PLEKHANOV, Ivan Petrovich; CHERNYAIKIN, Vladimir Aleksandrovich; PAPMEL',
Sergey Vladimirovich; YABLOKOV, V.I., red.; GALAKTIONOVA, Ye.N.,
tekhn.red.

[Handbook for automobile drivers] Spravochnik shofera. Izd.4-e,
ispr. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transporta
i shosseinykh dorog RSFSR, 1960. 288 p.   (MIRA 13:10)
        (Automobile drivers--Handbooks, manuals, etc.)

ZAKIN, Yakov Khononovich, kand. tekhn. nauk; CHERNYAYKIN, V.A., otv. za
vypusk; DONSKAYA, G.D., tekhn. red.

[Methods of analyzing the maneuvering characteristics of automobile
trains; construction of trajectories of curvilinear motion] Metody
analiza manevrennykh svoistv avtopoezdov; postroenie traektorii krivo-
lineinogo dvizheniia. Moskva, Avtotransizdat, 1961.   42 p.
(MIRA 14:11)

(Automobile trains—Dynamics)

NEFEDOV, Aleksandr Fedorovich; CHERNYAYKIN, V.A., otv. za vypusk; SEDOVA, A.P., red.;
    GALAKTIONOVA, Ye.N., tekhn. red.

   [Selectring the efficient total weight of an automobile train]
   Vybor ratsional'nogo obshchego vesa avtopoezda. Moskva, Avto-
   transizdat, 1961. 35 p.   (MIRA 15:1)
                        (Automobile trains)

CHERNYAYKIN, Vladimir Aleksandrovich; VLASKO, Yuriy Mikhaylovich;
    DUBROVSKIY, Ye.V., red.; ATROSHCHENKO, L.Ye., tekhn. red.

[New Soviet motor vehicles] O novykh otechestvennykh avtomobi-
liakh. Moskva, Izd-vo "Znanie," 1962. 45 p. (Novoe v zhizni,
nauke, tekhnike. IV Seriia: Tekhnika, no.3)   (MIRA 15:6)

(Motor vehicles)

RYTCHENKO, Viktor Ivanovich; CHERNYAYKIN, V.A., red.; GALAKTIONOVA,
        Ye.N., tekhn. red.

     [Repair of the electric equipment of motor vehicles] Remont
     elektrooborudovaniia avtomobilei. Moskva, Avtotransizdat,
     1963. 254 p.   (MIRA 16:4)
          (Motor vehicles—Electric equipment)

SABININ, Andrey Aleksandrovich; PLEKHANOV, Ivan Petrovich;
       CHERNYAYKIN, Vladimir Aleksandrovich; YAKOVLEV, G.N.,
       red.

       [Manual for the driver of the second class] Uchebnik sho-
       fera vtorogo klassa. Moskva, Transport, 1965. 393 p.
                                              (MIRA 18:9)

AUTHOR: Chernyk, M. A.

TITLE: On the Problem of Influence of the Armature-Circuit Inductance of a
    "Generator-Motor" System Upon the Transient Phenomena
    (K voprosu o vliyanii induktivnosti yakornoy tsepi sistemy "generator-dvigatel' "
    na perekhodnyye protsessy)

PERIODICAL: Nauch. zap. L'vovsk. politekhn. in-t, 1955, Nr 34, pp 129-138

ABSTRACT: In the analysis of transients, it is assumed that both the generator
    and the motor are equipped with compensating-field windings and that the
    generator magnetic circuit is not saturated. Furthermore, at variance with
    most published investigations, the armature-circuit inductance is assumed to
    be L ≠ 0. The operational differential equations set up for the case of a unit
    impulse at the system input are solved by the Laplas transformation.
    Transient current and transient rpm of the motor (dependent on time) serve as
    solutions of the equations. An analysis of the solutions shows that an oscillatory

Card 1/2

SOV/112-57-5-10298

On the Problem of Influence of the Armature-Circuit Inductance of a "Generator- . . . .

phenomenon can arise if $4T > \theta$, where T is the electromagnetic time constant of the armature circuit, θ is the electromechanical time constant of the motor. The above expressions have been used for calculating motor current and rpm curves plotted against time for a system that has the generator field-winding electromagnetic time constant $T_v = 2.72$ sec, $\theta = 0.0424$ sec, and T of four alternate values: 0.0050, 0.0106, 0.050, and 0. The investigation has shown that two different effects of the inductance should be distinguished: that of the mechanical transient, i.e., on the motor rpm curve, and that of the electrical transient, i.e., on the armature-circuit current curve. While the first effect is insignificant, the second is essential and is more pronounced for lower ratios of T_v/T. Thus, in the above calculation with $T_v/T = 2.72/0.05 = 55$, the deviations of current curves with and without an allowance for the inductances are as high as 50% at the initial portion of the transient and as high as 20% in the maximum-values region. At the same time, the rpm curves for both cases practically coincide.

