GOKHBERG, I.TS.; KREYN, M.G.

Basic concepts of defective numbers, radical numbers, and indices of linear operators. Usp.mat.nauk 12 no.2(74):43-118 Mr-Ap '57. (MLRA 10:7)

(Operators(Mathematics))

GOKHBERG, I.TS.; KREYN, M.G.

Systems of integral equations on a semisection with kernels depending on the difference of arguments. Usp.mat.nauk 13 no.2:3-72 Mr-Ap '58. (MIRA 11:4)
(Integral equations)

AUTHOR: Gokhberg, I.Ts., Kreyn, M.G.

TITLE: On a Stable System of Partial Indices of the Hilbert Problem for Several Unknown Functions (Ob ustoychivoy sisteme chastnykh indeksov zadachi Gil'berta dlya neskol'kikh neizvestnykh funktsiy)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 118, No. 3, pp. 431-434 (USSR)

ABSTRACT: Let a contour Γ consisting of finitely many simple smooth closed oriented curves with a positive curvature divide the complex plane into the regions D^+ and D^-. Let H denote the set of functions defined on Γ which satisfies a Hölder condition. Let $H_{(n\times n)}$ denote the set of all $n\times n$ matrices with elements of H. Analogously, $H_{(n\times 1)}$ denotes the set of vectors with components in H. Let the norm in $H_{(n\times n)}$ be defined by

$$\|A\| = n \max_{t\in\Gamma} |a_{jk}(t)| \qquad (A(t) = \|a_{jk}(t)\|_1^n \in H_{(n\times n)}).$$

Let $A(t)\in H_{(n\times n)}$ be a non-singular matrix function and $\varkappa_1(A) \geqslant \varkappa_2(A) \geqslant \ldots \geqslant \varkappa_n(A)$ be the partial indices of the Hilbert problem

$$\Phi^+(t) = A(t)\Phi^-(t).$$

Card 1/3 The system $\varkappa_j(A)$ $(j=1,2,\ldots,n)$ is called stable if for $A(t)$ there

On a Stable System of Partial Indices of the Hilbert Problem for Several Unknown Functions

20-119-5-3/59

exists a $\delta > 0$ such that every matrix $B(t) \in H_{(n\times n)}$ with $\|B-A\| < \delta$ has the same indices: $\varkappa_j(B) = \varkappa_j(A)$.

Theorem: Let $A(t) \in H_{(n\times n)}$ be non-singular and $\varkappa = \varkappa(A) = \frac{i}{2\pi}\left[\arg \det A(t)\right]_L$. The system of partial indices of the matrix $A(t)$ is stable then and only then if

$$\varkappa_1(A) = \ldots = \varkappa_{n-r}(A) = q+1, \quad \varkappa_{n-r+1}(A) = \ldots = \varkappa_n(A) = q,$$

where the integers q, r are determined from the relation $\varkappa = qn+r$, $0 \leq r < n$.

Conclusion: In every neighborhood of a non-singular $A(t) \in H_{(n\times n)}$ there exist matrices $B(t) \in H_{(n\times n)}$ with a stable system of indices.

Theorem: Let $A(t) \in H_{(n\times n)}$ be non-singular. There exists a $\delta > 0$ such that every $B(t) \in H_{(n\times n)}$ with $\|B-A\| < \delta$ is non-singular and

Card 2/3 for every integral p there holds

AUTHOR: Gokhberg, I.Ts.

TITLE: On the Number of Solutions of a Homogeneous Singular Integral Equation With Continuous Coefficients (O chisle resheniy odnorodnogo singulyarnogo integral'nogo uravneniya s nepreryvnymi koeffitsiyentami)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 122, Nr 5, pp 327-330 (USSR)

ABSTRACT: Let Γ be a smooth simply closed curve around the origin with continuous curvature.
Theorem: If $a(t)$, $b(t)$ are continuous and if $a^2(t) - b^2(t)$ is different from zero on Γ, then

$$a(t)\varphi(t) - \frac{b(t)}{\pi i}\int_G \frac{\varphi(\tau)}{\tau - t}\,d\tau = 0$$

possesses for $\varkappa(A) = \frac{1}{2\pi}\int_G d_t \arg \frac{a(t)+b(t)}{a(t)-b(t)} > 0$ exactly $\varkappa(A)$ linearly independent solutions. For $\varkappa(A) \leq 0$ there exists only the trivial solution.

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On the Number of Solutions of a Homogeneous Singular Integral Equation With Continuous Coefficients

DAN SSSR/20-122-3-1/57

Theorem: Let $k(t) \in L_2(-\infty, \infty)$ satisfy the conditions 1.) The Fourier transform $K(\lambda)$ of $k(t)$ is continuous and tends to zero for $t \to \infty$. 2.) $1 - K(\lambda) \neq 0$ $(-\infty < \lambda < \infty)$. Then

$$\varphi(t) - \int_0^\infty k(t-s)\varphi(s)\,ds = 0 \qquad (0 \leq t < \infty)$$

possesses exactly $\nu = \frac{1}{2\pi} \int_{-\infty}^{\infty} d_\lambda \arg (1 - K(\lambda))$ linearly independent solutions in the space $L_2(0,\infty)$ if $\nu > 0$, and only the trivial solution if $\nu \leq 0$.

Theorem: Let $a(t) = \sum_{k=-\infty}^{\infty} a_k t^k$, $(|t| = 1)$ converge uniformly on the unit circle and let $a(t)$ there be $\neq 0$. Then the system $\sum_{j=0}^{\infty} a_{k-j} \xi_j = 0$ $(k=0,1,2,\ldots)$ possesses exactly

On the Number of Solutions of a Homogeneous Singular Integral Equation With Continuous Coefficients

SOV/20-122-3 -/57

$$\nu = -\frac{1}{2\pi} \int_{|t|=1} d_t \arg a(t)$$ linearly independant solutions in the space l_2 if $\nu > 0$, and only the trivial solution if $\nu \leq 0$.

There are 5 Soviet references.

ASSOCIATION: Bel'tskiy gosudarstvennyy pedagogicheskiy institut (Bel'tsy State Pedagogical Institute)

PRESENTED: May 19, 1958, by V.I. Smirnov, Academician
SUBMITTED: May 16, 1958

Card 3/3

16(1) SOV/42-14-1-11/27

AUTHOR: Gokhberg, I.Ts.

