 1; Suppl.: Ontode 15 no. 9: 203-207
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HERZ, A.; SABO, E., chim.; ISTVAN, Fr.; BERLINSCHI, F.; PETO, St.; URSESCU, I
ing.; SABO, Gh.; AVRAM, V., ing.

Drying some materials in fluidized bed. Rev chimie Min petr 15
no.7:409-411 J1 '64

PETOCZ, Istvan .

Portable tv-wobulator. Radiotechnika 15 no.2:59-62 P '65.

10-4300 type text

344-346 5-1981.

PETOCZ, Istvan

The TR-0808 type Video sweep generator. Radiotekhnika 15
no.4:139-142 Ap '65.

KOMLOS, E.; PETOCZ, Lujza E.

Synergism of gestropine^(R) (N-p-phenyl benzyl atropinium bromide)
and trioxazine^(R) [N-(3,4,5-trimethoxybenzoyl)-tetrahydro-1,4-oxazine].
Acta physiol. hung. 19 no.1-4:179-187 '61.

1. Pharmacological Laboratory, United Works of Pharmaceutical and
Dietetic Products, Budapest.

(ATROPINE related compounds)
(TRANQUILIZING AGENTS pharmacology)

PETOCZ, Istvan

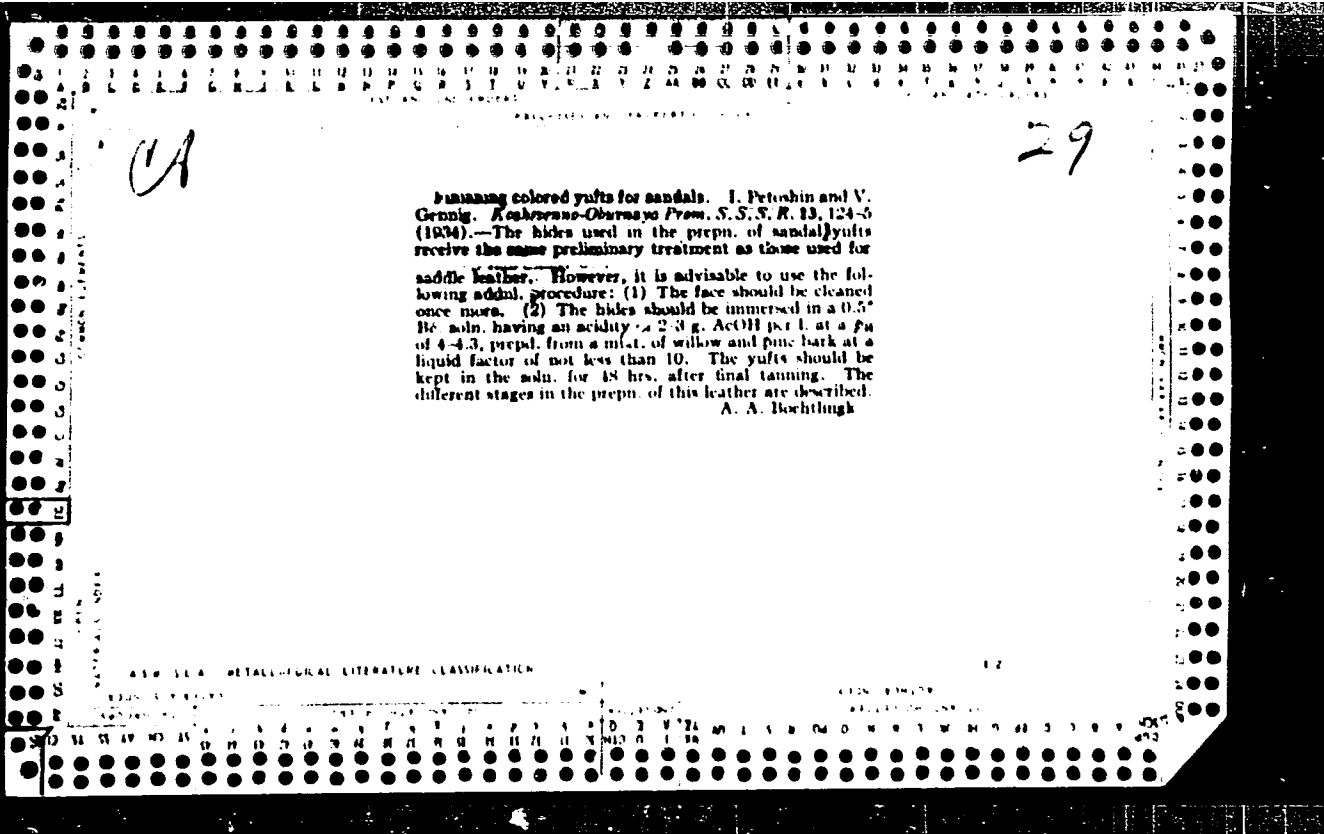
Time-delay adapter. Radiotechnika 14 no.12:459 D '64.