L.B.G.

Card 2/2

CHERNYK, M.A.

Electromagnetic time design constant of a d.c. machine and
methods for decreasing it. Izv. vys. ucheb. zav.; elektromekh.
5 no.2:233-234 '62.   (MIRA 15:3)
                    (Electric machinery--Direct current)

CHERNYKH, A.A., kand.tekhn.nauk; KISTANOV, N.S., kand.tekhn.nauk

Recharging natural limans. Gidr. i mel. 16 no.1:12-17 Ja '64.

(MIRA 17:2)

CHERNYKH, A. A.

USSR/Geophysics - Water Reservoirs   Jun 51

"Experience in the Construction and Use of Reservoir Excavations," A. A. Chernykh, Cand Tech Sci

"Gidrotekh i Meliorat" No 6, pp 44-50

Describes unique so-called reservoir-excavations first built in the Kursk territory in central chernozem regions: area 10,000 sq m, capacity 35,000 cu m, depth 1.2 m, height of embankment 2.5 m. Gives rate of filtration in cm/day vs time in days for variously treated earthdam-type reservoirs. Antifiltration measures are very important in the

USSR/Geophysics - Water Reservoirs (Contd)   Jun 51

struggle to prevent excessive loss of water from canals and reservoirs. Attempts to study such measures.

186T34

186T34

CHERNYKH, A. A. and PETROV, E. G.

"Local Snow Water Irrigation of Forest Belts," Gidr. i Mel., 4, No.7, 1952

Chernykh, A A.

PETROV, Yevgeniy Grigor'yevich; SOLOV'YEV, V.A.; CHERNYKH, A.A.; ORLOVA,
V.P., redaktor; GUREVICH, M.M., tekhnicheskiy redaktor.

[Snow water irrigation and the accumulation of moisture] Limannoe
oroshenie i vlagonakoplenie. Moskva, Gos.izd-vo sel'khoz.lit-ry,
1956. 165 p.   (MIRA 10:6)
                    (Irrigation)

J

CHERNYKH, A.A.

99-6-1/9

AUTHOR: Chernykh, A.A., Candidate of Mechanical Sciences and Alatort-
           sev, E.G., Candidate of Mechanical Sciences

TITLE: Complex Utilization of Run-Off Water on the Kolkhoz Imeni
           Kalinin, Saratovskaya Oblast. (Kompleksnoye Ispol'sovanie
           Stoka v Kolkhoze Imeni Kalinina, Saratovskoy Oblasti)

PERIODICAL: "Gidrotekhnika i Melioratsiya" 1957, No 6, pp 3-10, (USSR)

ABSTRACT: Conservation and use of run-off water in the arid south-eastern
           territories is of great importance for farming. The Dergachev
           Machine Tractor Station of the Saratov Oblast together with
           the Kolkhoz Imeni Kalinin carried out a complex utilization
           of run-off water, in which the following points were taken
           into consideration: 1. Reducing of run-off water and retain-
           ing of snow by means of deep contour plowing in connection with
           plowing of parallel flat ridges. 2. Construction of dams for
           regular irrigation. 3. Building of dams for flooding of
           estuaries (liman). These water conservation measures increased
           the yields considerably, reduced soil erosion and were inexpen-
           sive as compared with large scale irrigation projects. Water
Card 1/2   for irrigation purposes will be siphoned out of the reservoirs.

99-6-1/9

Complex Utilization of Run-Off Water on the Kolkhoz Imeni Kalinin,
Saratovskaya Oblast.

> Expenditures for the building of estuaries ranged from 47
> rubles to 90 rubles per hectare. Additional 5 kolkhozes in
> the Saratov Oblast' are being improved by the Dergachev Machine
> Tractor Station in the same manner. The article contains 4
> figures and 2 photographs.

ASSOCIATION: Dergachev Machine Tractor Station (Dergachevskiy MTS)-
Saratovskaya Oblast')

AVAILABLE: Library of Congress

Card 2/2

PETROV, Ye.G., kand. sel'skokhozyaystvennykh nauk; CHERNYKH A.A., kand.
        tekhn. nauk.

