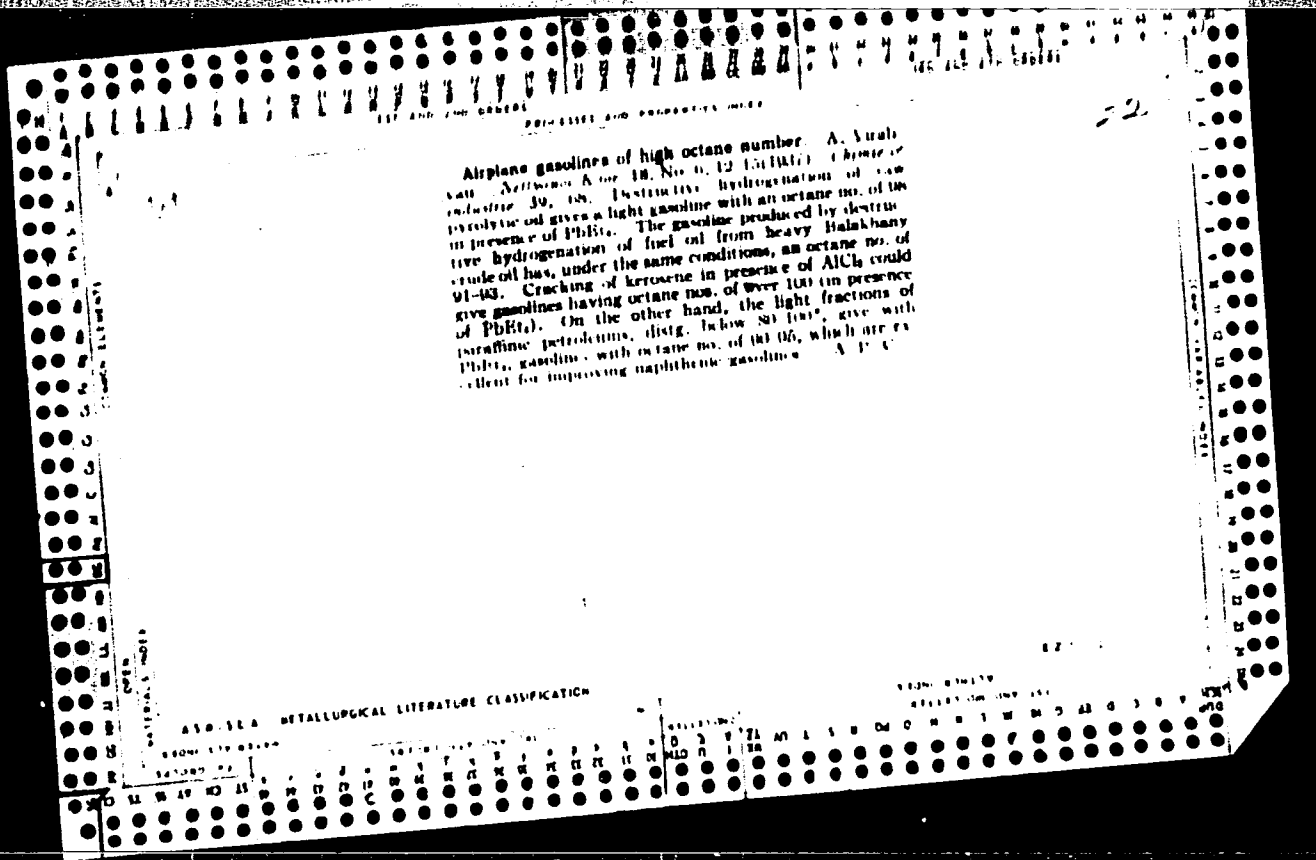


BAGMUT, S.I., arkhitekotor; VIRABOV, S.A., inzh.

Automatic protective device for rope passage apertures. Ugol' Ukr.  
4 no.7:34-35 J1 '60. (MIRA 13:8)  
(Hoisting machinery)



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s/020/60/132/05/04/069

AUTHOR: Virabyan, G. V.

TITLE: The Spectrum of a Certain Operator and Dirichlet's Problem for the Equation  $\square^2 u + 4 \frac{\partial^2}{\partial t^2} \square u + 2 \frac{\partial^4 u}{\partial t^4} = f(x, y, z, t)$ .

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 5. pp. 986-989

TEXT: Let  $\Omega$  be the finite domain bounded by  $\Gamma \equiv x^2 + y^2 + z^2 + t^2 - 1 = 0$ . Consider in  $\Omega$  the Hilbert space  $H_B^*(\Omega)$  which arises by completion of the linear manifold  $D_B$  of the finite functions infinitely differentiable in  $\Omega$  with the scalar product  $(u, v)_B$ , where

$$(1) (u, v)_B = \iiint_{\Omega} \left\{ \frac{\partial^2 u}{\partial x^2} \frac{\partial^2 v}{\partial x^2} + \frac{\partial^2 u}{\partial y^2} \frac{\partial^2 v}{\partial y^2} + \frac{\partial^2 u}{\partial z^2} \frac{\partial^2 v}{\partial z^2} + \frac{\partial^2 u}{\partial t^2} \frac{\partial^2 v}{\partial t^2} + 2 \frac{\partial^2 u}{\partial x \partial y} \frac{\partial^2 v}{\partial x \partial y} + \right.$$

$$+ 2 \frac{\partial^2 u}{\partial x \partial z} \frac{\partial^2 v}{\partial x \partial z} + 2 \frac{\partial^2 u}{\partial x \partial t} \frac{\partial^2 v}{\partial x \partial t} + 2 \frac{\partial^2 u}{\partial y \partial z} \frac{\partial^2 v}{\partial y \partial z} + 2 \frac{\partial^2 u}{\partial y \partial t} \frac{\partial^2 v}{\partial y \partial t} +$$

$$\left. + 2 \frac{\partial^2 u}{\partial z \partial t} \frac{\partial^2 v}{\partial z \partial t} \right\} d\Omega + \iint_{\Gamma} u d\sigma \iint_{\Gamma} v d\sigma + \iint_{\Gamma} \frac{\partial u}{\partial n} d\sigma \iint_{\Gamma} \frac{\partial v}{\partial n} d\sigma$$

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The Spectrum of a Certain Operator and Dirichlet's Problem for the Equation  $\square^2 u + 4 \frac{\partial^2}{\partial t^2} \square u + 2 \frac{\partial^4 u}{\partial t^4} = f(x, y, z, t)$ .

In  $H_B^*(\Omega)$  let the operator  $B^2$  be defined by  $B^2 = \Delta^{-2} \frac{\partial^4}{\partial t^4}$ , where  $\Delta^{-2} B$  is the inverse operator to the biharmonic Laplace operator for  $u|_{\Gamma} = \frac{\partial u}{\partial n}|_{\Gamma} = 0$ .

Theorem 1:  $B^2$  is symmetric, bounded and positive definite on the dense manifold  $D_B$  of the space  $H_B^*(\Omega)$ .