PETOCZ, P.

INCZE, M.; PETOCZ, P.

"The working peasant's situation under the Horthy fascism." p. 550. (Termesztet es Technika, Vol. 112, no. 9, Sept 53, Budapest)

SO: Monthly List of East European Accessions, Vol 3 No 2 Library of Congress Feb 54 Uncl



PETOSHIN, I.V.

More about the performance of worm type material-handling
machinery. Kosh.-obuv. prom. 2 no. 11:7-8 N '60.

(MIRA 13:12)

(Materials handling)

(Leather industry--Equipment and supplies)

PETOSHIN, I.V.

Review of drying methods and apparatus. Izv.vys.ucheb.zav.;
tekh.leg.prom. no.1:142-150 '59. (MIRA 12:6)

1. Spetsial'noye konstruktorskoye byuro po proyektirovaniyu
kozhevenno-obuvnykh mashin.
(Drying apparatus)

PEKERMANN, F.M.; PETOSHINA, L.N.

Luminous efficiency of electroluminescent condensers. Opt. i
spektr. 16 no.3:496-500 Mr '64. (MIRA 17:4)

24(4), 24(6)

SOV/51-6-5-18/34

AUTHORS: Kazankin, O.N., Pekerman, F.M. and Petoshina, L.N.**TITLE:** Electroluminescent Phosphors Based on Sulphides and Selenides
(Elektrolyuminofory na sul'fidselenidnoy osnove)**PERIODICAL:** Optika i Spektroskopiya, 1959, Vol 6, Nr 5, pp 672-677 (USSR)

ABSTRACT: Efficient ZnS.ZnSe-Cu electroluminescent phosphors cannot be obtained by heating in a stream of H₂S + HCl because, even if one starts with pure ZnSe, the final substance contains no more than 40% of ZnSe. Obviously the stream of H₂S + HCl produces a considerable replacement of selenium by sulphur. Under such conditions the electroluminescent phosphors had emission maxima at wavelengths not longer than 530-540 mμ and their emission brightness was much smaller than that of the usual green electroluminescent phosphors based on ZnS-Cu. The authors prepared ZnS.ZnSe-Cu phosphors by placing a charge in a horizontal quartz tube /and passing over it a stream of H₂S + HCl for 30 mins at room temperature. Then the tube was placed in a furnace, but the H₂S + HCl stream was no longer passed over it. Even then the amount of ZnSe in the final phosphor was always smaller than in the original charge. The authors found that with increase of the amount of ZnSe the electroluminescence spectra of the phosphors are

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SOV/51-6-5-18/34

Electroluminescent Phosphors Based on Sulphides and Selenides

shifted towards longer wavelengths (Fig 1). By varying the amount of ZnSe from 10 to 100% it was possible to obtain phosphors whose emission maxima lie in the region from 510 to 630 m μ when excited with a 5000 c/s, 400 V field. The emission spectrum of each phosphor was found to depend on the frequency and voltage of the applied field and on temperature. With increase of frequency the emission spectrum was displaced towards shorter wavelengths and this displacement was particularly clear in phosphors with small amounts of ZnSe (Fig 2). Increase of the applied voltage from 350 to 700 V displaced slightly the emission spectra towards short wavelengths (this displacement did not exceed 5 m μ). Heating of phosphors shifted their emission towards longer wavelengths (20 m μ displacement on change of temperature from -10°C to +50°C). The relative emission brightness of phosphors with various amounts of ZnSe is given in Table 2 (ZnS-Cu emission was taken as 100). Table 2 shows that the relative emission brightness of ZnS.ZnSe-Cu phosphors varied from 1 (70% of ZnSe) to 29 (10% of ZnSe). The results obtained contradicted theoretical predictions that addition of Se should increase electroluminescent brightness. Addition of Se affected the dependence of the emission brightness on the frequency and voltage of the applied field. The voltage dependence of brightness