        Basin snow-water irrigation in the Kazakh SSR. Zemledelie 6
        no.11:68-72 N '58.   (MIRA 11:11)
                    (Kazakhstan--Irrigation)

PETROV, Ye.G., kand. sel'skokhozyaystvennykh nauk; CHERNYKH, A.A., kand. tekhn. nauk, ALATORTSEV, Ye.K., kand. tekhn. nauk

Measures for utilizing snow-water runoff in the agriculture of the steppe zone; work practices of the Dergachi Machine-Tractor Station. Trudy VNIIGiM 32:29-35 '59.   (MIRA 13:8)
                (Saratov Province--Irrigation)

CHERNYKH, A.A., kand.tekhn.nauk

Basin snow-water irrigation of corn in the trans-Volga region.
Gidr. i mel. 13 no.2:8-14 F '61.   (MIRA 14:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrotekhniki i
melioratsii im. A.N.Kostyakova.
        (Volga Valley--Corn (Maize)--Irrigation)

SYROMYATNIKOVA, Z.A., kand. tekhn. nauk; CHERNYKH, A.A., kand. tekhn. nauk;
ZAYKIN, A.I., inzh.; IVANOV, V.M., inzh.

Saturation irrigation on large checks. Gidr. i mel. 16 no.9:10-21
S '64.   (MIRA 17:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidrotekhniki i
melioratsii imeni A.N. Kostyakova (for Zaykin). 2. Yuzhnyy gosu-
darstvennyy institut po proyektirovahiyu vodokhozyaystvennogo i
meliorativnogo stroitel'stva (for Ivanov).

VYSHEPAN, Ye.D.; IVANOVA, K.I.; CHERNYKH, A.M.

Effect of d,l-cycloserine on the process of transmination. Biul.
eksp.biol.i med. 47 no.8:52-55 Ag '59.   (MIRA 12:11)

1. Iz Instituta farmakologii i khimioterapii AMN SSSR (dir. - deyst-
vitel'nyy chlen AMN SSSR V.V. Zakusov), Moskva. Predstavlena deystvitel'-
nym chlenom AMN SSSR V.V. Zakusovym.
            (CYCLOSERINE pharmacol.)
            (LIVER metab.)
            (GLUTAMATES metab.)
            (PYRUVATES metab.)

CHERNYKH, A.R., bul'dozerist

Device for removing the semiaxles of a tractor. Stroi. truboprov.
9 no.8:25   Ag '64.   (MIRA 17:12)

1. Nizhneudinskiy uchastok Stroitel'nogo upravleniya No.5 tresta
Omsknefteprovodstroy.

CHERNYKH, Aleksandr Vladimirovich, prof.; REYNGOL'D, S.I., red.

[Power base of U.S.S.R. electrification; a textbook on
the economics of industry] Energeticheskaia baza elektri-
fikatsii SSSR; uchebnoe posobie po ekonomike promyshlennosti.
Moskva, Vses. zaochnyi finansovo-ekon. in-t, 1961. 106 p.
(MIRA 18:4)

CHERNYKH, A.V., prof.; BELYAKOVA, Ye.V., red.

[Oil and gas industry of the U.S.S.R.] Neftianaia i ga-
zovaia promyshlennost' SSSR. Moskva, Vysshaia shkola,
1964. 132 p.   (MIRA 17:8)

FERDINAND, Ya.M. (Rostov-na-Donu); Prinimali uchastiye: MARISOVA, A.P.;
    BRAYNINA, R.A.; MARGULIS, L.A.; MYASNENKO, A.M.; KOVALEVSKAYA,
    I.L.; TELESHEVSKAYA, E.A.; SOBOLEVA, S.V.; KALININA, K.I.;
    KOVALEVA, N.S.; IVANOVA, M.K.; ARENDER, B.A.; KUCHERENKO, R.A.;
    MANATSKOVA, K.S.; OLEYNIKOVA, L.T.; KIBARDINA, Yu.A.;
    GRIGOR'YEVA, K.S.; SEMENIKHINA, L.G.; CHERNYKH E.I.; DOROFEYEVA,
    V.M.; SHEVCHENKO, Ye.N.; ABRAMOVA, O.K.; SKUL'SKAYA, S.D.;
    PETROVA, Z.I.; MAKHLINOVSKIY, L.I.; KUZ'MINA, A.I.; AL'TMAN, R.Sh.;
    MARDERER, R.G.; YENGALYCHEVSKAYA, L.N.; CHIRKOVA, M.N.; TERESHCHENKO,
    N.I.; SHELKOVNIKOVA, M.A.; PROKOPENKO, V.V.; BEKLEMESHEVA, Ye.A.;
    BARANOVA, T.V.

Effectiveness of specific prophylaxis with alcohol divaccine
against typhoid and paratyphoid B fever in school-age children.
Zhur. mikrobiol., epid. i immun. 41 no.1:23-27 Ja '64.
                                    (MIRA 18:2)

CHERNYKH, G. A.