Theorem 2: The spectrum of  $B^2$  in  $H_B^*(\Omega)$  is discrete. The following boundary value problem is considered

(7)  $L(u) \equiv \square^2 u + 4 \frac{\partial^2}{\partial t^2} \square u + 2 \frac{\partial^4 u}{\partial t^4} = f(x, y, z, t)$

(8)  $u|_{\Gamma} = 0, (8') \frac{\partial u}{\partial n}|_{\Gamma} = 0$ , where  $\square = \frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial y^2} + \frac{\partial^2}{\partial z^2} - \frac{\partial^2}{\partial t^2}$

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The Spectrum of a Certain Operator and Dirichlet's Problem for the Equation  $\square^2 u + 4 \frac{\partial^2}{\partial t^2} \square u + 2 \frac{\partial^4 u}{\partial t^4} = f(x, y, z, t)$ .

$n$  is the exterior normal of  $\Gamma$ . Let  $\Omega$  be a finite domain bounded by a sufficiently smooth surface  $\Gamma$ .

Theorem 3: If  $B^2$  possesses a complete normed orthogonal system of eigenfunctions in  $H_B^*(\Omega)$ , then for the uniqueness of the solution of (7), (8), (8') it is necessary and sufficient that the number  $\mu^* = \frac{1}{2}$  is no eigenvalue of  $B^2$  in  $H_B^*(\Omega)$ .

Let  $f(x, y, z, t) \in W_2^{(2)}(\Omega)$  and

$$(11) \quad F(x, y, z, t) = \frac{1}{6} \int_0^t (t - \tau)^3 f(x, y, z, \tau) d\tau.$$

From  $F \in W_2^{(2)}(\Omega)$  it follows that

$$(12) \quad F = F_0 + \sum_{k=1}^{\infty} F_k \chi_k$$

where  $\chi_k$  are the eigenfunctions of  $B^2$

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S/020/60/132/05/04/069

The Spectrum of a Certain Operator and Dirichlet's Problem for the  
Equation  $\square^2 u + 4 \frac{\partial^2}{\partial t^2} \square u + 2 \frac{\partial^4 u}{\partial t^4} = f(x, y, z, t).$

Theorem 4: If the series

$$(13) \quad \sum_{k=1}^{\infty} \frac{F_k^2}{(1/\lambda_k - 2)^2}$$

converges, then the boundary value problem possesses a solution in  $W_2^{(2)}(\Omega).$

Let  $H$  be the Hilbert space which arises by completion in  $D_B$  in the sense of the scalar product

$$(18) \quad (u, v) = \iiint_{\Omega} \left\{ \frac{\partial u}{\partial x} \frac{\partial v}{\partial x} + \frac{\partial u}{\partial y} \frac{\partial v}{\partial y} + \frac{\partial u}{\partial z} \frac{\partial v}{\partial z} + \frac{\partial u}{\partial t} \frac{\partial v}{\partial t} \right\} d\Omega$$

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The Spectrum of a Certain Operator and Dirichlet's Problem for the  
Equation  $\square^2 u + 4 \frac{\partial^2}{\partial t^2} \square u + 2 \frac{\partial^4 u}{\partial t^4} = f(x, y, z, t)$ .

Let  $B = \Delta^{-1} \frac{\partial^2}{\partial t^2}$ , where  $\Delta^{-1}$  is the inverse operator to the Laplace  
operator for vanishing boundary conditions. Let the hypermaximum  
extension of B be denoted again with B.

Theorem 5: The limit spectrum of B in H is identical with the interval  
[0, 1].

The author mentions R. Denchev and S.L. Sobolev, Academician, whom  
he thanks.

There are 5 references: 4 Soviet and 1 German.

ASSOCIATION: Vychislitel'nyy tsentr Akademii nauk Arm SSR (Computing  
Center AS Armenian SSR)

PRESENTED: February 24, 1960, by S. L. Sobolev, Academician

SUBMITTED: January 25, 1960

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Card 5/5

VIRABYAN, G.V.

Spectrum of one operator and the Dirichlet problem for the  
equation  $\square^2 u + 4 \frac{\partial^2 u}{\partial t^2} + 2 \frac{\partial u}{\partial t} = f(x, y, z, t)$   
Dokl. AN SSSR 132 no.5:986-989 Je 160. (MIRA 13:6)

1. Vychislitel'nyy tsentr Akademii nauk ArmSSR. Predstavleno  
akademikom S.L.Sobolevym.  
(Differential equations, Partial) (Operators (Mathematics))

VIRABYAN, G.V.

Spectral equivalence of two operators generated by one class  
of Sobolev differential equation systems. Dokl. AN SSSR 132  
no.6:1238-1241 Je '60. (MIRA 13:6)

1. Vychislitel'nyy tsentr Akademii nauk ArmSSR. Predstavleno  
akademikom S.L.Sobolevym.  
(Operators (Mathematices))

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S/020/60/132/06/04/068  
C111/C222

470 4/6/60

AUTHOR: Virabyan, G.V.

16

TITLE: The Spectral Equivalence of Two Operators Generated by a Certain Class of Sobolev's Systems of Differential Equations

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 6, pp. 1238-1241

TEXT: Let  $\Omega$  be a finite domain in the  $R_n$  with a suitably smooth boundary  $\Gamma$ . Let  $D_{\mathcal{U}}$  be the linear manifold of the smooth solenoidal n-dimensional vectors the components of which are integrable in the square in  $\Omega$ . Let the Hilbert space  $H_1$  arise by the closure of  $D_{\mathcal{U}}$  in the sense of the scalar product

$$(1) \quad (u, v)_1 = \int_{\Omega} \{ u_1 \bar{v}_1 + \dots + u_n \bar{v}_n \} d\Omega .$$

In  $H_1$  let the operator  $\mathcal{U}$  be defined by

$$(2) \quad v \in D_{\mathcal{U}} , \quad \mathcal{U} v = Av + B \text{ grad } Sv , \quad Sv = P$$

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The Spectral Equivalence of Two Operators  
Generated by a Certain Class of Sobolev's  
Systems of Differential Equations

where P has to be determined from

(3)  $L(P) = \text{div } Av, P|_{\Gamma} = 0,$

where  $L = - \sum_{i,j=1}^n \frac{\partial}{\partial x_i} (a_{ij} \frac{\partial}{\partial x_j})$  is a differential operator of second

order of elliptic type with variable coefficients,  $A = \|a_{ij}\|, B = \|b_{ij}\|,$   
 $i, j = 1, 2, \dots, n; A^2 = E; B$ -positively definite;  $AB = BA$ . The operator  $\mathcal{L}$   
is generated by a system of differential equations of S.L. Sobolev (com-  
pare (Ref.1)).