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SCV/51-6-5-18/34

Electroluminescent Phosphors Based on Sulphides and Selenides

(Fig 3), even in phosphors with large amounts of ZnSe, followed Zalm's law (Ref 2)

$$B = A \exp(a\sqrt{\nu}U),$$

where B is the brightness, ν is the frequency of the applied field, U is the applied voltage (up to 900 V, and the quantities A, a are constants. It was found that phosphors with large amounts of ZnSe begin to emit at smaller voltages and the almost-linear portions of the voltage dependences of their brightness rise more sharply. The frequency dependences (0-15 kc/s) are shown in Fig 4. It is found that at high frequencies saturation does not occur in phosphors with large amounts of ZnSe. Fig 5 shows the temperature dependences of brightness of ZnS.ZnSe-Cu phosphors in the region from -140 to +80°C. The brightness rises first with temperature, reaches a maximum and then falls. On increase of the amount of ZnSe in the phosphor the fall begins at lower temperatures. All the described properties of phosphors with large

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SOV/51-6-5-18/34

Electroluminescent Phosphors Based on Sulphides and Selenides

amounts of ZnSe are due to shallowness of the local levels produced by selenium. There are 5 figures, 2 tables and 7 references, 3 of which are Soviet, 2 English and 2 Dutch.

SUBMITTED: June 9, 1959

Card 4/4

67156
SOV/51-7-0-11/80

24,3500

AUTHORS: Kazankin, O.N., Pekerman, F.M. and Petoshina, L.N.
TITLE: Electroluminescence of ZnS-Cu-Mn Phosphors in a Constant Field

PERIODICAL: Optika i spektroskopiya, 1959, Vol 7, No 6, pp 776-779 (USSR)
ABSTRACT: Application of a constant (d.c.) electric field usually produces only a momentary luminescence flash. The authors found, however, that phosphors of ZnS-Cu-Mn type prepared as described below exhibit strong electroluminescence in a constant field. These phosphors were prepared (with Cu from 0.05 to 0.3% and Mn from 0 to 3.0%) in an atmosphere of H₂S + HCl, following the authors' technique described earlier (Ref 1). They were placed in a liquid dielectric (castor oil) and tested both in d.c. and a.c. fields (the latter were of audio frequency). The phosphors luminesced brightly in a.c. fields, the samples with 0.2% Cu and 0.5-1.0% Mn exhibiting the strongest emission. Depending on the amounts of Cu and Mn, phosphors with one, two and three emission bands could be obtained (Fig 1). At least 0.1% Mn was required to produce electroluminescence in d.c. fields. The intensity of d.c. luminescence rose with increase of the amount of Cu and Mn up to a certain optimum value. The emission occurred only in the Mn band (Fig 2). These observations show that the two conditions for d.c. electroluminescence of ZnS phosphors are (A) the presence of Mn and (B) the presence of

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SC-7-7-7-11 38

Electroluminescence of ZnS-Cu-Mn Phosphors in a Constant Field

Cu as Cu_2S , the latter raising the conductivity of the phosphor very considerably (Fig 4, Table 1). On application of a d.c. field the luminescence intensity did not remain constant. The time dependence of the d.c. luminescence was affected by the amounts of Cu and Mn. For example Fig 3 shows the time dependences of ZnS-Cu-Mn phosphors with 2% Mn and various amounts of Cu from 0.1 to 0.3%. The latter figure shows that at low concentrations of Cu (curve 1) the intensity begins to fall immediately after application of the d.c. field. When larger amounts of Cu are present the intensity first rises rapidly and then falls at a lower rate (curves 2 and 3). In some cases the rise may last tens of minutes; the duration of the rise depends on the conditions of preparation. The eventual fall of the d.c. luminescence intensity is due to polarization processes which reduce the internal accelerating field. The authors carried out also the following experiment. An a.c. field was first applied to a phosphor and its emission intensity was determined. This field was switched off and 2-3 min later a d.c. field was applied. Then the d.c. field was removed, the a.c. field of the original amplitude was again used and the electroluminescence intensity was measured. It was found that this treatment raised the intensity by up to three times. This intensification of luminescence was found to