TITLE: On the Limits of the Indices of Matrix Functions

PERIODICAL: Uspekhi matematicheskikh nauk, 1959, Vol 14, Nr 1, pp 159-164 (USSR)

ABSTRACT: Let E_n be the n-dimensional normed space of vectors $\xi = (\xi^{(1)}, \xi^{(2)}, \ldots, \xi^{(n)})$ and $\mathfrak{A}$ be the set of all matrix functions $A(\zeta)$ $(|\zeta| = 1)$ of the form

$$A(\zeta) = \sum_{j=-\infty}^{\infty} A_j \zeta^j, \qquad \sum_{j=-\infty}^{\infty} \|A_j\| < +\infty,$$

where the quadratic matrices of n-th order A_j $(j = 0, \pm 1, \ldots)$ are understood as operators in E_n. The author and M.G.Kreyn [Ref 1] have stated that for $\det A(\zeta) \neq 0$, $|\zeta| = 1$, all $A(\zeta) \in \mathfrak{A}$ admit the factorization

$$A(\zeta) = F_-(\zeta) \begin{pmatrix} \zeta^{\varkappa_1} & 0 & \cdots & 0 \\ 0 & \zeta^{\varkappa_2} & \cdots & 0 \\ \cdots & \cdots & \cdots & \cdots \\ 0 & \cdots & \cdots & \zeta^{\varkappa_n} \end{pmatrix} F_+(\zeta) \qquad (|\zeta| = 1)$$

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On the Limits of the Indices of Matrix Functions SOV 42-12-2-11/27

The integers $\varkappa_1 \geq \varkappa_2 \geq \ldots \geq \varkappa_n$ are uniquely determined by $\mathfrak{A}(\zeta)$ and are called indices.

Theorem: Let $\mathfrak{A}(\zeta) \in \mathfrak{R}$ $\det \mathfrak{A}(\zeta) \neq 0$ $(|\zeta|=1)$.

$\mathfrak{A}^{-1}(\zeta) = \sum_{j=-\infty}^{\infty} B_j \zeta^j$ $(|\zeta|=1)$. If the integers p and q satisfy the inequations

$$\sum_{j=-\infty}^{-q-1} \|A_j\| < \left(\sum_{j=-\infty}^{q} \|B_j\|\right)^{-1}, \quad \sum_{j=p+1}^{\infty} \|A_j\| < \left(\sum_{j=-\infty}^{-p} \|B_j\|\right)^{-1},$$

then it holds.

$$q \leq \varkappa_j \leq p \qquad j=1,2,\ldots,n.$$

There are 1 Soviet references.

SUBMITTED: February 17, 1958

Card 2/2

16(1)

AUTHORS: Gokhberg, I.Ts. and Kreyn, M.G. SOV/20-128-2-2/59

TITLE: Completely Continuous Operators With a Spectrum Concentrated in Zero

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 2, pp 227-230 (USSR)

ABSTRACT: Let γ_p $(0 < p < \infty)$ be the set of all linear bounded operators A in the separable Hilbert space $\mathfrak{H}$, where $N_p(A) = \left[\mathrm{Sp}(A^*A)^{p/2}\right]^{1/p} < \infty$. Let γ_∞ be the set of all linear completely continuous operators in $\mathfrak{H}$, $\|A\|_\infty = \max(\|Af\|/\|f\|)$. The operator function $P(t)$ $(0 \leq t \leq 1,\ P(0) = 0,\ P(1) = I)$ the values of which are orthogonal projectors, is called a spectral operator function if it does not decrease and is continuous from the left hand side. Let

$$A = 2i \int_0^1 P(t) H dP(t), \tag{1}$$

where A,H are linear bounded operators and P(t) is a spectral operator function, converge in γ_p if $\left\| A - 2i \sum_{j=1}^{n} P(\tau_j) H (P(t_j) - P(t_{j-1})) \right\|_p$ $\rightarrow 0$ for $0 = t_0 \leq \tau_1 \leq t_1 \leq \ldots \leq t_{n-1} \leq \tau_n \leq t_n = 1$ and

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$\max_k (t_k - t_{k-1}) \to 0$.

Theorem 1: Let $H \in \mathfrak{S}_2$ and $P(t)$ $(0 \leq t \leq 1)$ be a continuous spectral operator function. Then (1) converges in $\mathfrak{S}_2$.

A linear completely continuous operator A is called a Volterra-operator if it has no eigenvalues different from zero.
Theorem 2: Let $P(t)$ be a continuous spectral operator function, let H be selfadjoint in $\mathfrak{S}_2$. Then the operator A defined by (1) has the properties 1. $A \in \mathfrak{S}_2$, 2. A - Volterraian, 3. the imaginary Hermitean component of A is identical with H: $Ay = H$, 4. $P(t)AP(t) = AP(t)$ $(0 \leq t \leq 1)$, 5. A is the single linear bounded operator with the properties 3. and 4.
Theorem 3: Every Volterra-operator A with $A_I \in \mathfrak{S}_2$ can be represented in the form $H = Ay$ after an unessential extension by (1).
Theorem 4: Let A be a Volterra-operator, $Ay \in \mathfrak{S}_1$. Then $A_R \in \mathfrak{S}_p$ for all $p > 1$ and furthermore:

Completely Continuous Operators With a Spectrum Concentrated in Zero SOV/20-128-2-2/5

$$(3)\ \|A\|_p \leq \frac{4}{\pi}\left(\sum_{j=-\infty}^{\infty}\frac{1}{(2j-1)^p}\right)^{1/p} S_p|Av| \qquad (S_p|A| = \|A\|_1),$$

$$(4)\ \left(\sum_{j=1}^{\infty}|\mu_j|^{-p}\right)^{1/p} \leq \frac{4}{\pi}\left(\sum_{j=-\infty}^{\infty}\frac{1}{(2j-1)^p}\right)^{1/p} S_p|Av| ,$$

where $\mu_j = \lambda_{jE}^{-1}$ form a complete system of characteristic numbers of A_R.

The authors [illegible] M.S.Brodskiy, L.A.Sakhnovich, and M.S.Livshits. There are 10 references, 9 of which are Soviet, and 1 American.

ASSOCIATION: Odesskiy inzhenerno-stroitel'nyy institut (Odessa Institute of Civil Engineers)

PRESENTED: May 18, 1959, by S.L.Sobolev, Academician

SUBMITTED: May 13, 1959

Card 3/3

GOKHBERG, I.TS.; MARKUS, A.S.

Characteristic properties of some spectrum points of linear limited operators. Izv. vys. ucheb. zav.; mat no.2:74-87 '60.
(MIRA 13:7)

1. Bel'tskiy pedagogicheskiy institut.
(Operators (Mathematics))

68792

S/020/60/131/01/0[illegible]/[illegible]

[illegible]

AUTHORS: Gol'denshteyn, L.S., Gokhberg, I.Ts.

