SOCOL, Sebastian; EVGHENIDE, Constantin; IONASCUT, Arion

Considerations about telecontrol and automation in crude oil
and gas extraction and transportation. Automatica electronica
6 no.3:95-101 My-Je '62.

EVGHENIDE, C.; IACOB, I.; IONASCUT, A.; SOCOL, S.

Specific weight continuous measuring device for pipeline transported
naphta and petroleum products. Automatica electronica 6 no.5:215-
220 S-O '62.

EVGHENIDE, C., ing.; SOCOL, S., ing.

Additional explanations regarding the simultaneous employment
of several hydraulic bottom hole compensators in the same well.
Petrol si gaze 12 no.8:376 Ag '62.

EVGHENIDE, C., ing; SLEV, V., ing.; SOCOL, S., ing.

Interpretation of the signals and indications received from a central
supervisory-control station set up for recording the natural and
artificial eruptions of wells. Petrol se gaze 13 no.3:121-125 Mr '62

1. Institutul de Cercetari pentru Foraj si Extractie (for Evghenide).
2. Schela Boldesti (for Slev). 3. Ministerul Industriei Petrolului si
Chimiei (for Socol).

EVGHENIDE, C., ing.; SLEV, V., ing.; SOCOL, S., ing.

Interpretation of signals and indications, concerning the deep
pumping wells, received at a central station for the telecontrol
of crude oil extraction. Petrol si gaze 13 no.4:177-181 Ap '62.

1. Institutul de Cercetari pentru Foraj si Extractie (for
Evghenide). 2. Schela Boldesti (for Slev). 3. Ministerul
Industriei Petrolului si Chimiei (for Socol).

IACOB, I., ing.; SOCOL, S., ing.; EVGHENIDE, C., ing.; IONASCUT, A., ing.

Considerations on the automatic apparatus for the volumetric measurement of crude oil flow for the collecting stations.
Petrol si gaze 13 no.5:219-228 My '62.

1. Institutul de Cerdetari pentru Foraj si Extractie (for Iacob, Evghenide, Ionascut). 2. Ministerul Industriei Petrolului si Chimiei (for Socol).

IACOB, I., ing.; SOCOL, S., ing.; EVGHENIDE, C., ing.;
        IONASCUT, A., ing.

        Automatic equipment for volumetric measurements
        of crude oil flows in collecting stations, achieved
        in Rumania. Petrol si gaze 13 no.8:343-352 Ag '62.

        1. Institutul de Cercetari pentru Foraj si Extractie
        (for Iacob, Evghenide, Ionascut). 2. Ministerul
        Industriei Petrolului si Chimiei (for Socol).

SOCOL, S. (R.P. Romina)

>   Collaboration for the development of the oil and gas
>   industry. Probleme econ 15 no.8:73-81 Ag '62.

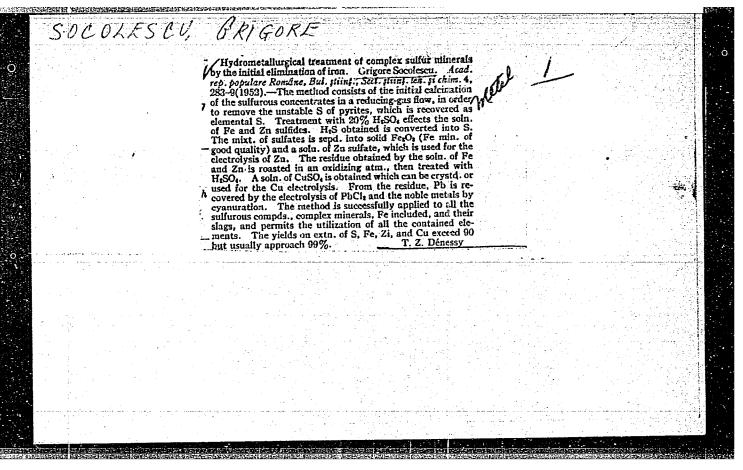EVGHENIDE, C., ing.; IACOB, I., ing.; SOCOL, S., ing.

Level regulators in gas-crude oil separators on the laminary
type. Petrol si gaze 14 no.4:189-193 '63.

SOCOL, S., ing.; EVGHENIDE, C., ing.

Considerations on some improvements in the technological processes of crude oil extraction as a result of automation. Petrol si gaze 14 no. 11:547-554 N 63.

SOKOLESKU--Aurelian [Socolescu, Aurelian]   (Rumyniya)

4-LD-150 boring rig. Nauka i zhizn' 25 no.7:70 Jl '58. (MIRA 11:9)
                     (Boring machinery)

SOCOLESCU, GRIGORE

Hydrometallurgical treatment of complex sulfur minerals by the initial elimination of iron. Grigore Socolescu. *Acad. rep. populare Romǎne, Bul. ştiinţ., Sect. ştiinţ. tel. şi chim.* 4, 283-9(1953).—The method consists of the initial calcination of the sulfurous concentrates in a reducing-gas flow, in order to remove the unstable S of pyrites, which is recovered as elemental S. Treatment with 20% H_2SO_4 effects the soln. of Fe and Zn sulfides. H_2S obtained is converted into S. The mixt. of sulfates is sepd. into solid Fe_2O_3 (Fe min. of good quality) and a soln. of Zn sulfate, which is used for the electrolysis of Zn. The residue obtained by the soln. of Fe and Zn is roasted in an oxidizing atm., then treated with H_2SO_4. A soln. of $CuSO_4$ is obtained which can be crystd. or used for the Cu electrolysis. From the residue, Pb is recovered by the electrolysis of $PbCl_2$ and the noble metals by cyanuration. The method is successfully applied to all the sulfurous compds., complex minerals, Fe included, and their slags, and permits the utilization of all the contained elements. The yields on extn. of S, Fe, Zi, and Cu exceed 90 but usually approach 99%.   T. Z. Dénessy

RUM/9-10-10-1/58

AUTHORS: Socolescu, Gr., Engineer, Triandaf, A.,
                Engineer, Mavromati, V., Engineer, and
                Isopescu, Al., Engineer.

TITLE: Production of Titanium Carbide and Ferrotita-
                nium from Domestic Raw Materials (Fabricarea
                carburii de titan şi a ferotitanului din
                materii prime indigene)

PERIODICAL: Metalurgia şi Construcţia de Maşini, Vol. 10,
                Nr 10, p 847-848   (RUM)   1957

ABSTRACT: Experiments that were conducted in 1957, on the
                possible use of titanium contained in alluvial
                sands, showed that titanium carbide and ferro-

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RUM/9-10-10-1/58

Production of Titanium Carbide and Ferrotitanium from Domestic
Raw Materials

Titanium white or titanium oxide were used as
raw materials to produce titanium carbide.
The titanium oxide solution which contained
titanium sulfates, titanil sulfates, and fer-
rous and ferric sulfates, was purified by re-
ducing the ferriccation to ferrous cations, cold
crystalization of the ferrous sulfate, and
filtration. The purified solution was hydro-
lized during which the $Ti(SO_4)_2$ was converted
into (TiO) SOH by contact with water, and fi-
nally yielded 75 to 76% TiO_2; the TiO_2 con-
tents totaled 99.2%. Sulfuric acid consump-
tion was 4.7 kg per kg of TiO_2. To obtain ti-