CHERNYKH, G. A.: "The use of preparations of active deposits of radon and thoron to treat patients with infectious polyarthritis of undetermined etiology." Min Health USSR. Central Inst of Spa Studies. Moscow, 1956. (Dissertation for the Degree of Candidate in Medical Sciences).

Source: Knizhnaya letopis' No. 28   1956   Moscow

CHERNYKH, G.A.

Treating infectious polyarthritis of unknown etiology with bandages containing active radon and thoron. Chernykh, G.A. Vop. kur., fizioter. i lech. fiz. kul't. 22 no.1:43-49 Ja-F '57 (MLRA 10:4)

1. Iz terapevticheskogo otdeleniya kliniki TSentral'nogo instituta kurortologii (dir.-kandidat meditsinskikh nauk G.N. Pospelova)
        (ARTHRITIS) (RADON--THERAPEUTIC USE)
        (THORON--THERAPEUTIC USE)

TRET'YAKOV, A.F.; SHCHEPOT'YEVA, Ye.S.; CHERNYKH, G.A.; FRENKLAKH, Kh. (Moskva)

New method of therapy using alpha-radiating radioactive isotopes (thorium C, thorium Cl). Klin.med. 37 no.10:105-109 O '59.

(MIRA 13:2)

1. Iz radiologicheskoy laboratorii (zaveduyushchiy - prof. Ye.S. Shchepot'yeva) TSentral'nogo instituta kurortologii (direktor - kand. med.nauk G.N. Pospelova).

(THORIUM radioactive)

SPERANSKIY, N.I., prof.; DANENKOV, Ya.I., kand.med.nauk; CHERNYKH, G.A.
(Moskva)

Postoperative indications and sanatorium and spa therapy of
patients following mitral commissurotomy. Klin.med.   39 no.5:
88-95 My '61.   (MIRA 14:5)

1. Iz terapevticheskoy kliniki (zav. - prof. N.I. Speranskiy)
TSentral'nogo instituta kurortologii i fizioterapii Ministerstva
zdravookhraneniya SSSR (dir. - kand.med.nauk G.N. Pospelova).
                    (MITRAL VALVE—SURGERY)

SPERANSKIY,N.I., prof.; CHERNYKH, G.A.

Sanatorium and health resort treatment of patients with a persistent form of hypertension. Vop kur., fizioter. i lech. fiz. kul't. 27 no.4:307-311 Jl-Ag'62   (MIRA 16:11)

1. Iz kardiologicheskogo otdeleniya (zav. prof. N.I.Speranskiy) TSentral'nogo instituta kurortologii i fizioterapii (direktor G.N.Pospelova).

CHERNYKH, Grigoriy Kuz'mich; USPENSKIY, N.M.,redaktor; ANDRIANOV,
    B,I.,tekhnicheskiy redaktor

[Military service is an honorable obligation of the Soviet
citizen] Voennaia sluzhba - pochetnaia obiazannost' grazhdanina
SSSR. Moskva, Izd-vo DOSAAF, 1956. 54 p.   (MIRA 10:4)
        (Military service, Compulsory)

CHERNYKH, G.N., RELSZOV, V.A.

Currants

Growing Seyanets Krandalya currants from seed.   Les i step' 4, no. 9, 1952.

9.   Monthly List of Russian Accessions, Library of Congress, DECEMBER 1952 1953, Uncl.

USSR/Chemistry - Nitric acid

FD-966

Card 1/1   Pub. 50 - 9/19

Authors   :   Zhavoronkov, N. M., Corr Mem Acad Sci USSR; Babkov, S. I. Martynov, Yu. M., Chernykh, G. N.

Title   :   Investigation of the Absorption of Nitrogen Oxides with alkaline solutions in columns having a regularly distributed filling

Periodical :   Khim. prom., No 7, 419-423 (35-39), Oct-Nov 1954

Abstract   :   Outline experimentally established relationships which can be used in the design of industrial equipment for the absorption of nitrogen oxides at a high linear velocity of the gases containing these oxides. Describes the design of a horizontal absorber for that purpose. Four references, all USSR, 3 since 1940.

Institutions: Physico-Chemical Institute imeni L. Ya. Karpov and Moscow Chemico-Technological Institute imeni D. I. Mendeleyev

ZHAVORONKOV, N.M.; BABIKOV, S.I.; ORLOV, V.Yu., kand.khimicheskikh nauk;
    SAKODYNSKIY, K.I., kand.khimicheskikh nauk; SEVRYUGOVA, N.N.;
    SOKOL'SKIY, V.A.; CHERNYKH, G.N.