TITLE: On a Multidimensional Integral Equation Upon a Half Space With a Kernel Which Varies With the Difference Between the Arguments and on a Discrete Analogue of This Equation

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 1, pp [illegible] (USSR)

ABSTRACT: Let $t = (t_1, t_2, \ldots, t_n)$ be a point of E_n; let E^+ be the half space $0 \leq t_j < \infty$ $(j = 1, 2, \ldots, n)$. The equation

$$(1)\quad \varphi(t) - \int_{E^+} k(t-s)\varphi(s)ds = f(t), \quad t \in E^+ ; \quad k(t) \in L_1(E_n) ;$$

$$f(t), \varphi(t) \in D(E^+)$$

is considered, where $D(E^+)$ is one of the spaces $L_p(E^+)$ $(p \geq 1)$, $M(E^+)$, $M_c(E^+)$, $M_n(E^+)$, $C(E^+)$, $C_0(E^+)$ (see [Ref 1], § 6). If it is $n > 1$ and if

$$(4)\quad 1 - \int_{E_n} e^{i(\lambda, t)} k(t)dt \neq 0 \quad (\lambda \in E_n)$$

Card 1/[illegible]

On a Multidimensional Integral Equation Upon a S/020/60/131/01/[illegible]/060
Half Space With a Kernel Which Varies With the Difference Between the Arguments, and on a Discrete Analogue of This Equation

then the index of (1) is always equal to zero and the solution can be carried out according to the factorization method of M G Kreyn [Ref 1]. It is shown that the equation (1), under the assumptions imposed, for arbitrary $f(t) \in D(E^1)$ possesses a unique solution $\varphi(t) \in D(E^1)$, for which it holds the integral representation $\varphi(t) = f(t) + \int_{E^1} \gamma(t,s) f(s) ds$ where $\gamma(t,s)$ results from the factorization of the function $\left(1 - \int_{\Omega} e^{i(\lambda, \cdot)} k(t) dt\right)^{-1}$. Then the authors consider the discrete analogue of (1):

(6) $\sum_{j \in R^1} a_{k-j} \xi_j = \eta_k \quad (k \in R^1)$

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68792

On a Multidimensional Integral Equation Upon a Half Space With a Kernel Which Varies With the Difference Between the Arguments, and on a Discrete Analogue of This Equation

S/020/60/131/01/001/050

where R^+ is the point lattice corresponding to the half space E^+. The properties of (6) are essentially different from those of (1) for $n \geq 1$, since (6) may have a vanishing as well as infinite index. The homogeneous equation (6) has either a unique zero solution or infinitely many linearly independing solutions whose form is given. The authors give conditions which are necessary and sufficient in order that the inhomogeneous equation (6) possesses at least one solution. Altogether three theorems are given

There are 4 references, 3 of which are Soviet, and 1 English.

[illegible]: Kishenevskiy sel'skokhozyaystvennyy institut imeni M V Frunze (Kishenev Agricultural Institute imeni M V Frunze)
Moldavskiy filial Akademii nauk SSSR (Moldavian [illegible] Institution of the Academy of Sciences USSR)

November 16, 1959, by V I. Smirnov, Academician
November 13, 1959

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S/020/60/1[illegible]/006/019/[illegible]XX
C 111/ C 333

16.4500

AUTHOR: Gokhberg, I. Ts.

TITLE: On the Theory of Multidimensional Singular Integral Equations

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 6, pp. 1279-1282

TEXT: With the a[illegible] of results on [illegible] commutative rings due to J. M. Gel'fand (Ref. 1) the author [illegible] complementary statements on the general theory of multidimensional singular equations in $L_2(E_m)$ of S. G. Mikhlin (Ref. [illegible]).

Let $\mathcal{T}$ be the set of all linear completely continuous operators and $\mathcal{V}_k$ the set of all operators

$$A = \sum_{|j| \leq K_A} a_j(x) S^{j} + T \quad (T \in \mathcal{T})$$

where K_A is a finite number depending on A, $a_j(x)$ ([illegible]) are continuous functions in the entire space E_m [illegible] and S is defined by

Card 1/[illegible]

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S/020/60/[illegible]/006/019/0[illegible]XX
C[illegible]/C[illegible]

On the Theory of Multidimensional Singular Integral Equations

$$(S\varphi)(x) = \frac{1}{2\pi}\int_E \frac{e^{[illegible]\vartheta(y)}\varphi(y)}{|x-y|^{2}}\,dy$$

for the considered case m = [illegible], where |x| and $\vartheta(x)$ are polar coordinates of the point $x \in E$. The function

$$\mathcal{A}(x,\theta) = \sum_{j=-\infty}^{\infty} a_j(x)\,e^{[illegible]\theta} \quad (0 \leq \theta \leq 2\pi)$$

is denoted as symbol of A (see (Ref. [illegible])).

Theorem [illegible]: If $A \in \mathfrak{N}'_{[illegible]}$, then it is

(3) $$\max_{x\in E,\ 0\leq\theta\leq 2\pi} |\mathcal{A}(x,\theta)| \leq \inf_{T\in\mathfrak{T}} \|A+T\|.$$

Let $\mathfrak{N}$ be the closure of the ring $\mathfrak{N}'_{[illegible]}$ in the norm. Let D be the

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APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515610002-1"

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S/020/60/135/006/019/031XX
C 1[illegible]/ C 33[illegible]

(7) $\mathcal{A}(x, \theta) \neq 0 \quad (x \in \tilde{E},\ 0 \leq \theta \leq 2\pi)$

If (7) is satisfied, then $A\varphi = 0$ and $A^{*}\psi = 0$ ($\varphi, \psi \in L_2(E)$) have equally many linearly independent solutions. ($\tilde{E}$ is the compact set which arises from E by adding the point at infinity)

Theorem 4 generalizes the result of theorem 3 to systems of singular integral equations.

The author thanks I. A. Itskovich, M. G. Kreyn and G. Ye. Shilov.

There are 5 Soviet references.

[Abstractor's note: (Ref. 1) concerns a paper of S. G. Mikhlin in Uspekhi matematicheskikh nauk 1948, Vol. 3, No. 3; (Ref. 2) concerns a paper of S. G. Mikhlin in Uspekhi matematicheskikh nauk, 1953, Vol. 8, No. 2; (Ref. 3) concerns a paper of S. G. Mikhlin

86[1]
S/020/60/133/006/019/031XX
C 111/ C 333

On the Theory of Multidimensional Singular Integral Equations

in Vestnik Leningradskogo universiteta. Seriya matematiki, mekhaniki i astronomii, 1960, Vol 15, No 1

ASSOCIATION: Moldavskiy filial Akademii nauk SSSR (Moldavian Branch Establishment of the Academy of Sciences USSR)

PRESENTED: April 2, 1960, by V. I. Smirnov, Academician

SUBMITTED: March 31, 1960

Card 5/5

GOKHBERG, I.TS.; KREYN, M.G.

Effect of some transformations of the kernels of integral equations on the spectra of these equations. Ukr. mat. zhur. 13 no.3:12-38 '61. (MIRA 14:9)
(Transformations (Mathematics))
(Integral equations)

GOKHBERG, I.TS.; KREYN, M.G.