Let  $D_Q$  be the linear manifold of the infinitely differentiable finite  
functions in  $\Omega$ . Let the Hilbert space  $H_2$  arise from  $D_Q$  by the closure  
in the sense of the scalar product

(5)  $(u, v)_2 = \int_{\Omega} Lu \cdot \bar{v} d\Omega.$

Let the operator  $Q$  be defined in  $H_2$  by  $Q = -L^{-1}M$ , where  
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The Spectral Equivalence of Two Operators  
Generated by a Certain Class of Sobolev's  
Systems of Differential Equations

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$$M = \sum_{i,j=1}^n \frac{\partial}{\partial x_i} \left( c_{ij} \frac{\partial}{\partial x_j} \right), \quad \|c_{ij}\| = \|a_{ij}\| \cdot \|b_{ij}\|.$$

Let  $H_1^{(A)}$  be the proper subspace of the operator  $\mathcal{O}$  which corresponds to the matrix  $A$ . The subspaces  $H_1^{(1)}$  and  $H_2^{(1)}$  correspond to the discrete parts of the spectra of  $\mathcal{O}$  in  $H_1 \ominus H_1^{(A)}$  and of  $Q$  in  $H_2$ . Let

$$(7) \quad H_{\mathcal{O}} = H_1 \ominus \{ H_1^{(A)} \oplus H_1^{(1)} \}, \quad H_Q = H_2 \ominus H_2^{(1)}.$$

Theorem: In the case of a continuous spectrum in  $H_{\mathcal{O}}$  the complete system of eigendifferentials for the operator  $Q$  in  $H_Q$  can be constructed with the aid of the complete system of eigendifferentials of the operator  $\mathcal{O}$ , and reversely.

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The Spectral Equivalence of Two Operators  
Generated by a Certain Class of Bobolev's  
Systems of Differential Equations

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S/020/60/132/06/04/068  
C111/C222

The author mentions R.A. Aleksandryan. There are 2 Soviet references.

ASSOCIATION: Vychislitel'nyy tsentr Akademii nauk Arm SSR (Computing  
Center of the AS Armenian SSR)

PRESENTED: February 24, 1960, by S.L. Sobolev, Academician

SUBMITTED: January 25, 1960

Card 4/4

X

16(1)

AUTHOR:

Virabyan, G.V.

SOV/20-128-1-2/58

TITLE:

Spectral Equivalence of two Operators

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 1, pp 13-16 (USSR)

ABSTRACT:

S.L. Sobolev [Ref 1] has shown that small oscillations of a rotating fluid satisfy the equation  $\frac{\partial^2 \phi}{\partial t^2} = -B\phi$ , where

$B = \Delta^{-1} \cdot \frac{\partial^2}{\partial z^2}$ . The connection between B and the operator

C is considered which expresses the derivative of the velocities of an oscillating rotating fluid. Let  $H_A$  be the Hilbert space of the complex solenoidal vectors, the components of which are square-integrable in the considered domain  $\Omega$  with the boundary  $\Gamma$ ; let the scalar product be

$(\omega, \omega)_A = \iiint_{\Omega} (v_x \bar{w}_x + v_y \bar{w}_y + v_z \bar{w}_z) d\Omega$ . In the linear

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Spectral Equivalence of two Operators

SOV/20-128-1-2/58

manifold  $D_A$  which is dense in  $H_A$  let the operator  $A$  be defined by

$$(1) \quad A\phi = \lambda\phi, \quad \phi \in D_A; \quad w_x = v_x + \frac{\partial P_0}{\partial y} + i \frac{\partial P_1}{\partial x}; \quad w_y = v_y - \frac{\partial P_0}{\partial x} + i \frac{\partial P_1}{\partial y}; \quad w_z = i \frac{\partial P_1}{\partial z}; \quad \Delta P_0 = \frac{\partial v_y}{\partial x} - \frac{\partial v_x}{\partial y};$$

$$\Delta P_1 = i \left( \frac{\partial v_x}{\partial x} + \frac{\partial v_y}{\partial y} \right), \quad P_0|_{\Gamma} = 0, \quad P_1|_{\Gamma} = 0.$$

It is  $A = C^2$ . Let the Hilbert space  $H_B$  arise by closing the linear manifold of infinitely differentiable finite functions in the sense of :

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## Spectral Equivalence of two Operators

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$$(u, v)_B = \iiint_{\Omega} \left[ \frac{\partial u}{\partial x} \frac{\partial \bar{v}}{\partial x} + \frac{\partial u}{\partial y} \frac{\partial \bar{v}}{\partial y} + \frac{\partial u}{\partial z} \frac{\partial \bar{v}}{\partial z} \right] d\Omega. \text{ Let } H_A^* =$$

$$= H_A \ominus \{ H_A^0 \oplus H_A^1 \}, \text{ where } H_A^0, H_A^1 \text{ are proper subspaces.}$$

Fundamental theorem : 1. The set of points of the spectra of  $A$  in  $H_A$  and  $B$  in  $H_B$  are identical. 2. The eigen values of

$A$  in  $H_A^*$  and  $B$  in  $H_B$  are the same, including multiplicities.

3. In the case of a continuous spectrum one can construct with the aid of a complete system of eigen differentials of  $A$  in

$H_A^*$  the complete system of eigen differentials of  $B$  in  $H_B$ ,

and inversely.

R.A. Aleksandryan is mentioned by the author.

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Spectral Equivalence of two Operators

SOV/20-128-1-2/58

There are 2 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova  
(Moscow State University imeni M.V. Lomonosov)

PRESENTED: May 14, 1959, by S.L. Sobolev, Academician

SUBMITTED: May 11, 1959

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L 13827-63

EWT(d)/FCC(w)/BDS AFFTC IJP(C)

S/0020/63/151/002/0258/0261

ACCESSION NR: AP3003546

AUTHOR: Virabyan, G. V.

TITLE: Resolvent of an operator <sup>16</sup>

SOURCE: AN SSSR. Doklady\*, v. 151, no. 2, 1963, 258-261

TOPIC TAGS: boundary-value problem, Green function, operator resolvent

ABSTRACT: The author constructs Green's function for the boundary-value problem (1) and (2) of the enclosure, when the domain is a quadrant, a strip, a half-strip, and a square. It is indicated that the construction of the Green's function is equivalent to the construction of the resolvent of the operator  $TS$ , where  $T$  is the operator inverse to the Laplacian and  $S$  is the wave operator. "I take this opportunity to express my sincere gratitude to my teachers S. L. Sobolev and R. A. Aleksandryan for proposing the problem and for valuable suggestions in carrying out this work." The paper was presented by Academician S. L. Sobolev on 2 February 1963. Orig. art. has: 9 formulas.

ASSOCIATION: Vy\*chislitel'ny\*y tsentr Akademii nauk ArmSSR (Computer Center, Academy of Sciences ArSSR)

SUBMITTED: 04 Nov 62  
SUB CODE: MM  
Card 1/21

DATE ACQ: 30 Jul 63  
NO REF SOV: 002

ENCL: 01  
OTHER: 002

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VIRABYAN, G.V.

The resolvent of a certain operator. Dokl. AN SSSR 151 no.2:  
258-261 JI '63. (MIRA 16:7)

1. Vychislitel'nyy tsentr AN Armyanskoy SSR. Predstavleno  
akademikom S.L.Sobolevym. (Operators (Mathematics))

VIRABYAN, G.V.