    Production and uses of stable isotopes. Khim.nauka i prom. 4
    no.4:487-498   '59.   (MIRA 13:8)
                (Isotope separation)
                (Isotopes--Industrial applications)

CHERNYKH, G. N., STRELTSOV, L. V., BABKOV, S. I. and SHAVORONKOV, N. M.

"Die Kinetik der Isotopenanreicherung in vielstufigen Kolonnen."

Report presented at the 2nd Intl. Conf. on Stable Isotopes.
East German Academy of Sciences, Inst. of Applied Physical Material
Leipzig, GDR, 30 Oct - 4 Nov 1961

CHERNYKH, G.N., inzh.

Experimental investigation of stresses and elastic deformations
of the 6ChRP 25/34 marine diesel engine crankshaft. Sudostroenie
29 no.11:23-25 N '63.   (MIRA 16:12)

CHERNYKH, G. V.

Chernykh, G. V.

"Improving Local Horses by the Introduction of ^{C}rlov Race Horses under the ^{C}onditions of the Angara Region (Irkutsk ^{O}blast)." Moscow Veterinary Academy, Min Higher Education USSR. Moscow, 1955 (Dissertation for the degree of Candidate in Agricultural Sciences)

SO: Knizhnaya letopis' No. 27, 2 July 1955

CHERNYKH, I.

GARBUZOV, I., brigndir malyarov; CHERNYKH, I., brigadir malyarov.

The foremen speak. Stroitel' no.6:11 Je '57.   (MLRA 10:9)
(Spray painting)

CHERNYKH, I.

CHERNYKH, I., brigadir malyarov

Mobile platform for exterior finishing of window apertures.
Na stroi.Mosk. 1 no.9:28   S '58.   (MIRA 11:12)
                         (Windows)

Chernykh, I

AUTHOR: Chernykh, I.   107-8-46/62

TITLE: HF Radio Receiver Block (Vysokochastotniy blok dlya radiopriyemnika).

PERIODICAL: Radio, 1957, # 8, pp 43-46 (USSR)

ABSTRACT: This article describes in detail the circuit diagram, the design and the adjusting of a HF radio receiver block, which can be used in radio amateur receivers, record players and TV-receivers.

This block has the same characteristics as the HF-units of the 2nd class receivers, but its sensibility and selectivity have been improved. It allows reception by a 5-position commutator in LW, MW and SW bands. For better tuning, the SW band is divided in three sub-bands of 19-25, 25-36 and 36-75 m. The band-widths can be selected at will by the amateur.

The sensibility is 50 μv in all frequency bands and the selectivity is 40 db in the neighboring channel, i.e. the same as that of the industrial 2nd class receivers in the mirror channel.

Card 1/2

TITLE: HF Radio Receiver Block (Vysokochastotniy blok dlya radiopriyem-
nika).

107-8-46/62

The power can be supplied by a rectifier of 150-250 v. In this
case, the rectifier will have a current of 25-28 ma.

It is preferable to tune the block with a "ГСС-6" generator
and a high-ohmic a.c. voltmeter (for instance "ВКС-7").