Theory of triangular representations of non-self-adjoint operators. Dokl.AN SSSR 137 no.5:1034-1037 Ap '61. (MIRA 14:4)

1. Moldavskiy filial AN SSSR i Odesskiy inzhenerno-stroitel'nyy institut. Predstavleno akademikom A.N.Kolmogorovym.
(Operators (Mathematics)) (Hilbert space)

GOKHBERG, I.TS.; KREYN, M.G.

Volterra operators with an imaginary component of any class. Dokl. AN SSSR 139 no.4:779-782 Ag '61. (MIRA 14:7)

1. Moldavskiy filial AN SSSR i Odesskiy inzhenerno-stroitel'nyy institut. Predstavleno akademikom A.N. Kolmogorovym.
(Operators (Mathematics)) (Spaces, Generalized)

GOKHBERG, I.TS.

Unilateral reversibility of elements of normalized rings and their applications. Dokl.AN SSSR 145 no.5:971-974 '62. (MIRA 15:8)

1. Institut fiziki i matematiki AN SSSR. Predstavleno akademikom P.S.Aleksandrovym.

(Rings (Algebra))

GOKHBERG, I.TS.

General theorem on the factorization of matrix functions in normed rings and its applications. Dokl. AN SSSR 146 no.2:284-287 S '62. (MIRA 15:9)

1. Institut fiziki i matematiki AN Moldavskoy SSR.
(Rings (Algebra)) (Functions, Continuous)

GOKHBERG, I.TS.; KREYN, M.G.

On the problem of factorization of operators in Hilbert space. Dokl. AN SSSR 147 no.2:279-282 N '62. (MIRA 15:11)

1. Odesskiy inzhenerno-stroitel'nyy institut i Institut fiziki i matematiki AN Moldavskoy SSR.
(Operators (Mathematics))
(Hilbert space)

GOKHBERG, I.TS.

Relations between the spectra of Hermitian components of nilpotent matrices and the integral of triangular truncation. Izv. AN Mold. SSR no.1:27-37 63. (MIRA 18:3)

POL'SKIY, N.I.; GOKHBERG, I.TS.; DYNIN, A.S.; SOLOMYAK, M.Z.; VILENKIN, N.Ya.; BRODSKIY, M.L.; SKLYARENKO, Ye.G.

Summaries of papers accepted for publication by the Moscow Mathematical Society. Usp. mat. nauk 18 no.2:179-188 Mr-Ap '63. (MIRA 16:8)

(Moscow--Mathematical societies)

GOKHBERG, I.TS.

Factorization problems in normed rings, functions of isometric and symmetric operators, and singular integral equations. Usp.mat.nauk 19 no.1 [115] 63-129 Ja-F '64. (MIRA 17:5)

ACC NR: AM6011528 Monograph UR

Gokhberg, Izrail' TSudikovich; Kreyn, Mark Grigor'yevich

Introduction to the theory of linear non-self adjoint operators in Hilbert space (Vvedeniye v teoriyu lineynykh nesamosopryazhennykh operatorov v gil'bertovom prostranstve) Moscow, Izd-vo "Nauka", 1965. 448 p. biblio., index. 8500 copies printed.

TOPIC TAGS: Hilbert space, operational calculus, mathematic operator, linear operator

PURPOSE AND COVERAGE: This book deals with non-self-adjoint operators which are essential to mathematical study of processes which take place in nonconservative systems which play a large role in modern physics and mechanics. For the first time a well-developed elucidation of a number of methods of the theory of non-self-adjoint operators in Hilbert space (the method of estimating resolvents, the method of perturbation determinants, various asymptotic methods, et cetera) is presented. In addition, new methods are presented for obtaining various bounds, inequalities, and relationships for eigenvalues and singular values of completely continuous operators. A complete theory of symmetrically normed ideals of completely continuous operators is presented along with the use of these methods, in particular, such

UDC 519.55

Card 1/3

ACC NR: AM6011528

important nuclear operators as the Hilbert-Schmidt operators and others. Material in this book can be used in university courses in linear algebra, integral equations, and functional analysis. The book is intended for scientists, graduate students, and senior students studying mathematics, mechanics, and theoretical physics.

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ACC NR: AM6011528

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SUB CODE: 12/ SUBM DATE: 29Oct65/ ORIG REF: 060/ OTH REF: 045

Card 3/3

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515610002-1

L 35451-65 EWT(d) IJP(c)

ACCESSION NR: AP5006846 S/0020/65/160/004/0750/0753

AUTHOR: Gokhberg, I.Ts.; Fel'dman, I.A.

TITLE: Approximate solution of certain classes of linear equations

SOURCE: AN SSSR. Doklady, v. 160, no. 4, 1965, 750-753

TOPIC TAGS: linear equation, Fredholm equation, Wiener Hopf equation, Banach space, isometric operator

ABSTRACT: The applicability of a projective method of N.I. Pol'skiy (Uspekhi matem. nauk, 19, 1, 71, 1964) to the linear equation $Ax = y$ is established for the case where operator A, acting in Banach space, is presented in the form of a function of a linear isometric operator. This method can be substantiated if operator A is invertible at least on one side. Two theorems are stated. By means of one theorem an approximate method of solution of the Wiener-Hopf equation can be derived. This solution reduces to the solution of a Fredholm equation of the second kind. By means of the other theorem approximate methods of solution of a paired integral equation can be derived. "The authors express their appreciation to A.B. Markus for discussing the results of this present

Card 1/2

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515610002-1

L 35451-65

ACCESSION NR: AP5006846

communication." Orig. art. has: 6 formulas.

ASSOCIATION: Institut matematiki s vychislitel'nym tsentrom Akademii Nauk MSSR (Institute of Mathematics with Computer Center, Academy of Sciences MSSR)

SUBMITTED: 14Apr64 ENCL: 00 SUB CODE: MA

NO REF SOV: 005 OTHER: 001

Card 2/2

GOKHBERG, I.TS.; KREYN, M.G.

Multiplicative representation [illegible] of
operators closely approaching [illegible] (MIRA 18:[illegible])
164 no.4:732-735 O '65.

1. Institut matematiki [illegible]
i Odesskiy inzhenerno-stroitel'nyy [illegible],
1965.

L 10764-66 EWT(d)/T/EWP(1) IJP(c)

ACC NR: AP5028268 SOURCE CODE: UR/0020/65/165/002/0268/0271

AUTHORS: Gokhberg, I. Ts.; Fel'dman, I. A.