Spectral properties of operators generated by Sobolev-type differential equations of higher order. Dokl. AN SSSR 150 no.1:13-16 My '63. (MIRA 16:6)

1. Vychislitel'nyy tsentr AN ArmSSR i Yerevanskiy gosudarstvennyy universitet. Predstavleno akademikom S.L.Sobolevym. (Operators (Mathematics)) (Differential equations)

MANVELYAN, M.G.; KUZ'MINA, N.I.; VIRABYAN, V.A.

An opaque glaze for electric insulating articles. Stek.i ker. 18  
no.5:24-25 My '61. (MIRA 14:5)

1. Chlen-korrespondent Akademii nauk Armyanskoy SSR (for Manvelyan).  
(Glazes) (Electric insulators and insulation)

VIRABYANTS, R.A.

Physical and chemical methods for testing furnace black. Gaz.prom.  
no.9:30-34 S '57. (MIRA 10:10)

(Carbon black)



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retsenzent; KLEYMENOVA, K.F., ved. red.; LEVINA, Ye.S., ved.  
red.; POLOSINA, A.S., tekhn. red.

[Analysis of petroleum and petroleum products] Analiz nefi i  
nefteproduktov. Izd.5., dop. i perer. Moskva, Gostoptekhizdat,  
1962. 887 p. (MIRA 15:3)

(Petroleum analysis)

VIRAG, A.

Economic problems of the interurban automotive transportation  
in the U.S.A. Medun transp 10 no.12:37-40 D '64.

KERTESZ, Otto (Gyor); VIRAG, Antal (Gyor)

New working methods in track maintenance. Vasut 12 no.3:22-23  
Mr '62.

GROSANU, I.; FAUNESCU, M.; VIRAG, I.

Calculating the stress of a reinforced concrete pile driven  
into the ground by vibropercussions. Bul St si Tehn Tim 9  
no.2:313-320 JI-D '64.

VIRAG, Imre (Budapest II. Keleti Karoly u.30)

Once more on the perlite-case. Musz elet 16 no.18:5 '61.

BAKACSI, Gyula, dr.; SZABO, Lajos, dr.; TROJAN, Emil, dr.; VIRAG, Istvan, dr.

On the problem of acute osteomyelitis in infants and children. Orv.  
hetil. 103 no.5:205-207 F '62.

1. Szegedi Orvostudományi Egyetem, Gyermekklinika.

(OSTEOMYELITIS in inf. & child.)  
(ANTIBIOTICS therapy) (CORTISONE therapy)

SZABO, Lajos, dr.; VILAG, István, dr.

Glucose-6-phosphate dehydrogenase defect of erythrocytes.  
(Screening tests; acute hemolytic anemia). Orv. hetil. 105  
no.49:2318-2321 6 B '64.

1. Szegedi Orvostudományi Egyetem. Gyermekklinika (igazgató:  
Boda Domokos dr.).

Pediatrics

HUNGARY

PATAKI, Lajos, Dr, KAISER, Gabriella, Dr, ~~VIRAG, Istvan, Dr~~, ~~ROMAN, Ferenc, Dr~~;  
Medical University of Szeged, Pediatric Clinic (director: BODA, Domokos, Dr)  
(Szegedi Orvostudományi Egyetem, Gyermekklinika), and National Blood Transfusion  
Service, Branch Center (head: GAL, Gyorgy, Dr) (OVSZ -- Országos Vertranszfuzio-  
zios Szolgalat --, Alkózpont), Szeged.

"New Therapeutic Possibility for the Hemolytic Disease of Newborn Caused by  
Rh Iso-Immunization. The Use of Rh-Positive Blood Based on the Testing of  
the Free Anti-D Antibody of the Newborn. (Preliminary Communication)."

Budapest, Orvosi Hetilap, Vol 108, No 8, 19 Feb 67, pages 352-354.

Abstract: [Authors' Hungarian summary] 1) The free anti-D antibody can be  
bound to Rh-positive blood; when the exchange transfusion is continued with  
Rh-negative blood, the bound antibody can be removed more effectively. 2)  
When anti-D antibody is absent, hyperbilirubinemia does not always develop  
in spite of a positive direct Coombs reaction. In these cases, an exchange  
transfusion can be avoided. 3) In the case of hyperbilirubinemia with a  
positive direct Coombs reaction but absence of free anti-D antibody, the ex-  
change transfusion can be carried out with Rh-positive blood as well. 4) It  
seems probable that the indications and performance of exchange transfusions  
in cases of Rh incompatibility will be modified, in the future, by testing  
for the presence of free anti-D antibodies in the circulation of the newborn.  
1 Hungarian, 11 Western references.

1/1



TOTH, Gyorgy, dr.; VIRAG, Istvan, dr.; DUX, Erno, dr.; ROMAE, Ferenc, dr.

Bone marrow disease in an infant caused by antiepileptic treatment (Sacerno) of the mother during pregnancy. Orv. hetil. 106 no.22:1029-1030 30 My'65.

1. Szegedi Orvostudományi Egyetem, Gyermekklinika.

VIRAG, Jozsef

Modern meat industry machinery. Technika 7 no.7:6-7 J1 '63.

1. Geptervezo es Muszaki Iroda.

VIRAG, J.

New Hungarian machines for the meat industry.

P. 243. (GEP.) (Budapest, Hungary) Vol. 9, No. 7/8, Oct./Nov. 1957

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

VIRAG, Lajos (Kiskunhalas)

Farewell to pensioners in Kiskunhalas. Magy vasut 6 nr.24:6 15 D '62.

LELEK, Istvan; NAGY, Dezso; KADAS, Laszlo; VIRAG, Lajos

A lipoid-mobilizing hormone in man. Kiserletes orvostud. 13 no.4:  
430-433 Ag '61.

1. Soproni Allami Szanatorium Belosztaly es Vas megye Tanacsa  
"Markusovszky" Korhaza Prosecturaja.

(LIPIDS metab) (PITUITARY GLAND POSTERIOR hormones)

KADAS, Laszlo; VIRAG, Lajos

Role of the neuro-endocrine relationship in blood coagulation.  
Kiserletes Orvostud. 12 no.6:572-577 D '60.

1. Vas megyei Tanacs Korhazanak Korszovettani Laboratoriuma.  
(BLOOD COAGULATION pharmacol)  
(CORTISONE pharmacol)  
(CORTICOTROPIN pharmacol)

JANI, Sandor; SZEBENYI, Lajos; VIRAG, Lajos

Water supply of industrial plants. Magyar ipar 13 no.7:400-406 '64.

GERO, S.; FARKAS, K.; GERGELI, I.; YAKAB, I.; CHEKELI, I.; VIRAG, S.;  
TSUPPON, A.