This article contains 6 figures, 1 table and 2 Russian
references.
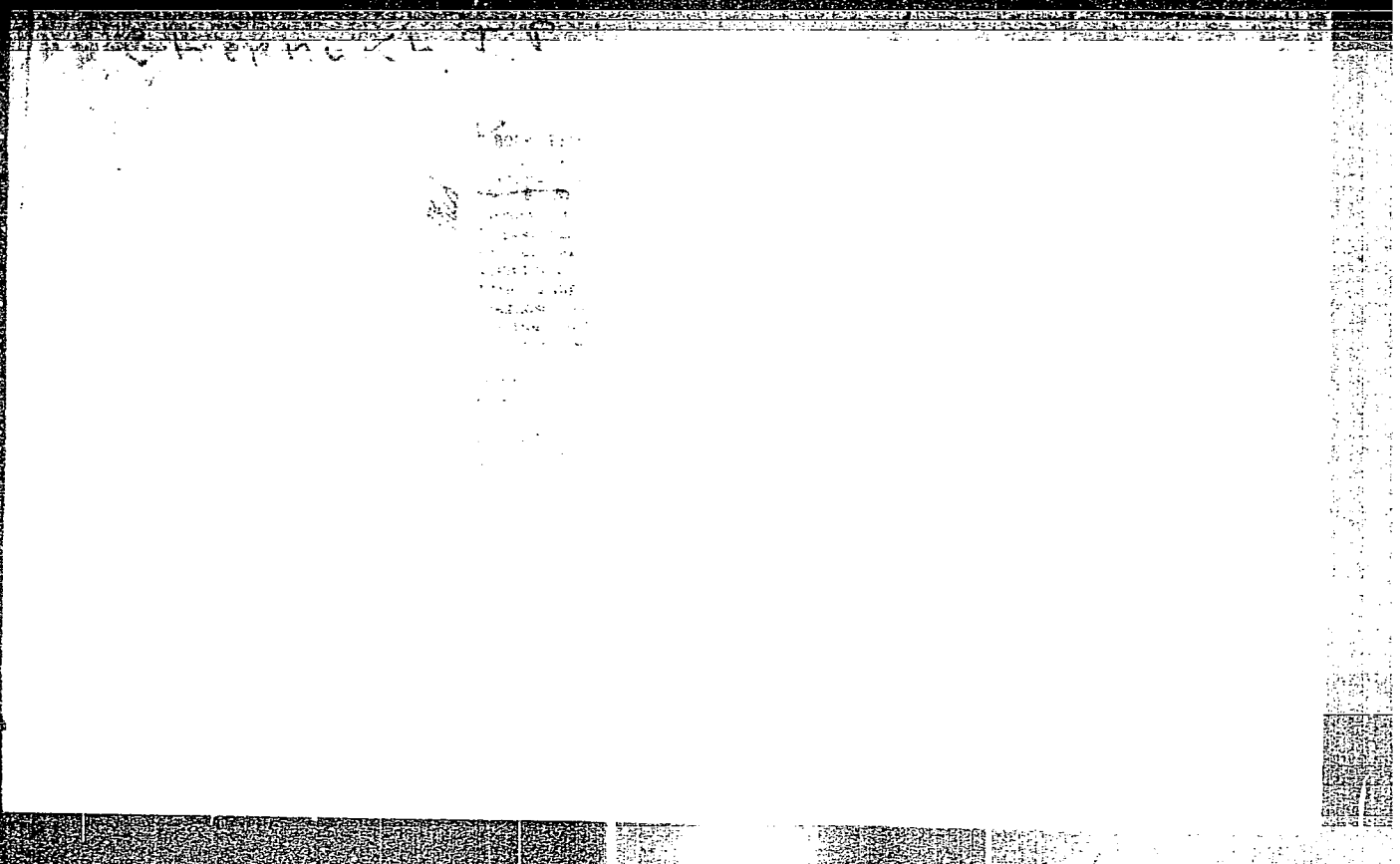
INSTITUTION: Not indicated

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress.

Card 2/2

CHERNYKH, I., ekonomist

We have many potentials. Avt.tnsmsp. 4 nd.8:48 Ag '62. (MIRA 16:4)

1. Khabarovskoye krayevoye planovoye upravleniye.
   (Khabarovsk Territory—Transportation, Automotive)

ChERNYKh, I. P., Cand Med Sci — (diss) "Data for the etiology, epidemiology and laboratory diagnosis of leptospirosis in Alma-Ata and East Kazakhstani Oblasts," Alma-Ata, 1960, 17 pp (Institute of Physiology; Institute of Regional Pathology; Institute of Clinical and Experimental Surgery of the Academy of Sciences Kazakh SSR) (KL, 39-60, 116)

CHERNYKH, I.V.

Summation and correlation blocks of the unified system of automatic control, signalling and regulation. Priborostroenie no.11:14-15 N '62.   (MIRA 15:12)
(Electronic control)

CHERNYKH, K. F.

Computatuion of cupola structures, supported bypillars (instantless theory). "Inzhinernyy Sbornik" By Academy of Science of the USSR, Department of Technical Sciences, Institute of Mechanics. 1955.

С ЛЕРНУЛ, К.F.

CHERNYKH, K.F. (Leningrad)

Design of cupolas resting on columns (based on the momentless theory)
Inzh.sbor. no.21:74-78 '55.   (MLRA 8:11)
                        (Domes)

CHERNYKH, K. F.

Chernykh, K. F. — "Certain Questions on the Complex Transformation in the Theory of Envelopes (Shells)." Leningrad Order of Lenin State U imeni A. A. Zhdanov, Leningrad, 1955 (Dissertation for the Degree of Candidate in Physicomathematical Sciences)

SO: Knizhnaya Lethopis', No 24,11 June 1955, Moscow, Pages 91-104

AUTHOR: *CHERNYKH, K. F.*
Chernykh, K. F.