ORG: Institute of Mathematics with Computing Center, Academy of Sciences MSSR (Institut matematiki s vychislitel'nym tsentrom, Akademii nauk MSSR)

TITLE: Reduction method for systems of Wiener-Hopf equations

SOURCE: AN SSSR. Doklady, v. 165, no. 2, 1965, 268-271

TOPIC TAGS: integral equation, Wiener Hopf equation

ABSTRACT: The authors give a justification of the reduction method for various systems of integral equations with kernels depending on the difference of the arguments, as well as their discrete analogs and systems of singular integral equations on the unit circle. For instance, necessary and sufficient conditions are given for a unique solution of

$$\varphi(t) - \int_{-\tau}^{\tau} k(t-s)\varphi(s)\,ds = f(t) \quad (-\tau \leqslant t \leqslant \tau) \qquad (1)$$

This paper was presented by N. I. Muskhelishvili on 3 April 1965.

Card 1/2 UDC: 517.948.3/.5:513.88

L 10764-66

ACC NR: AP5028268

Orig. art. has: 4 formulas.

SUB CODE: 12/ SUBM DATE: 25Mar65/ ORIG REF: 006/ OTH REF: 001

Card 2/2

GOKHBERG, Izrail' Tsudikovich; KREYN, Mark Grigor'yevich;
SHIROKOV, F.V., red.

[Introduction to the theory of linear non-self-adjoint operators in Hilbert space] Vvedenie v teoriiu lineinykh nesamosopriazhennykh operatorov v gil'bertovom prostranstve. Moskva, Nauka, [illegible]. [illegible] p. (MIRA 19:1)

L 25779-66 EWT(d) IJP(c)

ACC NR: AP6016360 SOURCE CODE: UR/0020/65/164/004/0732/0735

23
B

AUTHOR: Gokhberg, I. Ts.; Kreyn, M. G.; Smirnov, V. I. (Academician)

ORG: Institute of Mathematics and Computing Center, AN MoldSSR (Institut matematiki s vychislitel'nym tsentrom AN MoldSSR); Odessa Construction-Engineering Institute (Odesskiy inzhenerno-stroitel'nyy institut)

TITLE: Multiplicative representation of the characteristic functions of operators which are close to unitary operators

SOURCE: AN SSSR. Doklady, v. 164, no. 4, 1965, 732-735

TOPIC TAGS: mathematic operator, mathematics, function

ABSTRACT: The article shows that previous investigations by the authors on the factorization of operators, in conjunction with various investigations of others (V. I. Matsayev, Yu. I. Lyubich, B. Sz.-Nagy, and C. Foias), make it possible to obtain a multiplicative representation of the characteristic functions of operators of a comparatively wide class. The following theorem is formulated: If operator $T \in \mathfrak{C}(\mathfrak{S}_\infty)$ with unitary spectrum possesses a proper chain dividing the spectrum, its characteristic function $\theta_T(\lambda)$ permits the multiplicative representation

$$\theta_T(\lambda) = (\theta_T(0))^{-1} \int_0^{\infty} \left(I + \frac{H^{1/2} dP (I - PHP)^{-1} H^{1/2}}{\lambda e^{i\varphi(P)} - 1} \right),$$

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L 25779-66

ACC NR: AP6016360

The authors state that the above multiplicative representation is more complex in structure and derivation than that obtained by M. S. Brodskiy for the characteristic operator function of bounded operators with a real spectrum and a completely continuous imaginary component and that the latter can be obtained as a corollary of the above representation. This paper was presented by Academician V. I. Smirnov on 1 March 1965. Orig. art. has: 10 formulas. [JPRS]

SUB CODE: 12 / SUBM DATE: 26Feb65 / ORIG REF: 014 / OTH REF: 001

Card 2/2

GOKHBERG, M.B.

A method for processing vibration records of a natural electromagnetic field of the earth as applied to deep sounding. Izv. AN SSSR Ser. geofiz. no.5:722-729 My '63. (MIRA 16:6)

1. Institut fiziki Zemli AN SSSR.
(Magnetism, Terrestrial)
(Earth currents)

L 24477-66 EWT(1)/FCC GW

ACC NR: AP6008046 (N) SOURCE CODE: UR/0020/66/166/004/0851/0853

AUTHOR: Gokhberg, M. B.

ORG: Institute of Physics of the Earth im. O. Yu. Shmidt, Academy of Sciences SSSR (Institut fiziki Zemli Akademii nauk SSSR)

TITLE: Possibility of using geomagnetic storms for the study of the electrical characteristics of the earth

SOURCE: AN SSSR. Doklady, v. 166, no. 4, 1966, 851-853

TOPIC TAGS: geomagnetic disturbance, geoelectricity, transient electromagnetic field

ABSTRACT: The application of an analytical method developed by Gorkhberg (1963) to the evaluation of electrical characteristics of the earth is described. The paper is based on data obtained from a strong transient electromagnetic disturbance recorded in the Ashkhabad area (4 December 1962). The evaluation is based on the transformation of an integral

$$F(p) = \int_0^\infty f(t)\, e^{-pt}\, dt,$$

and the computation of an expression

$$\rho_p = \frac{0{,}4\pi}{p}\left[\frac{E_y(p)}{H_x(p)}\right]^2,$$

UDC: 550.375

Card 1/2

where p is a real number with a frequency dimension, $f(t)$ is the electric or magnetic field as a function of time, H_x is the horizontal component of the magnetic field, E_y is the horizontal component of the electrical field, and ρ_p is the cross sectional resistance. The investigation shows that 1) a single electromagnetic process gives practically a complete curve of depth probing; 2) it may be assumed for pulses that usually occur, that $p \gtrsim 4/\tau$, where τ is the period; 3) the method of plane waves, (where the sphericity of the earth is neglected) can be used for a wide range of p values; and 4) spectra of the initial phases of magnetic storms be more frequently used in magnetotelluric studies. Orig. art. has: 3 figures, 6 formulas. Presented by Academician A. P. Aleksandrov on 14 June 1965.

SUB CODE: 08/ SUBM DATE: 02Jun65/ ORIG REF: 002/ OTH REF: 002

GOKHBERG, M.M.

Inaccuracy in the application of St.Venant's approximation formula to torsional rigidity calculations of the bend resistance of beams. Trudy Len.politekh.inst. no.4:82-87 '47. (MLRA 6:8)
(Torsion)

GOKHBERG, M. M.

25465. GOKHBERG, M. M. K voprosu ob ustoychivosti ploskoy zhormy izgiba balok, nakhodya shchikhsya pod deystviem sistemy sil. Trudy Leningr. politekhn, in-ta im. Lalinina, 1948, No. 5 s. 125-42.

SO: Letopis' Zhurnal' Nykh Statey, Vol. 34, Moskva, 1949.

GOKHBERG, M. M.

Metallicheskie konstruktsii pod"emno-transportnykh mashin; teoriia i raschet. Dop. v kachestve uchebn. posobiia dlia in-tov inzhenerov vodnogo transporta. Moskva, Izd-vo Min. rechnogo flota SSSR, 194[illegible]. 3[illegible] p. Illus.