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SOVIET 1/5/59

Electroluminescence of ZnS-Cu-Mn Phosphors in a Constant Field

depend on the amounts of Cu and Mn and on the conditions of preparation (Table 3). The intensification effect was related directly to the presence of excess Cu_2S . By washing in potassium cyanide which dissolves Cu_2S , the intensification effect could be destroyed almost completely (Table 4). There are 4 figures, 4 tables and 3 references, 1 of which is Soviet and 2 English. 4

SUBMITTED: May 13, 1959

Card 3/3

PETUSHKINA A. D.

51-4 -1-10/28

AUTHORS: Kazanin, G.N. and Petushina, L.N.

TITLE: Effect of temperature on electroluminescence of Powder Phosphors. (Vliyaniye temperatury na elektroluminestsentsiyu poroshkoebraznykh lyuminoforov.)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol.IV, No.1, pp. 76-81. (USSR)

ABSTRACT: The authors studied, in several powder phosphors, change of intensity of electroluminescence with temperature (known as electrothermoluminescence) and the effect of temperature on the form of brightness waves. Measurements were made from - 160 to + 100°C. An electrophosphor was mixed with a dielectric and placed in a cell whose lower electrode was an aluminium plate and the upper electrode was of conducting glass. The distance between the electrodes was 300 μ . Electro-

Card 1/6 luminescence was excited by an alternating field of

Effect of Temperature on Electroluminescence of Powder Phosphors 51-4-1-10/26

50-20 000 c/s frequency. Electroluminescence was measured with a photomultiplier $\Phi 3Y-19$. In the study of thermal emission curves the electrophor was excited at -160°C by means of ultraviolet light (365 m μ). All phosphors used were in powder form and they were immersed in castor oil (dielectric). Fig.1 gives the electrothermoluminescence (continuous) and thermoluminescence (dashed) curves for five phosphors: ZnS-ZnSe,Cu, ZnS-Cu,Mn, ZnS-Cu,Pb, ZnS-Cu,Al, ZnS-Cu. From -160 to -50°C the intensity of electroluminescence remains practically constant, but on further heating it rises rapidly and reaches a maximum which is different for different phosphors. The authors studied the effect of the activator concentration, of quenching substances on

Card 2/6

51-411-10/26

Effect of temperature on electroluminescence of ZnO and ZnO, and of the frequency of the applied field on the position of electroluminescence maximum. When the concentration of copper is varied from 0.1 to 0.5 (by weight) in ZnO-Cu,Al phosphor, the electroluminescence curves have maximum at about $+60^{\circ}\text{C}$ (fig.2). To study the effect of ZnO, a ZnO-Cu,Al phosphor was oxidized by heating in air for 20 minutes at 700°C . X-ray analysis showed that after such treatment the sample contained 20% of ZnO. Such a treatment did not produce any appreciable change in the electroluminescence curves (fig.3). In ZnO-Cu,Al the position of the electroluminescence maximum was found to depend strongly on the amount of Cu (table on p.79); with

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Effect of Temperature on Electrothermal Luminescence of Powder Phosphors. 51-4-1-10/26

increase of the amount of the maximum moved towards lower temperatures. In 43-50, the electrothermal luminescence maximum was displaced towards higher temperatures by about 15% when the applied field frequency was increased five times (from 1000 to 5000 c/s). The authors make the following conclusions: Position of the electrothermal luminescence maximum depends on the chemical nature of the phosphor, presence of quenching substances and on the frequency of the applied field. The greater the integral electrothermal luminescent efficiency, the higher are the temperatures at which electrothermal luminescence reaches its maximum. Quenching substances displace the maximum towards lower temperatures. Increase of the applied field frequency displaced the maximum towards higher