20-6-7/47

TITLE: On the Conjugate Problems in the Theory of Thin Shells (O so-
pryazhennykh zadachakh teorii tonkikh obolochek).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 6, pp. 949 - 951 (USSR)

ABSTRACT: The present paper shows that the property of conjugation can
also be used in the theory of thin shells. The author first for
short assumes that the central surface of the shell is bounded
by a closed line with the curvature α_1 = const. Besides the prob-
lem is considered unidimensional and Poisson (Puasson)'s coeffi-
cient μ equal to zero. The notation was taken over from V. V. No-
vozhilov (reference 3). The generalized Hook (Guk)'s law valid
for this case and the functions of tension u, $\overline{V}$, W (functions of
Lur'ye-Gol'denveyzer) are given. Then the author gives expressions
for the complex displacements and strains. On the edge, as is the
custom, the moments of stress generalized according to Kirchhoff
(Kirkhgof) or the generalized components of the deformation of the
vector of the torsion of the boundary element are given. The 4
quantities given here completely determine the deformation of the
boundary element. Especially the conditions for a stiff edge are
given. Finally the author beside the deformed fundamental state
investigates the state characterizable by the complex displace-

Card 1/2

On the Conjugate Problems in the Theory of Thin Shells.   20-6-7/47

ments $\tilde{u}$, $\tilde{v}$, $\tilde{w}$. Two boundary conditions are investigated here:
1) 4 static-geometrical quantities are given on the edge. Then in
conjugate problems the boundary conditions go over to conjugate
conditions. Especially the conditions of the stiff edge then go
over into the conditions of the free edge. 2) In the fundamental
problem the displacements $u = u^o$, $v = v^o$, $w = w^o$, $\vartheta = \vartheta^o$ are given
on the edge. The fixing conditions $u=v=w=\vartheta=0$ go over to the
conditions of the free edge. The properties discussed here are
closely connected with the static-geometrical analogy and make it
possible immediately to write down the solution of the conjugate
problem when the solution of the fundamental problem is known.
When the boundary conditions are formulated in a complex form, the
boundary conditions of the conjugate problem are of the same type.
In this sense such a problem may be called a conjugate one. The
simplifying limitations assumed here may without great difficulties
also be omitted. There are 3 Slavic references.

PRESENTED: May 23, 1957, by V. I. Smirnov, Academician

SUBMITTED: May 17, 1957

AVAILABLE: Library of Congress

Card 2/2

NOVOZHILOV, Valentin Valentinovich; CHERNYKH, K.F., nauchnyy red.;
KAZAROV, Iu.S., red.; SHISHKOVA, L.N., tekhn.red.

[Theory of elasticity] Teoriia uprugosti. Gos.soiuznoe izd-vo
sudostroit.promyshl., 1958. 369 p.   (MIRA 12:3)
                         (Elasticity)

AUTHOR: Chernykh, K.F. (Leningrad)   40-22-2-11/21

TITLE: On a Variational Principle in the Complex Theory of Shells
             (O variatsionnom printsipe kompleksnoy teorii obolochek)

PERIODICAL: Prikladnaya matematika i mekhanika,1958,Vol 22,Nr 2,
                                              pp 238-244 (USSR)

ABSTRACT: In the calculation of shells of complicated form often the
             shells have to be decomposed into single, simpler parts. In
             the performance of the calculation the formulation of the
             transition conditions between the simpler parts then is
             usually difficult, since the complex functions have to be de-
             composed into their real and imaginary parts. In the present
             paper the author avoids this difficulty by formulating and
             calculating the real boundary conditions as a variational
             problem. He introduces the notion of the complex energy and
             proves a minimum property of its modulus. In the calculations
             it is assumed that the boundaries of the shell coincide with
             principal lines of curvature, furthermore the Poisson
             coefficient is set = 0. For a material of shells satisfying
             the law of Hooke then the equations following from the con-
             ditions of equilibrium and from the conditions of compatibil-
             ity are set up.
             The very complicated general equations are simplified for the

Card 1/2

On a Variational Principle in the Complex Theory of   40-22-2-11/21
Shells

        case of two symmetrically loaded shells of revolution of
        equal thickness which are connected with each other along a
        parallel circle.
        It is referred to the fact that the theory can be also ge-
        neralized without principal difficulties to the case that the
        Poisson coefficient does not vanish and that the boundaries
        of the shell do not coincide with principal directions of cur-
        vature.
        There are 4 figures, and 3 Soviet references.

SUBMITTED: December 28, 1956

        1. Bodies of revolution—Theory

Card 2/2

AUTHOR: Chernykh, K.F. (Leningrad)

TITLE: The Meissner Equation in the case of Inversely
            Symmetrical Loading

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh
            nauk, Mekhanika i mashinostroyeniya, 1959, Nr 6,
            pp 68-75 (USSR)