Card 3/5   tanium carbide, titanium oxide was mixed with

RUM/9-10-10-1/58

Production of Titanium Carbide and Ferrotitanium from Domestic
Raw Materials

carbon black, and the mixture was heated at
2,000°C in a Tamann furnace. The parameters
of the furnace operation: Temperature 1,900
to 1,950°C; time 95 to 100 minutes; carbon
contents of the initial charge 31 to 33%.
The obtained product contained 17.5 to 18%
bound carbon and 0.05 to 0.6% free carbon,
and had a specific weight of 4.5 to 4.7 g/cm^3.
This carbide was alloyed with CW and Co and
subsequently used for manufacturing hard tool
tips with satisfactory results. To produce
ferrotitanium by the aluminothermic process,
an ilmenite concentrate of the composition
TiO_2=46-48%, Fe = 33-36%, SiO_2 = 1.7-3.5%

was blended with powdered aluminum, iron oxide,
and lime, in various proportions. The mixture
was then preheated at approximately 400°C and
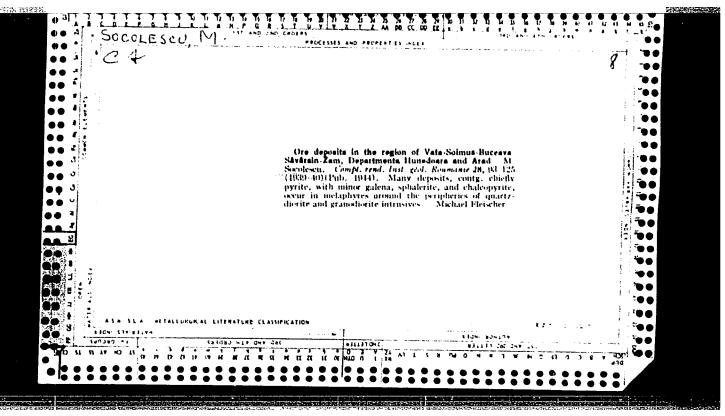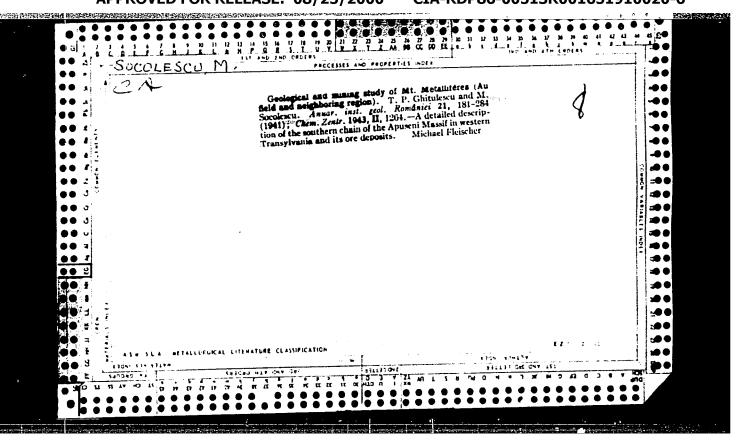ignited by a fuse. The various tests yielded
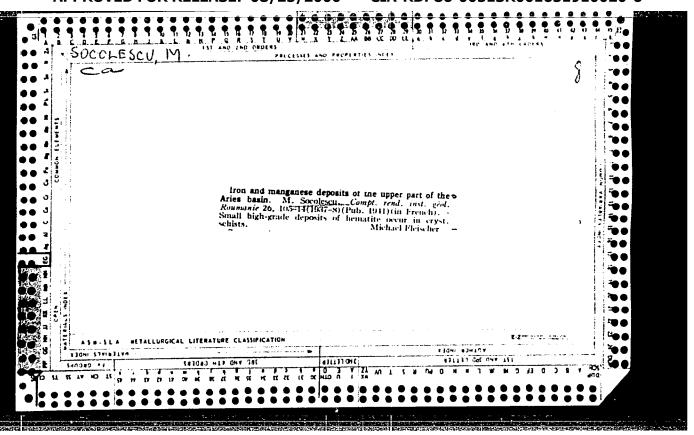
Card 4/5

RUM/9-10-10-1/58

Production of Titanium Carbide and Ferrotitanium from Domestic
Raw Materials

several types of ferrotitanium having the fol-
lowing composition: 17.7 to 22% Ti; 0.1 to
0.2% C; 1.7 to 3.5% Si; 3.2 to 5.8% Al; 3% Cu;
and 0.02 to 0.03% S. These ferrotitanium types
corresponded to the GOST 4761/49 requirements
for T_1 and T_2 qualities. Specific consumptions
were indicated in pertinent literature. There
are 5 references, one of which is Rumanian, 2/
French, 1 Soviet and 1 German.

Card 5/5

SOCCLESCU, M.

C 4

8

Ore deposits in the region of Vata-Soimus-Buceava
Sãvãrsin-Zam, Departments Hunedoara and Arad   M.
Soculescu. Compt. rend. Inst. géol. Roumanie 28, 113 125
(1939-40)(Pub. 1943).   Many deposits, contg. chiefly
pyrite, with minor galena, sphalerite, and chalcopyrite,
occur in melaphyres around the peripheries of quartz-
diorite and granodiorite intrusives   Michael Fleischer

A S A S L A   METALLURGICAL LITERATURE CLASSIFICATION

SOCOLESCU M,

PROCESSES AND PROPERTIES INDEX

Geological and mining study of Mt. Metallifères (Au field and neighboring region). T. P. Ghitulescu and M. Socolescu. *Anuar. inst. geol. Românici* 21, 181-284 (1941); *Chem. Zentr.* 1943, II, 1264.—A detailed description of the southern chain of the Apuseni Massif in western Transylvania and its ore deposits.   Michael Fleischer

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

SOCOLESCU, M.

Iron and manganese deposits of the upper part of the Aries basin. M. Socolescu. _Compt. rend. inst. geol. Roumanie_ 26, 105-14(1937-8)(Pub. 1941)(in French). - Small high-grade deposits of hematite occur in cryst. schists.
Michael Fleischer

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

SOCOLESCU, M, and others.

Topografic reductions of deflections from the vertical. p. 37

STUDII SI CERCETARI DE FIZICA

Vol. 7, no. 1, Jan./Mar. 1956

Rumania

Source: EAST EUROPEAN LISTS   Vol. 5, no. 10   Oct. 1956

SECTION, I.

A chart of isostatic anomalies and "if free air" for Oltenia and Muntenia.

p. 277 (Academia Republicii Populare Romine. Institutul de Fizica. Studii Si Cercetari De Fizica. Vol. 7, . 2, Apr./June 1956. Bucuresti, Rumania)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2, February 195

SCCOLESCU, M., AND OTHERS.

Determining the residual anomalies on the basis of the data from gravimetric measurements. In Russian. p. 119.

REVUE DE PHYSIQUE. JOURNAL OF PHYSICS. (Academia Republicii Populare Romine) Bucuresti, Rumania. Vol. 3, no. 2, 1958.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 7, July 1959.

Uncl.

SOCOLESCU, M., IANCU, G.

Exploration of non ferrous metal ores. p. 338

REVISTA MINELOR. (Ministerul Minelor, Ministerul Industriei Petrolului si
Shimiei, Directia Exploatarilor Miniere si Asociatia Stiintifica a Inginerilor
si Tehnicienilor din Rominia) Bucuresti, Rumania. Vol. 10, No. 8, Aug. 1959

Monthly List of East European Accessiosn (EEAI) LC, Vol. 9, No. 2, Feb. 1960
Uncl.

RODULESCU, M.; DIACONU, Fl.; KISSLING, M.

Contributions to the knowledge of the genesis of the mineralization
in the Blazna Valley. Rev min 12 no.6:253-258 Je '61.

SOCOLESCU, M.; ANDRONESCU, A.; DUMA, N.

New mineralogical observations on the polymetal mineralizing of the
Handalu Ilbei deposit. Rev min 13 no.10:444-446 O '62.

SOCOLESCU, M., prof.; BUTUOESCU, N.; POPESCU, Th.; SAMOILA, I.;
      TEODORESCU, D.; DRAGILA, M.

Contributions to the knowledge of stanniferous mineralizing in the
Baia Borsa, Burlogia ore. Rev min 13 no.11:481-487 N '62.

SOCOLESCU, Mircea; STOENESCU, Scarlat; POPOVICI, Dorin

First results of new measurements with a pendulum in Rumania, 1957-1958. Probleme geofiz 2:19-26 '63.

SOCOLESCU, M.; BONEA, Lidia; HAIDUC, P.