Bibliography: p. 3[illegible]2-3[illegible].

Metallic structures of hoisting and conveying machines; theory of design.

DLC: TJ13[illegible].G6

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 19[illegible]3.

DUKEL'SKIY, A.I., professor; GOKHBERG, M.M., redaktor; FLAUM, M.Ya., tekhnicheskiy redaktor

[Hoisting machinery; principles of calculation] Gruzopod"emnye mashiny; osnovy rascheta. Izd. 2-e, perer. i dop. Leningrad, Gos. izd-vo vodnogo transporta, 1953. 171 p. (MLRA7:8)
(Hoisting machinery)

DOLGOLENKO, Anatoliy Aleksandrovich, doktor tekhnicheskikh nauk, professor; RUDENKO, N.F., professor, doktor tekhnicheskikh nauk, retsenzent; VAYNSON, A.A., dotsent, kandidat tekhnicheskikh nauk, retsenzent; GOMOZOV, I.M., kandidat tekhnicheskikh nauk, retsenzent; GOKHBERG, M.M., redaktor; VOLCHOK, K.M., tekhnicheskiy redaktor

[Hoisting and conveying machines] Pod"emno-transportnye mashiny. Izd. 3-e, perer. Leningrad, Izd-vo "Rechnoi transport," 1956. 379 p. (MLRA 10:3)

(Hoisting machinery) (Conveying machinery)

GOKHBERG, Mikhail Mikhaylovich -- awarded sci degree of Doc Tech Sci for 30 Jun 56 defense of dissertation: "Fatigue stability [or durability] of crane metallic construction [kranovykh metallicheskikh konstruktsiy]" at the Council, Leningrad Polytech Inst imeni Kalinin; Prot No 8, 12 Apr 58.

(BMVO, 9-58,27)

SOV/124-57-3-3709

Translation from: Referativnyy zhurnal. Mekhanika., 1957, Nr 3, p 151 (USSR)

AUTHOR: Gokhberg, M. M.

TITLE: On the Working of Metallic Structures Under the Action of Variable Stresses (O rabote metallicheskikh konstruktsiy pri deystvii peremennykh napryazheniy)

PERIODICAL: V sb.: Konstruirovaniye mashin i oborudovaniya. Moscow-Sverdlovsk, Mashgiz, 1956, pp 81-99

ABSTRACT: The paper adduces the results of tensile-compressive tests on connections by flanged edge and butt welds. It also adduces data on the character of the failure and patterns of test specimens prepared from low-alloy (NL-grade) steel and from steel 3, as well as values of the effective stress-concentration factors. The author sets forth his reasonings on the design calculation of metal structures with the fatigue strength taken into account.

I. I. Trapezin

Card 1/1

AID P - 5194

Subject : USSR/Engineering

Card 1/1 Pub. 103 - 16/24

Author : Gokhberg, M. M.

Title : Cutting gears with internal teeth on slotter by hobbing them with single cutter.

Periodical : Stan. i instr., 7, 40-41, Jl 1956

Abstract : The author describes this method of cutting gears introduced at the Altay Tractor Plant because there was no vertical gear shaper. Two formulae and 3 drawings.

Institution : As above

Submitted : No date

SOV/124-58-10-11755

Translation from: Referativnyy zhurnal. Mekhanika, 1958, Nr 10, p 145 (USSR)

AUTHOR: Gokhberg, M. M.

TITLE: Fatigue Strength of Elements of Metal Structures in Which the Mean Stress is Compressive. (Soprotivleniye ustalosti elementov metallokonstruktsiy pri srednem napryazhenii szhatiya)

PERIODICAL: Tr. Leningr. politekhn. in-ta, 1957, Nr 191, pp 62-69

ABSTRACT: Bibliographic entry

Card 1/1

GOKHBERG, M.M., kand. tekhn. nauk.

Fatigue resistance of crane metal structures. [Izd.] LONITOMASH 43:105-122 '57. (MIRA 11:6)

(Cranes, derricks, etc.)
(Metals—Fatigue)

GOKHBERG, M.M.

Fatigue strength of metal structure components subjected to mean stresses. Trudy LPI no.191:62-69 '57. (MIRA 11:9)
(Metals--Fatigue) (Strains and stresses)

GRINBERG, M M

25(1) PHASE I BOOK EXPLOITATION SOV/1299

Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Leningradskoye oblastnoye pravleniye

Prochnost' svarnykh konstruktsiy (Strength of Welded Structures) Moscow, Mashgiz, 1958. 147 p. (Series: Its: Sbornik, kn. 48) 4,000 copies printed.

Ed.: Okerblom, N.O., Doctor of Technical Sciences, Professor; Tech. Ed.: Sokolova, L.V.; Managing Ed. for Literature on Machine Building Technology (Leningrad Division, Mashgiz): Naumov, Ye.P., Engineer.

PURPOSE: This collection of articles is intended for engineers, plant technicians and scientific workers employed in planning and design bureaus and research institutes. It may also be of use to students taking advanced courses in welding.

COVERAGE: The book contains the principal reports of a conference held in Leningrad and sponsored by the Leningrad branch of the All-Union Scientific, Engineering and Technical Society (VNITO - Vsesoyuznoye nauchnoye inzhenerno-tekhnicheskoye obshchestvo) of

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welders. These reports deal with present-day problems connected with the strength, and endurance of welded structures and the effect of weld stresses. Each article is briefly commented on in the introduction. No personalities other than the authors of the articles are mentioned. There are 45 Soviet and 5 English references.

TABLE OF CONTENTS:

Strength of Welded Structures SOV/1299

AVAILABLE: Library of Congress

GO/mtl
3-23-59

SOV/137-59-3-5814

Translation from: Referativnyy zhurnal Metallurgiya, 1959, Nr 3, p 125 (USSR)

AUTHOR: Gokhberg, M. M

TITLE: Fatigue Strength of Welded Connections in Metal Structures (Ustalostnaya prochnost' svarnykh soyedineniy metallicheskikh konstruktsiy)

PERIODICAL: V sb.: Prochnost' svarn. konstruktsiy. Moscow-Leningrad, Mashgiz, 1958, pp 68-80

ABSTRACT: The fatigue strength of weldments was investigated on a machine designed and manufactured by the Leningrad Polytechnic Institute im. M. I. Kalinin. The machine consists of two pulsator units equipped with clamps for holding a specimen (450-620 mm long) which is subjected to symmetrically alternating or non-reversing compressive-tensile stresses, the magnitude of which alternates within the specimen at a frequency of 25

type were employed in welding of NL steel. The fatigue testing was based on an "N" value of 2 million cycles. Conclusions were made regarding the relationship between the σ_w value of butt welds and the shape of the weld. The σ_w value of welds the surface of which had been ground does not differ from the σ_w of the parent metal. Effective values of the stress-concentration factor were determined for several types of welded joints.