Preventive effects of  $\beta$ -lipoprotein immunization in the development  
of experimental cholesterol atherosclerosis. Vest. AMN SSSR 16 no.3:  
20-27 '61. (MIRA 14:7)

1. 3-ya Meditsinskaya klinika Budapeshtskogo universiteta, Otdel  
patologii Budapeshtskogo gosudarstvennogo revmatologicheskogo  
instituta. (ARTERIOSCLEROSIS) (LIPOPROTEINS)



GERGELY, Janos, dr.; GERO, Sandor, dr.; JAKAB, Lajos, dr.; SZEKELY, Judit, dr.;  
VIRAG, Sandor, dr.; CZUPPON, Alfred, dr.

Studies on beta-lipoprotein antigens. Antigenic relationship between  
beta-lipoproteins from atherosclerotic patients and experimental  
animals. Orv.hetil. 102 no.31:1450-1452 30 J1 '61.

1. Budapesti Orvostudományi Egyetem, III. sz. Belklinika és a MTA  
Műszaki Fizikai Kutató Intézet Mikomorfológiai Osztálya.

(ARTERIOSCLEROSIS immunol) (LIPOPROTEINS blood)  
(ANTIGENS)

GERO, Sandor, dr.; GERGELY, Janos, dr.; DEVENYI, Tibor; JAKAB, Lajos, dr.;  
SZEKELY, Judit, dr.; VIRAG, Sandor, dr.

Role of mucoid substances of the blood vessel in the pathogenesis of  
atherosclerosis. Orv. hetil. 102 no.25:1165-1168 18 Je '61.

1. Budapesti Orvostudományi Egyetem, III sz. Belklinika.

(ARTERIOSCLEROSIS etiol)  
(BLOOD VESSELS chem)

GERO, Sandor, dr.; GERGELY, Janos, dr.; DEVENYI, Tibor, dr.; JAKAB, Lajos, dr.;  
SZEKELY, Judit, dr.; VIRAG, Sandor, dr.

Effect of mucopolysaccharides on the auto-lipolytic activity of the  
vascular wall. Orv. hetil. 103 no.17:781-782 29 Ap '62.

1. Budapesti Orvostudományi Egyetem, III ss. Belklinika.

(MUCOPOLYSACCHARIDES pharmacol)  
(LIPIDS metab)  
(BLOOD VESSELS pharmacol)

GERO, Sandor, dr.; FARKAS, Karoly, dr.; GERGELY, Janos, dr.; JAKAB Lajos, dr.;  
SZEKELY, Judit, dr.; VIRAG, Sandor, dr.; CZUPPON, Alfred, dr.

Inhibition of cholesterol atherosclerosis by immunization with  
 $\beta$ -lipoprotein. Orv.hetil. 101 no.41:1441-1447 9 0 '60.

1. Budapesti Orvostudományi Egyetem, III. sz. Belklinika, Országos  
Rheuma és Furdogyi Intezet, Prosectura, MTA Muszaki Fizikai  
Kutatointezet.

(ARTERIOSCLEROSIS exper)  
(LIPOPROTEINS)

GERO, Sandor, dr.; GERGELY, Janos, dr.; JAKAB, Lajos, dr.; SZEKELY, Judit, dr.;  
VIRAG, Sandor, dr.

Comparative immuno-electrophoretic studies on different vascular  
regions. Orv.hetil. 102 no.6:247-248 5 F'61.

1. Budapesti Orvostudományi Egyetem, III. Belklinika.  
(BLOOD VESSELS)  
(ELECTROPHORESIS)

VIRAGH, Antal; MOLNAR, Bela

Continuous manufacture of some sorts of chopped meat products -  
special chopped meat, morning canned goods and luncheon meat.  
Konzerv paprika no.5:156-158 S-0 '62.

1. Budapesti Konzervgyar.

DORRE, Pal, okleveles mernok; VIRAGH, Bela, okleveles mernok

Line correction of the Hungarian State Railways at Saltonfuzfo.  
Melyepitestud: szemle 13 no.4:145-150 Ap '63.

1. Fovarosi Melyepitesi Tervezo Vallalat csoportvezetoje (for Dorre).
2. MAV muszaki fotanacsos; MAV Budapesti Epitesi Fonokseg fomernoke (for Viragh).

HUNGARY

VODROS, Daniel, and VIRAGH, Elemer, Departmental Research Group in Medical Radiology (Orvosi radiologiai Akadémiai Tanszék Kutató Csoport) of the MTA (Director: Prof Dr Zoltan ZSEBOK).

"Measurement of Irradiation Per Unit Time Using Ionization Chambers with Vibratory Condenser"

Budapest, Magyar Radiologia, Vol 18, No 6, Dec 66; pp 357-360.

Abstract [Authors' English summary]: The ionization currents produced by different gamma-radiating isotopes in ionization chambers have been measured by authors by means of an electrometer with vibratory condenser. Using ionization chambers with volume of 1, 10, 100, 2500 and 10,000 cm<sup>3</sup> and with resistance of 10<sup>9</sup>, 10<sup>10</sup> and 10<sup>11</sup> ohms, the intensity of the doses used in radiological practice may be determined with great accuracy. 3 References, all Eastern.

1/1



FERENCZI, Endre, dr.; STOLL, Kalman, dr.; VIRAGH, Gyula, dr.

Epidemiological aspects of infectious enterocolitis in Budapest.  
Nepegeszsseggy 41 no.6:160-168 Je '60.

(COLITIS epidemiol)

VIRAGH, I.

Seed used for sowing. p. 3. (Magyar Mezőgazdaság, Vol. 11, no. 2, Jan. 1956 Budapest)

S0: Monthly List of East European Accession (MEAL) LC, Vol. 6, no. 7, July 1957. Uncl.

VIRAGH, I.

Decaying of seed in storage. p. 9. (Magyar Mezőgazdaság, Vol. 11, no. 7, Apr. 1956  
Budapest)

SO: Monthly List of East European Accession (EEAL) LC, Vol. 6, no. 7, July 1957. Uncl.

VIRAGH, I.

VIRAGH, K. Some problems of corn seed. II. p. 5

Vol. 11, no. 8, Apr. 1956

MAGYAR MEZOGAZDASAG

AGRICULTURE

Budapest, Hungary

So: East European Accession, Vol. 6, No. 3, March 1957

VIRAGH, I.

VIRAGH, I. For a qualitative cultivation of plants. p. 4.

Vol. 11, no. 11, June 1956

HUNGARIAN AGRICULTURE

AGRICULTURE

Budapest, Hungary

So: East European Accession, Vol. 6, No. 5, 1957

VIRAGH, I.

VIRAGH, I. - The quality of seeds of cereal grains. p. 5  
Vol. 11, no. 14, July 1956  
Magyar Mezőgazdaság - Budapest, Hungary

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

GEREB, Gyorgy, dr.; VIRAGH, Laszlo

Psychological testing of the fatiguing effect of work processes performed by workers at hemp spinning mills. Magyar pszichol szemle 18 no.3:294-305 '61.

1. Szegedi Kenderfonogyar (vallalatvezeto: Nagygyorgy Maria).

VIRAGH, Sz.; VIRAGH-KISS, Julia

Changes in the heart's conduction system in hypertensive states.  
Acta Morph. Acad. Sci. Hung. 11 no.2:239-255 '62.