Contributions to the knowledge of the copper mineralization at
the Pirul lui Avram, Muntii Apuseni. Rev min 14 no.9:393-402 S '63.

SOCOLOVSCHI, R.

A method for the indirect volumetric determination of phosphates. Rev chimie Min petr 13 no.5:306 My '62.

SOCOLOVSCHI, R.

Rapid determination of phosphorus from phosphorus copper. Rev. chimie.
Min petr 13 no.10:618 O '62.

Infectious Diseases

RUMANIA

VAINER, E., Dr, Col, SOCOSAN, Gh., Dr, Lt-Col, and GHEORGHIU, D.,
Dr, Lt-Col [affiliation not given]

"Clinical-Radiological Considerations on Pulmonary Tuberculoma."

Abstract: The authors describe six cases of pulmonary tuber-
culoma, emphasizing the considerable differences among them
and the variety of clinical and therapeutic approaches, and
discuss the general classification and treatment of pulmonary
tuberculoma.
      Includes 6 figures and 6 references, of which 4 Rumanian,
one Italian and one French. -- Manuscript submitted 2 June 1965.

1/1

Country   : POLAND   Q-5
Category   : Farm Animals.
               The Honey Bee.
Abs. Jour   : Ref Zhur-Biol., No 15, 1958, 74167

Author   :
Institut.   :
Title   :

Orig Pub.   :

Abstract   : which were placed on the nets. In the III
               group the beehives were also furnished with
               nets, but here training was performed attemp-
               ting to direct the bees to chestnut trees and
               white clover. In the IV group, control, the
               beehives' entrances were left open. Results:
               on 30 May, 4 June, and 26-31 July the tempera-
               ture in the nests of groups II and III was
               significantly lower than of the groups I and
               IV. The colonies of group I presented the
               smallest losses of bees; the hive temperature

Card: 2/3

86

SOCZEK, Zygmunt

Biotic tests for the determination of the growth substances in plants.
Wiad botaniczne 6 no.1.33-64 '62.

HANKIEWICZ, Janusz; SOCZEK-MICHALSKA, Janina; SZENIC, Julian; PIETRASZUN, Romuald.

Hemorrhage from the upper segment of the digestive tract of unknown etiology according to data of the Second Surgical Clinic of the Academy of Medicine in Lodz. Polski Przegl. chir. 30 no.5:511-514 May 58.
(GASTROINTESTINAL SYSTEM, hemorrh.
upper segment, unknown etiol. (Pol))

SOCZEK-H CHRL..., ...HA...

...rations on portal hypertension in patients in the
... Surgical Clinic of the Medical Academy in Lodz and
...te results after surgical treatment in urgent cases
: portal hypertension. Pol. tyg. lek. 20 no.24:900-901
.. .. 1965.

SOCZEWICA, W.

35

POLAND

KULESZA, Aleksandra; Department of Epidemiology (Zaklad Epidemiologii), PZH /Panstwowy Zaklad Higieny -- State Institute of Hygiene/, Director: Prof Dr J. KOSTRZEWSKI, Head of the Institute: Prof Dr F. PRZESMYCKI; with the collaboration of J. GOLBA, T. JOPKIEWICZ, M. ZACPRZAK, W. KOCIELSKA, M. KOPEC, K. LIPINSKA, R. LUTYNSKI, J. MAKAREWICZ, H. MALYSZKO, K. NEYMAN, A. OLES, S. PESKA, K. POPIELEWICZ, T. RODKIEWICZ, J. ROZWADOWNA, W. SOCZEWICA, S. SZCZESNIAK, D. ZOLNIERZOWA all of the Wojewodztwo Health and Epidemiological Stations (Wojewodzkie Stacje Sanitarno-Epidemiologiczne); H. BOBROWSKI, A. GECOW, J. GELBER, M. GRUSZCZYNSKA, H. JASTRZEBSKA, E. JUZWA, J. KUROCZKIN, Z. RESZKE, R. STANCZYK, J. SYGNATOWICZOWA, Z. SZCZERSKA, K. SZCZYGIELSKI, S. SZYNDLAR, K. SWICOWA, J. WAJSZCZUK, R. WARZECHA all of the Departmente of Poliomyelitis Patients (Oddzialy dla Chorych na Poliomyelitis) of the Wojewodztwo Health and Epidemiological Stations; J. ADAMSKI (Poznan), H. DOBROWOLSKA (Warsaw), J. BOCHENSKA (Lodz), M. KOENIG (Krakow); H. DOBROWOLSKA of the Department of Virology (Zaklad Wirusologii) of PZH.

1/2

POLAND

Director: Prof Dr F. PRZESMYCKI, technical aid: A. BACINSKA

''Epidemic Situation of Poliomyelitis in Poland in 1961''

Warsaw, Przeglad Epidemiologiczny, Vol XVI, No 4,/1962,
pp369-375.

Abstract:/Authors' English summary modified7 The profound
influence on the epidamiology, etiology and clinical picture
of poliomyelitis of the introduction of mass immunization
with attenuated polio vaccines in 1959 is discussed. Obser-
vations on the influence and effect of immunizations with
such vaccines on the epidemic situation of poliomyelitis
in Poland are reported. 4 tables, 2 diagrams; 5 Polish
references.

2/2

JAMROG, Dariusz; RECZEK, Janina; SOCZEWINSKA, Zofia

Replacement of daily sampling with a single-stage test in the
study of lead excretion in exposed workers. Med. pracy 16
no.2:96-101 '65

1. Ze Stacji Sanitarno-Epidemiologicznej dla m. Warszawy
(Dyrektor: dr. J. Letki).

SOCZEWINSKI, E. ; WAKSMUNDZKI, A.,

E. SOCZEWINSKI, "Countercurrent extraction in a system: liquid-liquid, as a method of separating mixtures," Chemical News (Poland), Vol. IX No. 9, September 1955

Country	: POLAND	E
Category	: Analytical Chemistry. Analysis of Organic Substances	
Abs. Jour	: Ref Zhur - Khim., No 5, 1959, No. 15138	
Author	: Waksmundzki, A.; Soczewinski, E.; Aksanowski,R.	
Institut.	: -	
Title	: Chromatographic Separation of Quinoline Bases on Buffered Paper	
Orig Pub.	: Chem. analit., 1957, 2, No 5, 459-462	
Abstract	: Values of R_f were determined for quinoline bases (QB) on Whatman No 4 paper by the method of ascending chromatography. Strips of the paper were saturated with buffer solutions of 0.1 n. citric acid and 0.2 n. Na_2HPO_4 containing HgI_2 as a stabilizer. The paper was dried in air to a moisture coefficient of 1.5 (ratio of weight of moistened strip to weight of dry strip). Then, 0.6 μl. of a 0.05 M QB solution in hexane (H) was applied on the starting line	
Card:	1/2	

COUNTRY	:	Poland	H-17
CATEGORY	:		

ABS. JOUR. : RZKhim., No.   1959, No. 87568

AUTHOR   : Waksmundzki, A.; Soczewinski, E.

INST.   :

TITLE   : Separation of Strychnine and Brucine by the Method of Countercurrent Extraction

ORIG. PUB. : Acta polon. pharmac., 1958, 15, No 4, 279-283

ABSTRACT   : To find the most suitable conditions for the separation of strychnine and brucine by the method of countercurrent extraction, the distribution coefficients of these alkaloids in different systems were determined at different pH values of the aqueous phase. It is shown that the greatest difference in distribution coefficient values occurs on using the system benzene - citrate-phosphate buffer of pH 7.2, as a result of which a complete separation of these alkaloids is effected.