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SI-4-1-10/26

Affect of temperature on electroluminescence of ZnS and ZnS-ZnO

temperatures. Temperature affects also the form of brightness waves (variations of instantaneous light intensity with time, see Fig.4) of ZnS and ZnS-ZnO phosphors activated with copper. In the solid powder phosphors the electrothermoluminescence curves possess maxima which are different from the thermoluminescence curves. The non-coincidence of maxima of these curves indicates that electrons ejected from local levels in thermoluminescence are not of great importance in electroluminescence. A theory put forward by Thomson (Ref.11), which takes into account simultaneous action of electric field and temperature in freeing of electrons from capture levels, gives electrothermoluminescence curves close in form to those

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Effect of Temperature on Electroluminescence of Phosphors
obtained by the present authors. (There are 1 figure,
1 table and 12 references, of which 7 are German, 2
French, 1 Russian and 2 English and American.)

ASSOCIATION: State Institute for Applied Chemistry (in
institut prikladnoy khimii.)

SUBMITTED: March 21, 1957.

AVAILABLE: Library of Congress.

1. Phosphors-Excitation
2. Photomultipliers-Applications

Card 6/6

PEKERMEN, F.M.; KOZLOVA, N.A.; PETOSHINA, L.N.; KAZANKIN, O.N.

Investigating the stability of electroluminescers. [Trudy] GIFKH
no.51:40-52 '64. (MIRA 13:5)

PETOSHINA, L.N.; PEKERMEN, F.M.

Investigating the luminescence of electroluminescent condensers.
[Trudy] GIPKH no.51:66-74 '64. (MIRA 18:5)

ACCESSION NR: AP4020963

S/0051/64/016/003/0496/0500

AUTHOR: Pekerman, F.M.; Petoshina, L.N.

TITLE: Investigation of the luminescence efficiency of electroluminescent capacitors

SOURCE: Optika i spektroskopiya, v.16, no.3, 1964, 496-500

TOPIC TAGS: electroluminescence, electroluminescence efficiency, luminescence yield, electroluminescent capacitor design, electroluminescence excitation

ABSTRACT: The luminescence yield or efficiency of electroluminescent capacitors is one of their most important characteristics, for it is an indication of the efficiency of conversion by the device of electric to radiant energy. The purpose of the present work was to develop a reliable procedure for determining the luminescence efficiency of electroluminescent capacitors and electroluminophors. The paper gives the results of measurements of the yield of electroluminescent cells prepared in different ways and excited under different conditions. The light flux was measured by means of a selenium photocell with a correcting filter; the power consumed by the capacitor was evaluated by an oscillographic method, for the usual method of calcu-

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ACCESSION NR: AP4020963

lating the power consumed is valid only for sinusoidal voltages. The measurements showed that the efficiency goes through a maximum with increasing voltage; with variation in frequency the luminescence efficiency rises to a peak in the range from 2000 to 4000 cps (the exact value differs for different capacitors). Measurements were also made using the same luminophor (not specified) in different dielectrics (resin varnishes); the best results were obtained with an epoxy resin. Tests showed that the efficiency increases with increase of the luminophor concentration in the dielectric, but to a lesser degree than the brightness because the power consumption also rises. Measurements with phosphors of different grain size indicated an increase in efficiency with reduction in grain size owing to reduction of the power consumed. Aging experiments indicated that with aging the efficiency decreases more slowly than the output (brightness), again because the power consumption decreases with decrease in the conductivity of the aging luminophor. "In conclusion, we express our gratitude to A.M. Bonch-Bruyevich and Ya.A. Oksman for consultations on a number of questions involving procedure and to F.Ya. Vaysberg for preparing some of the electroluminescent capacitors." Orig.art.has: 1 formula, 2 figures and 2 tables,

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Card

ACCESSION NR: AP4020963

ASSOCIATION: none

SUBMITTED: 21May63

DATE ACQ: 02Apr64

ENCL: 00

SUB CODE: PH

NR REF SOV: 001

OTHER: 006

Card 3/3

KAZANKIN, O.F.; PEREKHO, F.M.; PETOSHEVA, L.I.

Electroluminescence of ZnS-Cu⁺ in phosphors in a constant field.
Opt. i spektr. 7 no. 6:776-779 D '59. (I A 14:2)
(Zinc sulfide) (Luminescence)