1. Department of Pathological Anatomy, University Medical School,  
Szeged (Director: Prof. B. Korpassy)

(HEART pathol) (HYPERTENSION pathol)



VIRAGH, Szabolcs; PORTE, Aime

Studies in the innervation and stimulus conduction system of the heart on the basis of examining the heart of rats by means of an electronmicroscope. Biol orv ~~Kozl~~ MTA 13 no.1-2:159-190 '62.

1. Szegedi Orvostudományi Egyetem Korbonctani es Korszovettani Intezete es a Strasbourgi Egyetem Korbonctani es Korszovettani Intezete.

VIRAGH SZABOLCS, Dr.; SZABO REZSO, Dr.; KOLLER KATALIN, Dr.

Eisenmenger complex in adolescence associated with open Botalli duct and aortic coarctation. Orv. hetil. 99 no.45:1584-1586 9 Nov 58.

1. A Szegedi Orvostudományi Egyetem Kóronctani és Kórszövettani Intézetének (igazgató: Korpássy Béla dr. egyet. tanár) és II sz-Belklinika-jának (mb. vezető: Szigetói István dr. adjunctus) közleménye.

(CARDIOVASCULAR DEFECTS, CONGENITAL, case reports

Eisenmenger complex with patent ductus arteriosus & coarctation of aorta in adolescent girl (Hun))

(DUCTUS ARTERIOSUS, PATENT, case reports

with Eisenmenger complex & coarctation of aorta in adolescent girl (Hun))

(COARCTATION OF AORTA, case reports

with Eisenmenger complex & patent ductus arteriosus in adolescent girl (Hun))

HUNGARY

VIRAGH, S., of the Institute of Morbid Anatomy of the Medical University of Szeged [Original version not given].

"Electron Microscopy of the Impulse-Conducting System and Nervous Elements of the Heart"

Budapest, Acta Physiologica Academiae Scientiarum Hungaricae, Supplement to Vol 22, 1963;pp 9-10.

Abstract [Author's English summary]: In the rat and guinea pig no basic difference has been found to exist between the conductor fiber and the common muscle fibers of the heart. There are, however, certain differences in the quantity and location of myofibrils, in the organization of the endoplasmic reticulum, in the distribution of the mitochondria and in the connection between fibers, etc. The most typical conductor elements are to be found in the sinus node. The largest number of nerve fibers are found in the Aschoff-Tawara node of the heart. There is a certain difference between the individual and collective innervation of the nerve fibers.

1/1

VIRAGH, Szabolcs, Dr.; SCULCETY, Sandor, Dr.

Malignant neurinoma in the region of the cardia. Orv. hetil. 99 no.49:  
1726-1728 7 Dec 58.

1. A Szegedi Orvostudományi Egyetem Kóronctani és Kórszövettani  
Intézetének (igazgató: Kórpássy Béla dr. egyet. tanár) és I. sz. Sebészeti  
Klinikájának (igazgató: Jaki Gyula dr. egyet. tanár) közleménye.

(STOMACH NEOPLASMS, case reports

neurinoma, malignant, in region of cardia (Hun))

(NEURILEMMOMA, case reports

malignant neurinoma in region of cardia ventriculi (Hun))

L 15501-66

ACC NR: A16007447

SOURCE CODE: HU/2505/65/026/00X/0049/0049

AUTHOR: Viragh, S.; Kovacs, K.; Tiboldi, T.; Hodi, M.; Julesz, M. 20  
P. 1

ORG: Medical University of Budapest, Institute of Histology and Embryology (Budapesti Orvostudományi Egyetem, Szovetani és Fejlődéstan Intézet); Medical University of Szeged, Department of Medicine (Szegedi Orvostudományi Egyetem, I. Belgyógyászati Tanszék)

TITLE: Electron-microscopic structure of the pituitary transplanted into the anterior chamber of the eye / This paper was presented at the 29th Meeting of the Hungarian Physiological Society held in Szeged from 2 to 4 July 1964

SOURCE: Academia scientiarum hungaricae. Acta physiologica, v. 26, Supplement, 1965, 49

TOPIC TAGS: electron microscopy, histology, animal physiology, endocrinology, gland, hormone, rat

ABSTRACT: Homologous adenohipophysis, transplanted into the anterior chamber of the eye of male albino rats, was examined 50 days after transplantation and later. The transplanted organ underwent significant structural and cellular changes but the presence of every normal type of cell could be demonstrated by electron microscopy. The

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L 15501-66

ACC NR: AT6007447

cell ratio underwent a change in the transplants as the elements containing granules characteristic of the acidophilic mammatropic cells gained preponderance. It was demonstrated earlier by functional studies that the transplanted hypophyses secreted luteotrophin. The pituitary cells, especially near the blood vessels, possess well-developed and regular endoplasmic reticulum characteristic of active function, and they often contain maturing granules. The results appear to indicate that the GOLGI apparatus, too, has a role in the production of the secretory granules. [JPRS]

SUB CODE: 06 / SUBM DATE: none

Card 2/2

RUSSIAN/Optics - Photometry, Colorimetry

X-12

Abs Jour : Ref Zhur - Fizika, No 4, 1959, No 960

Author : Viroghalay Geza

Inst : "

Title : The Principal Problem in Objective Colorimetry

Orig Pub : Meres es automat., 1958, 6, No 4, 97-100

Abstract : In objective colorimeters, the measurement of the light of the specimen is performed by determining the ratios of the photocurrents from three photocells with different spectral sensitivity. The author indicates conditions for the possibility of recalculation of the primary data to the international system of color coordinates. --- G.H. Pantian

Card : 1/1

95

VIRAGH, Sz.; VIRAGH-KISS, Julia

Changes in the heart's conduction system in hypertensive states.  
Acta Morph. Acad. Sci. Hung. 11 no.2:239-255 '62.

1. Department of Pathological Anatomy, University Medical School,  
Szeged (Director: Prof. B. Korpassy)

(HEART pathol) (HYPERTENSION pathol)



VIRAKHOVSKIY, A.S., (g.Petrodvorets).

Using the topics of the 20th Congress of the Communist Party  
of the Soviet Union in chemistry classes. Khim.v shkole 11  
no.5:16-28 S-0 '56. (MLRA 9:11)  
(Chemistry, Inorganic--Study and teaching)

LEBEDEVA, G.N.; VIRAKHOVSKIY, G.S.; SMETANINA, Ye.K.

Effect of sulfuric acid impurities on the quality of ammonium sulfate. Koks i khim. no.6:40-42 '60. (MIRA 13:7)

1. Vostochnyy uglekhimicheskiy institut (for Lebedeva).
2. Magnitogorskiy metallurgicheskiy kombinat (for Virakhovskiy, Smetanina).

(Ammonium sulfate) (Sulfuric acid)

VIRAKHOVSKIY, G.S.; SMYANINA, Ye.K.

Production of white ammonium sulfite. Koks i khim.  
no.7:40-43 '60. (MIRA 13:7)

1. Magnitogorskiy metallurgicheskiy kombinat.  
(Magnitogorsk--Ammonium sulfata)

VIRANT, J.