A K.

GOKHBERG, M.M.

Methods of calculating the endurance of metal structures for machine building. Shor.st.UZTM no.2:157-175 '58. (MIRA 11:12)
(Machinery--Construction) (Structures, Theory of)

GOKHBERG, M.M.

Investigating the fatigue strength of certain welded joints in crane frameworks. Trudy LPI no.199:48-52 '58.
(MIRA 12:9)

(Cranes, derricks, etc.--Welding)

CIA-RDP86-00513R000515610002-1

[illegible]

25(2); 14(10)

PHASE I BOOK EXPLOITATION SOV/2739

Akademiya nauk SSSR. Institut mashinovedeniya

Problemy prochnosti v mashinostroyenii, vyp. 3 (Strength Problems in Mechanical Engineering, No. 3) Moscow, Izd-vo AN SSSR, 1959. 94 p. Errata slip inserted. 3,000 copies printed.

Ed.: S.V. Serensen, Academician, Ukrainian SSR Academy of Sciences; Ed. of Publishing House: G.A. Nechayev; Tech. Ed.: N.F. Yegorova.

PURPOSE: This book is intended for design engineers and research workers in the fields of machine building and strength of structures. It may also be useful to students of corresponding specialties in advanced technical schools.

COVERAGE: This is a collection of 5 articles dealing with problems of strength and stability of cylindrical parts. Effect of cut-outs, general conditions for the calculation of endurance, regressive analysis of fatigue, and measurements of limits of fluidity in impact loading are considered. References appear at the end of each article.

TABLE OF CONTENTS:

14(2) PHASE I BOOK EXPLOITATION SOV/2947

Gokhberg, Mikhail Mikhaylovich, Doctor of Technical Sciences, Professor

Metallicheskiye konstruktsii kranov; raschet s uchetom yavleniy ustalosti (Metal Structures of Cranes; Design, Taking Fatigue Phenomena Into Consideration) Moscow, Mashgiz, 1959. 181 p. Errata slip inserted. 4,000 copies printed.

Reviewer: G.A. Nikolayev, Corresponding Member, USSR Academy of Construction and Architecture, Doctor of Technical Sciences, Professor; Ed.: V.S. Mayzel', Engineer; Ed. of Publishing House: V.P. Vasil'yeva; Tech. Ed.: R.G. Pol'skaya; Managing Ed. for Literature on the Design and Operation of Machines (Leningrad Division, Mashgiz): F.I. Fetisov, Engineer.

PURPOSE: This book is intended for engineering and technical personnel dealing with designing and operating hoisting and transporting machines. It may also be used by students of vtuzes and designers of multi-purpose metal structures subject to variable stresses.

COVERAGE: The book is claimed to be the first attempt to discuss the designing of metal structures for cranes taking fatigue phenomena into account. The book is divided into two parts. The first part deals with the problem of loads. Basic

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attention is given to the actual character of the variation of stresses in crane structures during the operation of basic crane mechanisms, as well as to the approximate methods of designing crane structures subjected to loads of short duration. The second part is devoted to the analysis of the strength of metal structures of cranes under the action of variable stresses. The general concept of fatigue strength, results of the fatigue testing of the structural elements of cranes, and designing, taking fatigue phenomena into account are discussed. Examples of designing are given at the end of the book. No personalities are mentioned. There are 71 references: 59 Soviet, 9 German, and 3 English.

TABLE OF CONTENTS:

Metal Structures of Cranes (Cont.)

SOV/2047

Metal Structures of Cranes (Cont.)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515610002-1"

Metal Structures of Cranes (Cont.) SOV/2047

AVAILABLE: Library of Congress

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8-11-59

Card 5/5

S/124/63/000/002/051/052
D234/D308

AUTHOR: Gokhberg, M.M.

TITLE: Main principles of the method of designing metallic structures for durability

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 2, 1963, 67, abstract 2V544 (In collection: 'Proyektir. i prochnost' svarn. konstruktsiy'. M.-L., 1959, 111-121)

TEXT: Full fatigue diagrams of metal structures, formed by straight lines, are constructed from two points. From the value of the fatigue limit in symmetric tension-compression of large specimens with conserved rolling surface $\sigma_{-1} = \sigma_B/3$ and from the value of fatigue limit in pulsating cycle, σ_o is calculated from

$$\eta = \frac{2\sigma_{-1} - \sigma_o}{\sigma_o} \qquad (1)$$

where $\eta = 0.2$ for Ст.3 (St.3) and $= 0.3$ for НЛ (NL) steel. With

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Main principles of the method ...

effective stress concentration coefficient k, the fatigue limit on the 2×10^6 basis for any coefficient of cycle asymmetry r is calculated from

$$\sigma_{rk} = \frac{2\sigma_{-1}}{(1 - r)k + (1 + r)\eta} \qquad (2)$$

Limited fatigue limits σ are calculated from

$$\sigma^m N = 2 \times 10^6 \sigma^m_{rk} \qquad (3)$$

where km is about 1.2. Possible loads are classified and methods of estimating them in design of metal structures are given. Non-stationary variable loads (stresses) are estimated by reduced values (reduced loads, stresses durabilities) calculated by means of the well-known linear rule of the summation of damages:

$$\sum_i \frac{n_i}{N_i} = 1 \qquad (4)$$

Main principles of the method ... S/124/63/000/002/051/052
D234/D308

and the equation of the inclined segment of fatigue curve. The strength condition for design by the method of limits state contains, apart from normative values of design load and yield limit, the coefficients of overloading, homogeneity of metal and working conditions. The choice of strength reserve is based on the ratio of dangerous and permissible stresses. Numerical values of the reserve coefficient vary from 1.33 to 1.7.

[Abstracter's note: Complete translation]

Card 3/3

GOKHBERG, M.M.

General principles of strength calculation of metal structures of machinery. Probl. proch. v mashinostr. no.3:50-70 '59.
(MIRA 12:11)

1.Leningradskiy politekhnicheskiy institut im. M.I. Kalinina.
(Machinery--Design)

I BOOK EXPLOITATION SOV/5375

Gokhberg, M[illegible] Markovich

Avtomatizatsiya proizvodstvennykh protsessov s pomoshch'yu pnevmaticheskikh ustroystv (Automation of Industrial Processes by Means of Pneumatic Devices) Barnaul, Altayskoye knizhnoye izd-vo, 1960. 134 p. Errata slip inserted. 2,000 copies printed.

Ed.: F. Yel'kov, Tech. Ed.: G. Zhdanova.

PURPOSE: This book is intended for engineering and technical personnel, and for designers and operators engaged in the mechanization and automation of industry.