CARD:

The relation between R_f values and partition coefficients, ionization constants, and pH of the water phase in buffered paper chromatography of weak organic acids and bases. Andrzej Waksmundzki and Edward Soczewiński (Univ, Lublin, Poland). *Roczniki Chem.* 32, 803-70(1958)(English summary).—Formulas are derived relating the value of R_f of weak org. acids and bases to their partition coeffs., ionization consts., pH of buffered paper and the ratio of vols. of the moving and stable phases. Buffered paper chromatography of quinoline and isoquinoline was effected with hexane as the moving phase, at various pH values of the water phase, and ionization consts. of the bases were calcd. The theoretical curve of R_f vs. pH agreed very well with the exptl. one. The curve obtained for 2-hydroxy-3-naphthoic acid with Et_2O as solvent follows qualitatively the theoretical predictions.   A. Kręglewski

WAKSMUNDZKI, Andrzej; SOCZEWINSKI, Edward

Parameters influencing R_f values of organic amphoteric substances
buffered paper chromatography. Rocz chemii 33 no.6:1423-1430 '59.
(EEAI 9:9)

1. Zaklad Chemii Fizycznej Uniwersytetu Marii Sklodowskiej-Curie,
Lublin i Zaklad Chemii Nieroganicznej Akademii Medycznej, Lublin.
        (Organic compounds)   (Chromatography)
        (Amphoteric substances)

WAKSMUNDZKI, A.; SOCZEWINSKI, E.

A paper chromatography method for determination of suitable solvent systems for countercurrent distribution. Bul chim PAN 9 no.3: 155-158 '61.

1. Department of Physical Chemistry, University, Lublin and Department of Inorganic Chemistry, School of Medicine, Lublin. Presented by W. Kemula.

(Chromatographic analysis)   (Solvents)

SOCZEWINSKI, E.; WAKSMUNDSKI, A.

On the relation between the R_M coefficient and hydrogen ion concentration in buffered paper chromatography. Bul chim PAN 9 no.6:445-449 '61.

1. Department of Inorganic Chemistry, Medical Academy, Lublin and Department of Physical Chemistry, University, Lublin. Presented by B. Kamienski.

WAKSMUNDZKI, Ar zej; SOCZEWINSKI, Edward; PRZYBOROWSKA, Maria

The factor Rf of organic electrolytes in linear and circular
chromatography by means of the buffered filter paper method.
Chem anal 7 no.5:989-993 '62.

1. Department of Inorganic Chemistry, Academy of Medicine, Lublin.

WAKSMUNDZKI, Andrzej; RATAJEWICZ, Danuta; SOCZEWINSKI, Edward

A rapid method for the chromatographic analysis of mixtures of brucine and strychnine. Acta pol. pharm. 19 no.1:44-47 '62.

1. Z Katedry Chemii Nieroganicznej Wydzialu Farmaceutycznego Akademii Medycznej w Lublinie Kierownik: prof. dr A. Waksmundzki.
        (ALKALOIDS chem)   (STRYCHNINE chem)

JUSIAK, Leon; SOCZEWIHSKI, Edward; WAKSMUNDZKI, Andrzej

Partition of chelidonine and protopine by means of countercurrent
cascade extraction. Acta pol. pharm. 19 no.3:193-198 '62.

1. Z Zakladu Chemii Nieorganicznej Akademii Medycznej w Lublinie
Kierownik: prof. dr. A. Waksmundzki.
        (CHELIDONIUM chem)   (ALKALOIDS chem)
               (CHROMATOGRAPHY)

WAKSMUNDZKI, A.; SOCZEWINSKI, E.; SUPPRYNOWICZ, Z.

On the relation between the composition of the mixed stationary
phase and the retention time in gas-liquid partition chromatography.
Coll Cz Chem 27 no.8:2001-2006 Ag '62.

1. Department of Physical Chemistry, University Lublin, Poland.

WAKSMUNDZKI, Andrzej; SOCZEWINSKI, Edward; RATAJEWICZ, Danuta

Chromatographic separation of some acridine derivatives. Chem anal 8 no.1:103-106 '63.

1. Department of Inorganic Chemistry, Faculty of Pharmacy, Academy of Medicine, Lublin.

SOCZEWINSKI, Edward

Separation efficiency in buffered paper chromatography of organic electrolytes. Rocz chemii 37 no.4:467-479 '63.

1. Department of Inorganic Chemistry, Medical Academy, Lublin.

SOCZEWINSKI, Feliks (Warszawa)

Development of the Workshop Family Vacationing Movement.
Przegl budowl i bud mieszk 33 no.7:441-442 Jl '61

SOCZEWKA, Henryk; SZMEL, Mikolaj; WYSZTYGIEL, Lucyna; ZAREMBA, Ryszard

Diagnostic value of Sternheimer-Malbin cells. Pol. tyg. lek. 20 no.39:1459-1460 27 S '65.

1. Studenckie Kolo Naukowe przy II Klinice Chorob Wewnetrznych AM w Bialymstoku (Kierownik: prof. dr. Jakub Chlebowski).

SOCZYNSKA, Eugenia Urszula

Computation of momentary runoff coefficients in forecast of floods on mountain streams caused by rainfall. Acta geophys Pol 11 no.3:161-170 '63.

1. State Hydrological and Meteorological Institute, Warsaw.

SOCZYNSKA, Urszula

Application of the coaxial method to the determination of the
flood parameters in mountain streams. Przegl. geofiz. 8 no.1/2:
65-74 '63.

1. Polski Instytut Hydrologiczno-Meteorologiczny, Warszawa.

SOCZYNSKA, Urszula

Zenon Pietka, August 20, 1931-January 25, 1964. Przegl
geofiz 9 no. 2:176 '64.

SOCZYNSKI, S.

Polish Technical Abst.
No. 1 1954
Agriculture, Food Processing
Industry, Forestry, Fisheries

(2)

2656   663.14.038 : 664.872.03 : 66.047.005
Soczyński S. Production of High Quality Dried Bakery Yeast.
"Otrzymywanie dobrej jakości drożdży suszonych piekarnianych".
(Prace Gł. Inst. Przem. Roln. i Spoż. No. 3), Warszawa, 1952, PWT, 32
pp., 21 tabs.

Conditions for the production of a good quality bakery yeast and
guiding principles for designing a suitable type of dryer were worked
out. The properties of the raw material were determined, together with
the conditions for drying yeast and characteristic properties of high
quality dried bakery yeast. The problem of yeast strains is discussed,
as also the conditions of production of raw material. Optimum condi-
tions for storing dried yeast are given, and the methods of evaluating
and properly utilising yeast.

SOCZYNSKI, S.

"Producing Dry Yeast of High Protein Content." p.35
(PRZEMYSL ROLNY I SPOZYWCZY Vol. 7, no. 1, Jan. 1953 Warszawa, Poland)

SO: Monthly List of East European Accessions, LC, Vol. 3, no. 5, May 1954/Uncl.

Poland/Chemical Technology.   Chemical Products and Their Application -- Fermenta-
                              tion industry, I-27

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 6466

     Author: Socsynski, St.

Institution: None

      Title: Investigation of Molasses Processed in the Fermentation Industry

   Original
Publication: Przem. rolny i spozywczy, 1954, 8, No 11, 430

   Abstract: To determine the causes of decreasing yields of yeast and a deteriora-
              tion of its quality as well as of deterioration of the fermentation
              process in the alcohol industry, an investigation was made of 50
              samples of molasses collected at the processing plants. Methods of
              chemical determinations have been selected and adapted, in simplified
              form, for determination of the sugars, pH, volatile acids, SO_2, col-
              loids, ash, CaO, foaming and color.

Card 1/1

SOCZYNSKI, S.

A quick method of determining reducing substances, especially sugars. p. 416

Vol. 9, no. 10, Oct. 1955

PRZEMYSL SPOZYWCZY

Warszawa

SOURCE: East European Accessions List (EEAL) LC. Vol. 5, no. 3, Mar. 1956

Up-to-date results of investigations of molasses delivered to (Polish) fermentation industry. Stanislaw Soczyński. *Gaz. Cukrownicza* 57, 228-30(1955).—Yeast plants and EtOH plants suffer losses when molasses delivered to them has a volatile-acid content above 1.60%, a colloid content above 8.5%, and a degree of purity above 65%. S. investigated 55 different cases and analyzed each batch for: d. (75-83° Brix₁₅), sugar by polarization (47-52%), degree of purity (59-65), pH (7.1-9.0), volatile acids (1.00-1.60%), SO₂ (below 0.05%), color (1-3), colloids content (below 8.0%), and N (1.4-2.0%). — F. L. Hendel

SOCZINSKI, S

STANISLAW SOCZINSKI

POLAND / Chemical Technology, Chemical Products and Their   H-25
          Application. Part 3 - Carbohydrates and Their
          Treatment.