"Technics of electronic computing in management and national economy" by G.Forbrig and H.Luck. Reviewed by J.Virant. Elektr vest 29 no.8/10:234-235 '61.

VIRANOVSKIY, G.B., inzhener.

Removal of valve liners from LM steam engines. Energetik 4 no.9:14  
8 '56. (Steam engines--Maintenance and repair) (MIRA 9:10)

VIRANOVSKIY, V.V.; PODGORODETSKIY, A.A.

Improving the quality of the delivered product. Metallurg 8 no.11:  
32-33 N '63. (MIRA 16:12)

VIRANYI, A

FISCHER, Antal, dr.,; SZECSENY, Andor, dr.,; VIRANYI, Andras, dr.

Neural regulation of function of the kidney tubules. *Magy. belorv. arch.* 8 no.2:25-35 Apr 55.

1. A Budapesti Orvostudományi Egyetem III. sz. Belklinikája (igazgató: Gomori Pal dr. egyetemi tanár) és III. sz. Sebészeti Klinikája (igazgató: Rubanyi Pal dr. egyetemi tanár) közleménye.

(KIDNEYS, physiology,

regulation by nervous system in dogs)

(NERVOUS SYSTEM, physiology,

regulation of kidney funct. in dogs)



VIRANYI, A.

BACH, I.; SZMUK, I.; GYULAI, E.; VIRANYI, A.

Investigation of the pituitary and adrenal gland system  
in experimental fever; new method for eosinophil cell  
count. Orv. hetil., Budap. 93 no.35:1117-1125 2 Sep 1951.  
(CIWL 21:1)

1. Internal Department (Head Physician -- Prof. Dr. Imre  
Bach) and Laboratory (Head Physician -- Dr. Imre Szuk),  
Peterfy Sandor-utcai Metropolitan Hospital, Budapest.

VIRANYI, Miklos (HA 5 ED)

Marginal notes on the "CK-DK" competition on the Czechoslovak  
"Field Day." Radiotechnika 12 no.9:287 S '62.

VIRANYI, Miklos

Balance sheet of the "ether card" during the past 8 months.  
Radiotechnika 11 no.7:206 J1 '61.

HUNGARY/Cultivated Plants - Grains.

11-4

Abs Jour : Ref Zhur - Biol., No 9, 1990, 39272

Author : Szanto, G., Viranyi, S.

Inst : -

Title : The Present and the Future of Leguminous Plants in Hungary.

Orig Pub : Agratudomány, 1957, 9, No 6, 21-27.

Abstract : No abstract.

Card 1/1

VIRBANSKI, W. S.

Mathematical Reviews  
 Vol. 14 No. 7  
 July - August, 1953  
 Mechanics.

*Leimanis, E. M. Les méthodes pour calculer les trajectoires des projectiles. (Vol. 1. Méthode de Leimanis, 1947. 217 pages. 1947. (Vol. 2. French summary.)*

Consider the projectile as a material point moving in still air, and assume that the only forces acting on it are gravity  $mg$  and the air resistance  $mR$ , the latter acting in the direction of the tangent to the trajectory and opposite to the velocity  $v$  of the projectile. If  $R$  depends on the velocity  $v$  only and is proportional to the  $n$ th power, then  $R = -cF(v)v/v$ , where  $cF(v) = bv^n$ .

Instead of the variables  $x, y, t$  the author introduces a reduced velocity  $p = v(b/g)^{1/n}$ , reduced coordinates  $X = (b^2g^{n-2})^{1/n}x$ ,  $Y = (b^2g^{n-2})^{1/n}y$  and a reduced time  $\tau = (bg^{n-1})^{1/n}t$ , and gives the solution of the problem for the reduced variables in terms of  $\tau$  and a parameter  $q$ , where  $\tau$  is the angle of inclination to the horizontal of the tangent to the trajectory, and  $q = u(b/g)^{1/n}$ ,  $u$  being the velocity of the particle at a summit of the trajectory. Since the trajectories corresponding to one and the same value of the parameter  $q$  are similar, it is sufficient for the solution of the problem to calculate a family of solutions for a certain range of values for  $q$  (separately for  $n=2, 3, 5$ ). In the case where the density of the air varies with the altitude, or the exponent  $n$  varies with the velocity  $v$ , the ballistic coefficient  $b$  becomes a variable quantity and the method of successive arcs should be applied. In any case, the author claims that the procedure involved in his method is simpler than that of the G. H. M. (Garnier-Haag-Marcus) method. In the case of aviation bombs it is sufficient to restrict  $n$  to the case  $n=2$ . *E. Leimanis (Vancouver, B. C.).*





RESEARCH AND DEVELOPMENT

TEST AND PROPERTIES UNIT

72

CA

Chemical composition and technological properties of Perm crude oil. R. A. VIRASYANIL. *Nefteos Kherpizne 18, 186-201(1930).*—The properties of aromatic, n-alkid and unsatd. hydrocarbons in various fractions are given. Cracking of fuel oil from this crude yielded 7% of gasoline (b. below 200°), 17-41% of fuel oil, depending on the amt. of asphalt desired, 35-47% of high grade asphalt and 5-8% of gas. In addn., 25% of highly aromatized straight-run gasoline was obtained. The high content of S requires a very thorough treatment. This crude is suitable for gasoline and asphalt production. A. A. BOBYLNIKOV

ASB-5LA METALLURGICAL LITERATURE CLASSIFICATION

FROM SOURCE

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Research on naphthenic acid soaps. M. A. VISARVANTS AND O. A. ARIMOV  
*Gosnabst Neftyanis* 1, No. 2-3, Suppl. No. 1, Sci. Ser. 9-31(1930 31). -- The amt  
of naphthenic acid soap is calcd. by multiplying by 2 the amount of naphthenic acids.  
The naphthenic acids were detd. as follows: 10 g. of the product was dissolved in an  
alc. benzene mixt. (1:4) and then titrated with an alc. caustic soln. in the presence of  
alkali blue. The alc. benzene mixt. was first neutralised. A 0.1 or 0.01 N alkali  
soln. should be used, depending on the concn. of the acid in the distillate. The con-  
tent of naphthenic acids in various fractions is: kerosene distillate from paraffin base  
oil, 0.0024-0.0010; gas oil distillate from paraffin base crude oil, 0.0040-0.0018%; kero-  
sene distillate from wmparaffin base crude oil, 0.013-0.0018%; gas oil distillate from  
semiparaffin base crude oil, 0.013-0.018%; kerosene distillate from asphalt base  
crude oil unsuitable for making lubricants, 0.030-0.015%; gas oil distillate obtained  
from the above crude oil, in the Foster-Wheeler pipe still, 0.018-0.134%; kerosene  
distillate from asphalt base crude oil suitable for mfg. lubricating oil, 0.154-0.180%;  
gas oil distillate from the above crude oil, 0.260-0.427%. The amt. of naphthenic  
acids was detd. by multiplying the amt. of SO<sub>2</sub> by the coeff. 5.4 for kerosene and by 6.7  
for gas oil distillates. Coeffs. for other fractions are now being calcd. Naphthenic  
acids, called "acid oil," are prepd. in refineries by the action of dil. H<sub>2</sub>SO<sub>4</sub> on the alkali  
sludge. The absence of salts in this "acid oil" is considered of great advantage because  
there is no need for special containers and the product can be transported in tank cars.  
Another advantage of this method is the absence of H<sub>2</sub>O, which constitutes 50% in  
naphthenic acid soaps. V. and A. experienced difficulty in prep. "acid oil" conforming  
to specifications, which require less than 15% oil, an acid no. of 195 and a sp. gr. of  
0.940-0.940. A. A. BOENTLINIK