COVERAGE: The book contains a description of pneumatic valves, limit switches, timers, throttles, pressure regulators, and other auxiliary devices applicable in various semiautomatic and automatic machines, and automatic production lines. Subassemblies in such lines are described as are schemes of automatic control of some processes of the foundry industry. All these pneumatic devices and schemes have been in use for some time in the foundries of the Altayskiy traktornyy zavod im. M. I. Kalinina (Altay Tractor Plant imeni M. I. Kalinin).

Card 1/3

AVAILABLE: Library of Congress (TJ950.G5?)

Card 3/3

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APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515610002-1

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AVAILABLE: Library of Congress

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VK/mab/gmp
9-7-60

14

DUKEL'SKIY, Aleksandr Iosifovich, prof., doktor tekhn.nauk; GOKHBERG, M.M., prof., spetsred.; SAMDLER, N.V., red.izd-va; DROZHKHINA, L.P., tekhn.red.

[Load hoisting machines in harbors and on ships] Portovye i sudovye gruzopod"emnye mashiny. Leningrad, Izd-vo "Morskoi transport," 1960. 516 p. (MIRA 14:4)
(Cranes, derricks, etc.)

ANAN'YEV, A.A.; GOKHBERG, M.M.; DUKEL'SKIY, A.I., prof., doktor tekhn. nauk; LANG, A.G.; MAYZEL', V.S.; MEKLER, A.G.; SIROTSKIY, V.F.; KOGAN, I.Ya., kand. tekhn. nauk, retsenzent; REYNGOL'DT, Yu.A., kand. tekhn. nauk, retsenzent; SAMOYLOVICH, P.A., kand. tekhn. nauk, red.

[Reference book on cranes] Spravochnik po kranam. Pod red. A.I.Dukel'skogo. Moskva, Mashgiz. Vol.1. [General design, materials, drives, metal constructions] Obshchie raschety, materialy, privody, metallicheskie konstruktsii. By A.A.Anan'ev i dr. 1961. 455 p. (MIRA 14:11)
(Cranes, derricks, etc.)

GOKHBERG, M.M., doktor tekhn.nauk

"Steel structures in the manufacture of heavy machinery" by Kh.A. Vinokurskii. Reviewed by M.M.Gokhberg. Vest.mash., 41 no.10:84 O '61. (MIRA 14:10)

(Steel, Structural) (Machinery industry)

GOKHBERG, M.H.

Investigating the fatigue strength of welded joints in steel pipe. Trudy LPI no.216:32-47 '61. (MIRA 14:12)
(Pipe, Steel--Welding)
(Steel--Fatigue)

SMIRNOV, V.S.; [illegible], M.D.; PODPORKIN, V.G.; [illegible], A.I.; NEYMAN, L.R.; [illegible], A.M.; KOSTENKO, M.V.; [illegible], V.S.; [illegible], O.V.; IGNATIN, I.A.; [illegible], A.K.; [illegible], S.M.; [illegible], K.P.; [illegible]LOBOV, N.S.; BOSHNYAKOVICH, A.D.; BURGSDORF, V.V.; [illegible]GOROLTSEV, B.P.; GOKHBERG, M.M.; STEPANOV, K.S.

Nikolai Pavlovich Vinogradov; obituary. Elektrichestvo no.10: 91-92 O '61. (MIRA 14:10)

(Vinogradov, Nikolai Pavlovich, 18[illegible]-1961)

GOKHBERG, M.M.

Fatigue strength of components of metal constructions.
Trudy LPI no.219:65-83 '62. (MIRA 15:12)
(Steel, Structural—Fatigue)

GOKHBERG, M. M. (Prof, Dr. Tech. Sci.)

"Basic problems of calculation and design of steel framework of cranes."

report submitted for Intl Conf on Conveyor Engineering & Construction Machinery, Magdeburg, E. Germany, 7-12 Sep 64.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515610002-1"

GOKHBERG, M.M., doktor tekhn. nauk, prof.

[Metal structures of hoisting and conveying machinery] Metallicheskie konstruktsii pod"emno-transportnykh mashin. Moskva, Izd-vo "Mashinostroenie," 1964. 328 p. (MIRA 17:6)

GOKHBERG, M.M.

Fatigue strength of the components of metal structures. Trudy LPI no.236:62-75 '64. (MIRA 18:3)

GOKHBERG, M.M.; TUN BAO [illegible] [T'ung Pao-[illegible]]

Effect of preloading and high tempering on the [illegible] strength of welded joints. Trudy LPI no.36:70-8[illegible]

[illegible]

GOKHBERG, M.M.

Investigating fatigue strength of a welded butt joint of steel pipes. Trudy LPI no. 54: 6-[illegible] '6[illegible]. (MIRA 19:1)

L 24518-66

ACC NR: AP6009514 SOURCE CODE: UR/0413/66/000/005/0031/0031

AUTHOR: Kidin, I. N.; Shirbanyan, A. S.; Gokhberg, Ya. A.; Marshalkin, A. N.; Burkhanov, S. F.; Marschenko, V. Z.; Mironov, Yu.M.

ORG: none

TITLE: Fabrication of steel wire. Class 18, No. 179348

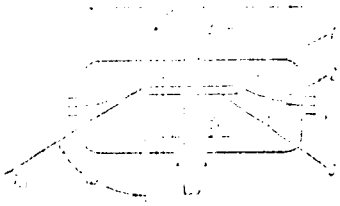
SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 5, 1966, 31

TOPIC TAGS: steel wire, wire production, austenitizing, deformation, patenting, cold drawing

ABSTRACT: An Author Certificate has been issued describing a method for producing steel wire, including electro-contact heating to austenitizing temperature, reduction, patenting, and cold drawing. In order to improve the mechanical properties of the wire and reduce the heat treating cycle, the wire deformation is carried out simultaneously with cooling down to 400-450C followed by patenting in air. [LD]

SUB CODE: 13/ SUBM DATE: 14Dec64/

Card 1/1 BLG UDC: 621.785.79:621.785.47:621.778.1



Card

ACC NR:

GOKHBERG, M.Sh., inzh.; NAUMOV, P.P., inzh.

Flow line for the manufacture of truck trailers. Svar.proizv. no.11:26-28 N '62. (MIRA 15:12)

1. Kishinevskiy traktorosborochnyy zavod.
(Truck trailers) (Assembly line methods)

SHABIN, P., inzh.; GOKHBERG, S., inzh.

Machine for lapping crankshaft journals. Avt.transp. 39 no.10:48-49 O '61. (MIRA 14:10)
(Grinding machines)

ABRAMOV, R.; GORBUNOV, S.; [illegible]

Rolling stock for the transportation of various dry bulk mineral containers. Avt. transp. [illegible]

[illegible]

GOKHBERG, S.P.

Electric heater used for drying interiors. Rats. i izobr. predl. v stroi. no.2:85-87 '57. (MIRA 11:1)
(Drying apparatus) (Plastering)