Abs Jour   : Ref. Zhur. Khimiya, No 4, 1958, 12737.

Author   : Stanislaw Soczinski.

Inst   : Not given

Title   : Study of Molasses for Fermentation Industry. Part II.

Orig Pub   : Przem. spozywczy, 1956, 10, No 4, 180 -181.

Abstract   : A method of pH, SO_2 and ash determination in molasses
             (M) was developed. It was found that dilute M should not
             be used for pH determination. It was shown that the M com-
             position did not change during a prolonged storage.
             Soviet scientists determined that the content of carbonate
             ash in M was from 8.1 to 11.1%. It was established that

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H-25

POLAND / Chemical Technology, Chemical Products and Their
        Application. Part 3 - Carbohydrates and Their
        Treatment.

Abs Jour : Ref. Zhur. Khimiya, No 4, 1958, 12737.

Abstract : the amount of volatile acids and SO_2 did not change at the
            clarification in acid medium in the cold, but the amount of
            colored substances decreased; in the case of clarification
            at a raised temperature, the volatile acids and SO_2 were dis-
            charged depending on the temperature and the clarification
            duration, and the amount of colored substances decreased a
            little less than at clarification in the cool. The quality
            of normal M does not change at the clarification of acid M
            at 100° in the duration of 5 hours, and the quality of im-
            perfect M improves. See Part L in RZhKhim, 1957, 6466.

Card 2/2

H

POLAND / Chemical Technology. Chemical Products.
Fermentation Industry.

Abs Jour: Ref Zhur-Khimiya, 1958, No 20, 68926

Author : Soczynski S.,
Inst   : Not given.
Title   : Molasses a Raw Material in the Alcohols and Yeast
          Manufacture.

Orig Pub: Przem. spozywczy, 1958, 12, No 1, 3-7.

Abstract: Methods of evaluation of molasses suitable as a
          raw material for the production of alcohols and
          yeast are reviewed. Experience of refining var-
          ious grades of molasses and particularly that used
          by the Poland National Republic's refineries is
          summarized. Bibliography includes 45 names.

Card 1/1

SOCZYNSKI, S.

Molasses as a raw material for the production of spirits and yeast.

P. 3 (PRZEMYSL SPOZYWCZY) (Warsaw, Poland) Vol. 13, no.1, Jan. 1958

SO: Monthly Index of East European Accession (EEAI) LC Vol. 7, No. 5. 1958.

SODAN, Milan, ing. (Zagreb)

Frequency and power control in electric power supply systems and its application in the Yugoslav network. Energija Hrv 10 no. 3/4:89-100 '61.

1. Zajednica elektroprivrednih poduzeca Hrvatske, Zagreb, Proleterskih brigada 37.

SODAN, Milan, ing. (Zagreb)

Examination of the characteristics of the Yugoslav electric power network.
Energija Hrv 10 no. 5/6:188-189 '61.

1. Zajednica elektroprivrednih poduzeca Hrvatske, Zagreb, Proleterskih
    brigada 37.

NOVAK, Vjekoslav, ing. (Zagreb); SODAN, Milan, ing. (Zagreb)

Examination of characteristics of the automatic regulators of the number
of rotation in the electric power plants of Croatia. Energija Hrv 10
no. 7/8:253-255 '61.

1. Zajednica elektroprivrednih poduzeca Hrvatske, Zagreb, Proleterskih
   brigada 37.
2. Clan Urednickog odbora, "Energija." urednik rubrike "Energetsko-
   dispacerska problematika" (for Sodan).

SODAN, Milan, inz. (Zagreb)

Is the old thermoelectric-power economical or not? Energija Hrv
11 no.7/8:235 '62.

1. Zajednica elektroprivrednih poduzeca Hrvatske, Zagreb,
Proleterskih brigada 37, clan Urednickog odbora, "Energija".

SODEC, Franc, dipl. inz. metalurgije

Annealing of stainless steels in protective atmosphere.
Rud met zbor no. 2:169-174 '64.

1. Department of Mining and Metallurgy, Faculty of Natural
Sciences and Technology, University of Ljubljana, Askerceva
20, Ljubljana.

SODEIKAITE B.

DAGIS, I.; GUDINIENE, B.; PUTRIMAS, A.; SODEIKAITE, B.; JANKEVICIUS, K.

Dynamics of phytoncides of the meadow buttercup during its vege-
tative period. Bot.zhur. 39 no.5:721-733 S-O '54.   (MLRA 7:11)

1. Institut biologii Akademii nauk Lit. SSR; Vil'nyusskiy Gosu-
darstvennyy universitet.
        (Phytoncides) (Buttercup)

L 2205-66   EWT(d)/EWP(v)/EWP(k)/EWP(h)/EWP(l)

ACC NR: AT5028446

SOURCE CODE: UR/2690/65/009/000/0049/0058

AUTHOR: Sodell', B. B.

ORG: none

TITLE: Determining the transfer function of a dynamic system with constant parameters

SOURCE: AN LatSSR. Institut elektroniki i vychislitel'noy tekhniki. Trudy. v. 9, 1965. Avtomatika i vychislitel'naya tekhnika, 49-58

TOPIC TAGS: control system, dynamic system, control theory, transfer function determination

ABSTRACT: It is shown how the method for determining the transfer function of a dynamic system with constant parameters developed by A. N. Sklyarevich (Sklyarevich, A. N. Operatornyye metody v statisticheskoy dinamike avtomaticheskikh sistem. "Nauka", M., 1965) can be extended to the case when the poles of the transfer function of the system and the Laplace transform of the correlation function of the input signal do not coincide and are of order higher than one. A procedure for determining the cross-correlation function of the input and output signals is presented. This cross-correlation function is used as a basis for deriving a system of algebraic equations for determining the coefficients of the frequency response function and a recurrence formula for their calculation is presented. It is stressed that the results obtained

Card 1/2

UDC: 62-5:519.25
62-5.132

L 7705-66

07012100

ACC NR: AT5028446

here can be utilized in designing a special-purpose computer for calculating the transfer functions. Two examples illustrate the calculation procedure. Orig. art. has: 26 formulas.

[LK]

SUB CODE: MA, ME/ SUBM DATE: none/ ORIG REF: 003/ ATD PRESS: 4/42

Card 2/2

15-1957-10-13578

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 10,
                   p 17 (USSR)

AUTHORS: Furrer, M. A., Soder, P. A.