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

137 AND 138 REFER TO PROCESSES AND PROPERTIES PAGES

BE

6-I-3

Naphthenic acid soaps. R. A. VIRAVANTH and O. A. ANTYUMEV (Goskhozizdat, 1930-1931, No. 2-3, Suppl. 1, 9-13).—The naphthenic acids are determined by dissolving the product in a mixture of NaOH and  $C_{12}H_{22}$  and titrating with alcoholic alkali in presence of alkali-blue. The naphthenic acid content of various oil fractions is recorded.

CHEMICAL ABSTRACTS.

ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION

GROUP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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11 AND 7ING COVER		PROCESSING AND PROPERTIES INDEX		11 AND 7ING COVER	
<p>12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100</p>					
<p>Form credit ed. R. A. FRANKEL (Natl. Choz., 1980, 88, 198-201). The composition is recorded; the sulphur content is high. The results of cracking tests are also given. CHEMICAL ABSTRACTS.</p>					
ASM-51A METALLURGICAL LITERATURE CLASSIFICATION					
GROUP	SUBGROUP		SECTION	SUBSECTION	
A	B	C	D	E	F

VIRAG, A.

Development and state of the interurban bus transportation  
in the United States. Medun transp 10 no.11:38-39 N '64.

VIRAG, Eva

Society news. Faipar 12 no.12:384-3 of cover D '62.

VIRAG, Eva

Society news. Faipar 13 no.1:31-32 Ja '63.

VIRAG, Eva

Association news. Faipar 13 no.4:132 Ap '63.

VIRAG, Eva

Society news. Faipar 12 no.10:319-320 0 '62.



MAURER, I.Gy.; VIRAG, I.

Observations on the normal form of the elements of a group.  
Studia Univ B-B S. Math-Phys 7 no.1:19-23 '62.

11E

CA

Utilization of spent mash of cornstarch factories. Iure  
Mag. *Agriculturny* 2, 287-91(1950).-- The feeding of 3 kg mash (contg. 50% dry matter) during the 1st half of pregnancy caused no toxic effect in Berkshire and Yorkshire pigs. Most of the young pigs of sows fed with such mash in the 2nd half of pregnancy died from septic inflammation of the stomach and intestines caused by the  $SO_2$  contained in the mash (1660 mg. total  $SO_2$ /day). Eight Yorkshire pigs were given 2 kg. pressed mash, contg. 1130 mg.  $SO_2$  daily for a month. The daily wt. increase and feed utilization were very low. When 200 g. disintegrated corncobs per day were also fed, the wt. increase was considerably higher. A cow fed daily 6 kg. mash (contg. 653 mg. free and 4267 mg. total  $SO_2$ ) for 3 weeks gave only 8 l. milk daily as against 22 l. normal milk yield. The best method for removing  $SO_2$  from the mash is sedimentation followed by centrifuging or pressing the sediment in filter presses yielding a product contg. 55-65% water. Thermal processing is necessary to obtain a lower water content. The husks should be sieved and centrifuged. During this processing all  $SO_2$  is removed, and a valuable feed is obtained.  
István Finály

MAURER, I.Gy.; PURDEA, I.; VIRAG, I. (Cluj)

A topology of univocal applications of a set in space. Bull math  
Rum 6 no.3/4:195-206 '62 [publ. '64].

1. Submitted April 12, 1963.

HUNGARY

TOTH, Gyorgy, Dr, VIRAG, Istvan, Dr; Medical University of Szeged, Pediatric Clinic (director: BODA, Domokos, Dr) (Szegedi Orvostudományi Egyetem, Gyermekklinika).

"The Technique of Exchange Transfusion. Description of a New Apparatus."

Budapest, Orvosi Hetilap, Vol 107, No 17, 24 Apr 66, pages 793-794.

Abstract: [Authors' Hungarian summary] A survey of various methods of exchange transfusion is followed by the description of the apparatus used by the authors. It has a few new features such as a special stopcock, the use of paired syringes and a new method of heparinization. It is suited for the simple and safe performance of the exchange transfusion in a closed system. 4 Hungarian, 22 Western references.

1/1

- 18 -

GULYAS, Bela; KAROLYI, Jozsef; FEHER, Jozsef; KEILWERT, Vilmos;  
VIRAG, Jozsef; GANGER, Gyorgy

Requirements of the food industry toward machine manufacture.  
Elelm ipar 17 no.2:36-46 F '63.

1. Elelmezesugyi Miniszterium (for Gulyas). 2. Orszagos  
Tervhivatal (for Karolyi). 3. Geptervezo es Muszaki Iroda  
(for Feher). 4. Lang Gepgyar (for Keilwert). 5. Geptervezo  
es Muszaki Iroda (for Virag). 6. Hutolanc Tarcakozsi Bizottsag  
Titkarsaga (for Ganger).

VIRAG, L.; SZABO, D.

"Experiences From the Introduction of Extended Teeth in Rip-Band Saws",  
P. 74, (FAIPAR, Vol. 4, No. 3, Mar. 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12,  
Dec. 1954, Uncl.

URI, J.;CSOBAN, G.;VIRAGH, E.

The antibacterial effect of the flavonol-dyestuff, rhamnetin.  
Acta physiol. hung. 2 no.2:223-228 1951. (GLML 21:2)

1. Of the Institute of Pharmacology of Debrecen University.

VIRACH, K.; KISS, J.

"Phosphatic rock with uranium content in the Triassic of the Palaten uplands around Pecsely." p. 85.

FOLDTANI KOZLONY. BULLETIN OF THE HUNGARIAN GEOLOGICAL SOCIETY. (Magyar Foldtani Tarsulat). Budapest, Hungary, Vol. 89, No. 1, Jan./Mar. 19 9.

Monthly list of East European Accessions (EEA), IC, Vol. 8, No. 8, August 1949.  
Uncla.



VIRAG, Lajos, aspirans, okleveles villamosmérnök

Some methods for the increase of dependability. Meres automat  
12 no. 1: 13-16 '64.

CA

11C

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H. I. Chinn

VIRAGH, Janos, oklevelés bányamernok

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1. Komloi Szenbanyaszati Troszt, Komlo.

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**Sources:** Budapest, Magyar Pszichológiai Szemle, Vol 18, No 3, 1961,  
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**Data:** "Psychological Investigation of the Fatiguing Effects of  
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