TITLE: Oligocene-Miocene Marine Formations in the Kum Region
            (Central Iran) /Oligo-miotsenovaya morskaya formatsiya
            v rayone Qum (Tsentral'nyy Iran)/

PERIODICAL: V sb: 4-y Mezhdunar. neft. kongress, vol 1, Moscow,
            Gostoptekhizdat, 1956, pp 261-272

ABSTRACT: The Tertiary rocks of Qum have been divided into the
            following formations: /Quaternary deposits/, an upper
            red-bed formation (miocene-pliocene), a marine formation
            (middle Oligocene-lower Miocene), a lower red-bed forma-
            tion (lower Oligocene), and Eocene rocks. The Eocene
            consists of andesites interbedded with tuffaceous and
            calcareous rocks which contain large numbers of foramin-
            ifers (nummulites, operculinids, discocyclinids, pseudo-
            clavulinids, miliolids, and alveolinids), corals, and
Card 1/4   echinoids. The lower red-bed formation corsists of red

Oligocene-Miocene Marine Formations in the Qum Region (Central Iran)   15-1957-10-13578

and green silty shales, gypseous sandstones and marls, and vol-
canic and pyroclastic rocks, extremely poor in fossils. Its
lower Oligocene age is determined by its position between fos-
siliferous upper Eocene and middle upper-Oligocene beds. A num-
ber of lithologic units are distinguished in the marine forma-
tion. From the base upward, these are as follows: 1) basal
limestone, consisting of fragments of lithothamnion, bryozoans,
and occasional foraminifers (Miliolina, Textularia, Peneroplis,
and Operculina)--20 to 180 m thick; 2) sandy marls with numerous
small foraminifers of the genera Cyclammina, Textularia, Quin-
queloculina, Massilina, Robulus, Nodosaria, and Bulimina, and
also very occasional ostracods, bryozoans, and echinoid spines--
60 to 450 m thick; 3) interbedded marls and limestones, consist-
ing of fragments of lithothaminion and bryozoans, with pectens,
small gastropods, echinoids, and foraminifers (Miliolina)--430 m
thick; 4) gypsum and anhydrate--15 to 20 m thick; 5) greenish-
gray marls with abundant small foraminifers (approximately 300
species), ostracods, and echinoid fragments--90 m thick; and 6)

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15-1957-10-13578
Oligocene-Miocene Marine Formations in the Qum Region (Central Iran)

upper limestone, light-colored, porous, chalk-like limestones with large numbers of foraminifers, bryozoans, and gastropods--50 to 60 m thick. The boundary between the Oligocene and Miocene is placed at the floor of the upper limestone. A specific species of foraminifer, Neoalveolina curdica Reichel, occurs in the marine formation, accompanied by Miliolina and Peneroplis. These are indicative of a warm shallow sea, favorable for the growth of coral reefs. The marine formation has a different composition along the northern border of the Qum plain. Her: it is divided into 1) basal conglomerates, consisting of lava fragments; 2) basal limestones, corresponding to unit one of the southern section; 3) yellow marls and limestones, corresponding to unit 3 and, in part, to unit 2 of the southern section; 4) reef limestone, Separe-Rostam; and 5) the limestone Sefidkukh. In comparing the marine formation of the Qum region with the limestone of Asmara in southwestern Iran, a great similarity of fossils is found; this indicates that the limestones formed in the same basin at the same time, the water advancing from the

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15-1957-10-13578
Oligocene-Miocene Marine Formations in the Qum Region (Central Iran)

southwest and gradually flooding the environs of Qum during the
Oligocene. The Asmara limestone and the clastic-carbonate ma-
rine formation represent the final phase of marine sediment ac-
cumulation in this region. The paper is accompanied by a geolo-
gic map of the Qum and Quain regions, to a scale of 1:1,000,000,
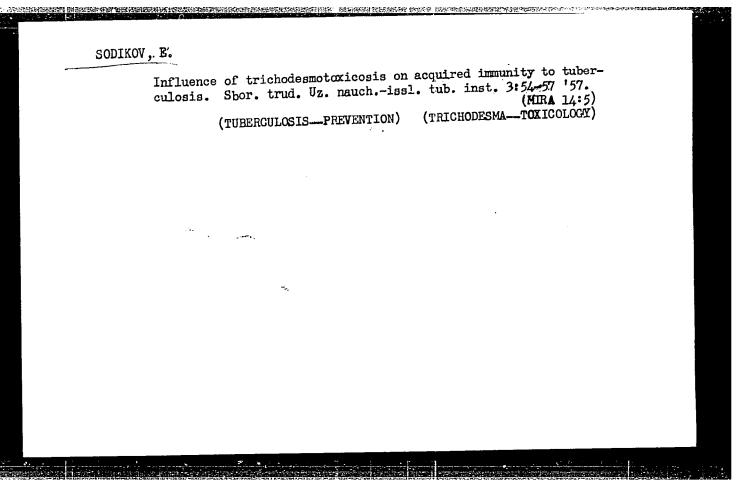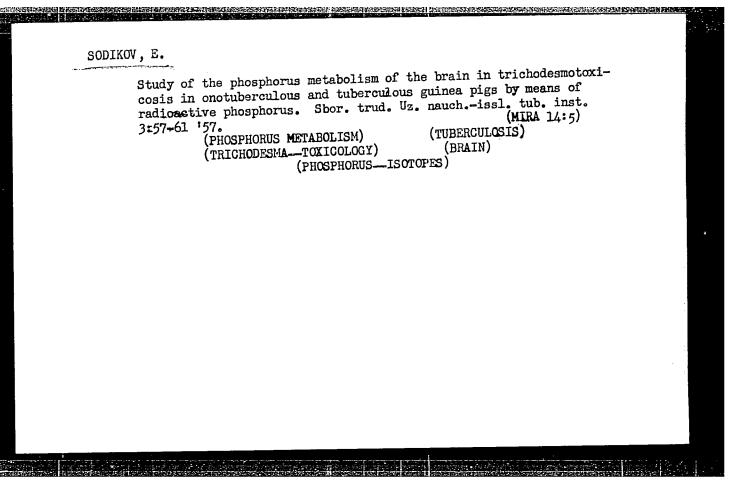and by comparative sections of the marine formation.
Card 4/4
                                                    M. Ya. Serova

ALDOVA, E.; SODIA, I.

Shigella mucinase. 1. Method of detection and incidence in
S. flexneri 2a. Cesk. epidem. 12 no.4:208-214 Jl '63.

1. Ustav epidemiologie a mikrobiologie v Praze.
        (SHIGELLA)   (INFLUENZA VIRUSES)   (MUCIN)
                  (HYALURONIDASE)

SODIKOV, E.

Influence of trichodesmotoxicosis on acquired immunity to tuber-
culosis. Sbor. trud. Uz. nauch.-issl. tub. inst. 3:54-57 '57.
(MIRA 14:5)

(TUBERCULOSIS—PREVENTION)   (TRICHODESMA—TOXICOLOGY)

SODIKOV, E.

Study of the phosphorus metabolism of the brain in trichodesmotoxi-
cosis in onotuberculous and tuberculous guinea pigs by means of
radioactive phosphorus. Sbor. trud. Uz. nauch.-issl. tub. inst.
3:57-61 '57.
(MIRA 14:5)

(PHOSPHORUS METABOLISM)   (TUBERCULOSIS)
(TRICHODESMA—TOXICOLOGY)   (BRAIN)
(PHOSPHORUS—ISOTOPES)

SODIKOV, E.: Master Med Sci (diss) -- "Experimental study of the interaction of Trichodesma toxicosis and tuberculosis". Tashkent, 1959. 15 pp (Min Health Uzbek SSR, Tashkent State Med Inst), 250 copies (KL, No 10, 1959, 129)

Sodin, L.

USSR/ Electronics - Radio receivers and transmitters

Card 1/1   Pub. 89 - 10/29

Authors   :   Azat'yan, A.; Ushanev, V.; Levit, N.; Sodin, L, and Baramidze, L.

Title   :   "Urozhay Y-2" radio receiver and transmitter

Periodical :   Radio 9, 24-26, Sep 1954

Abstract   :   A detailed description, with circuit diagrams, of the "Urozhay Y-2" radio
                transmitter and receiver is presented. It is a portable transmitting and
                receiving amplitude-modulation station, redesigned from a similar set named
                the "Urozhay Y-1". The improvements of the converted set, its auxiliary
                equipment, power-supply and operation are described in detail. Diagrams.

Institution :   ...

Submitted   :   ...

Sodin, L. G.

621.372.54 : 621.372.412

1455.   CALCULATION OF A SINGLE-CRYSTAL QUARTZ FILTER.

L.G.Sodin.

Radiotekhnika, Vol. 11, No. 7, 63-72 (1956). In Russian.

Expressions are deduced for the amplification factor and reson-
ance characteristics of an amplifier with a single-quartz-crystal
filter in its output circuit. The filter is a conventional π-section,
whose arms consist of LC-circuits. Two cases are analysed:
(1) LC-circuits tuned to quartz resonator frequency, (2) LC-circuits
untuned. A design for a band-pass filter of variable width is given.

J.B.Arthur

SOV/108-13-12-6/12

6(4), 7(7)
AUTHORS:

Zhlobinskiy, I. M., Sodin, L. G.

TITLE: Methods of Calculating and Eliminating Interference Disturb-
            ances Occurring During Frequency Transformation (Metody rascheta
            ustraneniya kombinatsionnykh pomekh, voznikayushchikh pri
            preobrazovanii chastoty)

PERIODICAL: Radiotekhnika, 1958, Vol 13, Nr 12, pp 45-52 (USSR)

ABSTRACT: The present paper sets out from the consideration of the condi-
            tions that are necessary, and not only sufficient, for suppres-
            sing interference disturbances. As far as the receiving range
            is subdivided into some sub-areas the choice of the inter-
            mediate frequencies and of the sub-areas is made easier by a
            sufficient attenuation of the interference disturbances. The
            task is not to choose an intermediate frequency being lower or
            higher than those frequency values at which the formation of
            interference disturbances at any signal frequency is possible
            but in being able to choose the intermediate frequency for the
            respective range of signal frequencies between the values at
            which the dangerous interferences occur. The conditions for the
            occurrence of interference disturbances are investigated and the

Card 1/2

SOV/108-13-12-6/12

Methods of Calculating and Eliminating Interference Disturbances Occurring at Frequency Transformation

formulae for the determination of the frequency of the signal forming the combined interference at the frequency transformation are derived. The conditions for eliminating this interference are investigated. A graphical method is given whereby the intermediate frequency of an aural or panoramic receiver can easily be chosen. There are 5 figures and 4 Soviet references.

SUBMITTED: April 15, 1957

Card 2/2

Sodin, L.G.

9(2)

SOV/19-59-2-154/600

AUTHOR: Sodin, L.G.

TITLE: A Narrow-Band Tube Amplifier

PERIODICAL: Byulleten' izobreteniy, 1959, Nr 2, p 38 (USSR)

ABSTRACT: Class 21a^4, 29$_{02}$. Nr. 96574 (446373/A-1678 of 21
             April 1952). Submitted to the Ministry of Communi-
             cations Means Industry of the USSR. A narrow-
             band tube amplifier with a frequency-dependent ne-
             gative feedback and a quartz resonator in its system.
             The arrangement is simplified and the control of
             the transmission frequency facilitated by connecting
             the resonator to the cathode circuit of the tube,
             so that it forms a part of the negative feedback
             system.

Card 1/1

9(3)

AUTHOR: Sodin, L.G.

TITLE: The Action   of a Compelling Force, Having a Lineari-
               ly Changing Frequency, on a Passive Linear Circuit
               With Lumped Parameters

ABSTRACT: Studying the behavior of a linear passive circuit,
               being under the influence of an alternating frequency
               excitation, is of interest to various engineering
               branches. A number of papers was devoted to this prob-
               lem and some of them provide a very profound analysis
               /Ref 2,7/. However, a generalized method for solving
               this problem has not yet been created. The author
               attempted to create such a general method, using the
               idea of I.T. Turbovich /Ref 8/. He presents a general
               solution using the Fourier transformations. The ex-
               pression providing the sought solution is presented in
               two versions. A formula is given for the partial solu-
               tion of the problem, for circuits whose transmission

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06530

SOV/142-2-2-6/25

The Action   of a Compelling Force, Having a Linearily Changing
Frequency, on a Passive Linear Circuit With Lumped Parameters

function has a finite number of poles. The author
shows the importance of the function $W(z)$ (integral
of probability of the complex argument), which was
tabulated in /Ref 10/. Using the following formula for
the general solution

$$ J \quad ? \quad = \quad \qquad \qquad $$

he author derives the calculation for the linear
passive circuit ith lumped parameters, obtaining
finally

Card 2/3

06530
SOV/142-2-2-6/25
The Action   of a Compelling Force, Having a Linearily Changing
Frequency, on a Passive Linear Circuit With Lumped Parameters

There are 10 references, 9 of which are Soviet and 1
English. This article was
recommended by the
Kafedra radiotekhniki Severo-Zapadnogo zaochnogo poli-
tekhnicheskogo instituta (Chair of Radio Engineering
of the Northwestern Correspondence Polytechnic Insti-
tute)

SUBMITTED: May 27, 1958

Card 3/3

33795

S/108/62/017/002/010/010
D201/D305

$L.4770$

AUTHORS: Zhlobinskiy, I.M., and Sodin, L.G., Members of the
             Society (see Association)

TITLE: Reducing the analysis time of discrete radio signal
             spectra by applying the 'active' method of analysis

PERIODICAL: Radiotekhnika, v. 17, no. 2, 1962, 71 - 80

TEXT: The resolving capability of a panoramic analyzer working on
the principle of sequential analysis, is determined by the pass-
band b of the analyzing filter, and is related to the time of ana-
lysis T and the swept band S by the known relationship

$$b_{0.7} = 0.665 \ \sqrt{\frac{S}{T}} = 0.665 \ \sqrt{FS} \qquad (1)$$

where F - the sweep frequency. A.N. Virskiy and V.A. Martynov (Ref.
2: Sposob uvelicheniya skorosti posledovatel'nogo analiza spektra
(A Method of Increasing the Speed of Sequential Spectrum Analysis)
Author's certificate No. 134716) have independently of each other,
suggested a method of shortening the analysis time with a constant
Card 1/5

33795
S/108/62/017/002/010/010
Reducing the analysis time of ...   D201/D305

resolving capability of the analyzer. The method consists in the
intervals between the adjacent spectral lines being swept quickly
and decreasing the change in frequency (γ = FS) when it reaches the
value determined in (1). The decrease should be automatic by acting
on the sweep generator by the filter system output pulses. It is
suggested in Ref. 2 (Op. cit.) that the sweep speed be controlled
directly by the pulse signals. In conjunction with the above the
authors suggest two distinct speeds of analysis: Large (γ_1) – in
the intervals between the signals and small (γ_s) – in the presence
of signals. According to (1) the following condition should be sa-
tisfied

$$b_{0.7} = 0.665 \sqrt{\gamma_s} \, . \qquad\qquad (2)$$

The block diagram of the suggested circuit, with which a larger sa-
ving in time could be achieved is given in Fig. 4. As may be seen
the proposed circuit has a separate filtering system which controls
retardation of the sweep. The analysis of the above circuit shows
that the parameters of the control system $b_{0.7_c}$ – the 3 db band-

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S/108/62/017/002/010/010
D201/D305

Reducing the analysis time of ...

width of the control system, γ_1 – high sweep speed and d_{1c} – the operating level of the control delay system should be taken from

$$b_{0.7st.c.opt.} = b_{0.7st.f} \sqrt[3]{\frac{4}{Bk_{s_c}p_c}} \qquad (10)$$

and

$$\gamma_{1\,opt} = \gamma_s \sqrt[3]{\frac{16B}{p_0^2 k_{s_c}^2}} \qquad (11)$$

where $b_{0.7st.c.opt.}$ – the optimum static 3 db bandwidth of the control channel, $b_{0.7st.f}$ – the 3 db static bandwidth of the filter channel, $B = \gamma_1/\gamma_s$, k_{s_c} – the rectangularity factor of the control channel at the static operating level $d_{st.c}$ of the delay channel, and parameter $p_c = N_c \, b_{0.7f}/S$ where N_c – the number of signals present in the swept frequency band. The $d_{1.c}$ should be taken as $\sqrt{2}$

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S/108/62/017/002/010/010

Reducing the analysis time of ...   D201/D305

and $p_0 \approx 0.05$. The analysis shows that the control channel should
have a minimum number of stages (n_c = 1 ÷ 2) for small dynamic
range of input signals, for 40 ÷ 60 db range of input signals n_c
should be increased to 4 ÷ 5. A still greater reduction of the ana-
lysis time may be obtained if the filter of the control channel is
detuned in the direction opposite to the change in frequency, since
in this case the bandwidth may be decreased without the danger of
'sealing-in'. This decrease should be kept small, otherwise the
sensitivity of the analyzer will be decreased. There is 1 table, 11
figures and 2 Soviet-bloc references.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i
              elektrosvyazi imeni A.S. Popova (Scientific and Techni-
              cal Society of Radio Engineering and Electrical Commu-
              nications imeni A.S. Popov) [Abstractor's note: Name
              of Association taken from first page of journal]

SUBMITTED: March 7, 1961

Card 4/4

3?L?3

S/033/62/039/003/010/010
E032/E114

3,1720

AUTHORS: Sodin, L.G., Braude, S.Ya., and Men', A.V.

TITLE: Observations of the spectra of strong bursts of solar
radio emission in the 10 - 25 Mc/sec range on
July 14 and 18, 1961

PERIODICAL: Astronomicheskiy zhurnal, v.39, no.3, 1962, 542-544
(+ 1 plate)

TEXT: These measurements were carried out with a 10-40 Mc/sec
spectral analyser, which included a panoramic receiver with a
wide-band high-frequency amplifier (10-40 Mc/sec), a heterodyne
with frequency conversion in the range 136-166 Mc/sec, an inter-
mediate frequency amplifier (126 Mc/sec), a second frequency
converter, a second intermediate frequency amplifier (2 Mc/sec)
and various indicating devices. The pass band of the apparatus
as a whole was 7 kc/sec. The analyser operates with a multi-
dipole antenna consisting of 24 dipoles. The effective area of
the antenna was 350-500 m^2. The width of the main lobe of the
polar diagram of the antenna in the E - W plane was about 20°.
Owing to the considerable background due to terrestrial radio

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Observations of the spectra of ...   S/033/62/039/003/010/010
                                       E032/E114

stations, weak and medium bursts could not be observed. On
July 12, 1961, at 10 hours 20 minutes U.T. there was a rapid
increase in ionospheric absorption followed by an almost complete
fading of all radio signals between 10 and 25 Mc/sec.
Immediately after this, the solar radiation flux density rose to
about 10^{-19} w/m^2 cps and the enhanced emission continued until
10 hours 55 minutes. After the termination of the radio burst
the enhanced ionospheric absorption continued for a further four
hours. Since the reception of the radio emission was carried
out in the side lobes of the antenna no details of the phenomena
are reported. On July 18, 1961, at 9 hours 50 minutes U.T., a
region of enhanced radio emission was found to move in from the
high-frequency side and had a sharply defined low-frequency cut-
off. The rate of drift of the low-frequency cut-off was about
2 Mc/sec/sec so that the spectrum was classified as belonging to
type II. At 9 hours 56 minutes the intensity of the burst was
found to fall and at 9 hours 58 minutes a second burst appeared
from the high-frequency end and persisted until 10 hours 30 mins.
It was found that the bursts were simultaneous with large

Card 2/3

BAZELYAN, L.L.; BRAUDE, S.Ya.; BRUK, Yu.M.; ZHUK, I.N.; MEN', A.V.;
    RYABOV, B.P.; SODIN, L.G.; SHARYKIN, N.K.

Radio emission spectra of the discrete sources Cassiopeia-A,
Cygnus-A, Taurus-A, and Virgo-A at frequencies of 12.5 to 40 Mc.
Izv. vys. ucheb. zav.; radiofiz. 6 no.5:897-903 '63. (MIRA 16:12)

1. Institut radiofiziki i elektroniki AN UkrSSR.

S/0142/63/006/006/0670/0676

ACCESSION NR: AP4012364

AUTHOR: Sodin, L. G.

TITLE: On the dependence of interference immunity of a radio re-ceiver for pulsed signals on the radio and video channel bandwidths

SOURCE: IVUZ. Radiotekhnika, v. 6, no. 6, 1963, 670-676

TOPIC TAGS: interference immunity, pulse radio receiver, receiver radio channel, receiver video channel, radar, signal to noise ratio, optimum detection, optimum filtering, reception under noise condi-tions, pulsed signal detection reliability, radio channel bandwidth, video channel bandwidth

ABSTRACT: Equations are derived from which to determine the inter-ference immunity of a radio receiver against pulsed signals for arbitrary values of the radio and video channel bandwidths. This problem is of interest since most heretofore developed theories for optimal reception of pulsed signals in the presence of additive stationary normal noise presuppose the use of optimal filter para-meters. It is shown that when weak signals are received, the loss

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ACCESSION NR: AP4012364

of interference immunity due to the broadening of the filter ahead
of the detector can be compensated by using additional filtration
past the detector.   In the case of strong signals, filtering ahead
and past the detector is equivalent.   If the bandwidth of the radio
channel is made narrower than optimal, the loss of interference
immunity can be offset by using high-frequency emphasis in the filter.
The relations are valid for the signal/noise ratio and static char-
acteristics of pulsed-signal detection reliability in normal white
noise for arbitrary values of radio and video bandwidths. Orig.
art. has: 3 figures and 19 formulas.

ASSOCIATION: Institut radiofiziki i elektroniki AN UkrSSR (Insti-
tute of Radiophysics and Electronics, AN UkrSSR)

SUBMITTED: 14Sep61   DATE ACQ: 14Feb64   ENCL: 00

SUB CODE: GE   NO REF SOV: 005   OTHER: 004

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TITLE: On the calculation of electrically scanned antenna arrays

PERIODICAL: Elektrosvyaz', no. 3, 1963, 8 - 14

TEXT: The calculation of the directive gain of electrically scanned plane multidipole antennas, such as it was reproduced in the articles of Von Aulock (Properties of phased arrays, Proc. IRE, 1960, no. 10) and Thomas King (Gain of large scanned arrays, Trans IRE, AP-8, 1960, no. 6), leads to very coarse and often even incorrect results (at great angles of the pattern). The authors of the present article deduce a set of formulae giving the directive gain for horizontal multidipole antennas composed of parallel short $(1 < \frac{\lambda}{2})$ dipoles, fed by identical currents (Fig. 1). Considering the directivity pattern $F(\varepsilon, \varphi)$ as consisting of four factors: $F(\varepsilon, \varphi) = F_{dip}(\varepsilon, \varphi) F_{gr}(\varepsilon, \varphi) F_x(\varepsilon, \varphi) F_y(\varepsilon, \varphi)$ where $F_{dip}(\varepsilon, \varphi)$ is the dipole factor, corresponding to the pattern of the Hertz dipole

$$F_{dip}(\varepsilon, \varphi) = 1 - \cos^2 \varepsilon \sin^2 \varphi, \qquad (1)$$

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where $p_{ki} = \sqrt{k^2a^2 + i^2b^2}$, $q_{ki} = \sqrt{p_{ki}^2 + 4c^2}$, $R_{ki} = \dfrac{k^2a^2}{p_{ki}^2}$, $T_{ki} = \dfrac{i^2b^2}{p_{ki}^2}$,

$S_{ki} = T_{ki} - \dfrac{1}{3}$, $f_1(x) = \dfrac{\sin x}{x}$, $f_2(x) = \dfrac{\sin x - x \cos x}{x^3}$, $c = \dfrac{2\ h}{\lambda}$. The

general formulae (6) and (13) are convenient for calculating the antennas with a comparatively small number of dipoles (up to 20 ÷ 30). Two simplified approximate formulae for the directive gain of antennas with a large number of dipoles are deduced in the article (respectively for the cases when one or two dimensions of the antenna are larger in comparison with the wavelength). The obtained formulae permit rendering many times more rapid a sufficiently accurate calculation of the directive gain. For instance, 20 min suffice for calculating (with a computer URAL-1) the directive gain by means of formula (13) at $N = 4$, $M = 32$. There are 4 figures.

SUBMITTED: October 2, 1962

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