ABSTRACT: The paper is a continuation of previous work (Refs 3, 4).
            Novozhilov (Ref 1) has discussed the action of an
            inversely symmetrical (wind) loading on a constant
            thickness shell of rotation. The present paper extends
            the discussion to a shell of variable thickness. The
            mathematical specification of an inversely symmetrical
            loading is stated (Fig 1 and accompanying equations) and
            the differential equations governing the problem are
            derived in complex variable form (Eqs 1.7, 1.8 and 1.9).
            The boundary conditions (2.5, 2.6 and 2.7) and the
            conjugation equations (2.10, 2.11) are introduced and
Card   approximations are made by assuming: (1) the functions of
1/2   the static system (Eqs 1.3) are of the same order of
            magnitude; (2) the components of the dislocation
            deformation are likewise of the same order;

68168

S/179/59/000/06/010/029
E081/E141

The Meissner Equation in the Case of Inversely Symmetrical Loading

(3) the thickness of the shell varies smoothly; and
(4) small terms of the order h/R_0 can be neglected in
comparison with unity, where h is the shell thickness
and R_0 is the radius of curvature. The differential
equation (3.1) involving a stress function is then
obtained which is analogous to an equation derived by
Meissner (Ref 2) in considering the symmetrical
deformation of a shell of rotation. The forms of the
stress function corresponding (1) to the momentless
solution (Eq 3.4), and (2) to the homogeneous equation
obtained by the method of asymptotic integration
(Eq 3.5) are given, and a simpler form of the latter
(Eq 3.6), adequate for most practical purposes, is
derived.

Card
2/2
There are 2 figures and 4 references, of which 3 are
Soviet and 1 is German.

SUBMITTED: July 21, 1958

CHERNYKH, K.E.

Leningrad. Universitet

Mekhanika (Mechanics) [Leningrad] 1960. 254 p. (Series: Its: Uchenyye zapiski, no. 280, Seriya matematicheskikh nauk, vyp. 35) Errata slip inserted. 1,775 copies printed.

Sponsoring Agency: Leningradskiy ordena Lenina gosudarstvennyy universitet imeni A. A. Zhdanova.

Resp. Ed.: N. N. Polyakhov, Professor; Ed.: T. I. Ellerdan; Tech. Ed.: Ye. G. Shubova.

PURPOSE: This collection of articles is intended for scientists, engineers at NII's (scientific research institutes) and design offices and also for students of advanced courses in related fields.

COVERAGE: The collection consists of original investigations in the field of modern mechanics including general mechanics, the theory of elasticity, and hydrodynamics. No personalities are mentioned. References accompany all articles except one.

5. Belitskiy, G.I. On Differential Equations of Triangular Form   31

6. Birkgan, V.M. Supplement to the Reports on Rheholonomic Mechanics   36

7. Brekhovskiy, V.S. Equations of Motion of Nonlinear Rheholonomic Systems With Constraints Not Belonging to the Type of H.G. Chetayev   53

THEORY OF ELASTICITY

8. Bogdanovich, A.F. Optical Properties of Plastics Used in the Optical Polarization Method for Stress Analysis   63

9. Vekua, I.N. On the Problem of Deformation of a Cylindrical Tube   80

10. Yershova, V.A. Approximate Solution of the Problem of the Action of Concentrated Forces on a Cylindrical Shell   87

11. Pavlichev, V.A. On the Equations of the Membrane Theory of Double-Curvature Shells   97

12. Babbington, G.S. and V.M. Tolkachev. Investigation of the Field Produced from Other Effects in the Case of Multiple Loading   113

13. Feld, V.A. Plastic-Plastic Equilibrium of a Beat With a Constant Temperature Field   132

14. Cherepanov, C.P. Analysis of Ultimate Stresses of Steel in the Case of Multiple Loading Under Conditions of a Biaxial Stressed State   136

15. Cherepanov, V.M. Determination of the Elastic Constants of Paper   147

16. Cherepanov, G.P. and K.E. Chernykh. On the Calculation of a Curved Tube Reinforced by Taut Rings   156

HYDROAERODYNAMICS

17. Brik, A.V. Effect of Compressibility on the Aerodynamic Forces of Subsonic Profiles   166

18. Gladkiy, V.F. and A.A. Grozov (Dressed) Turbulent Boundary Layer of a Plate in a Compressible Fluid   170

19. Gladkiy, V.F. and V.M. Salmistan. Boundary Layer of a Plate in a Compressible Fluid   186

20. Grib, A.A. Evolutionary Motion of an Ideal Gas in a Tube of Variable Cross-Section   197

21. Mirgorod, V.A. Effect of the Depth of Immersion on the Velocity of the Associated Mass of a Sphere   238

22. Schwartz, Y.S. Effect of the Depth of Immersion on the Quantity of the Associated Mass of an Ellipsoid of Revolution   242

CHERNYKH, K.F.(Leningrad)

Saint-Venant's problem for thin walled tubes with a circular
axis. Prikl.mat.i mekh. 24 no.3:423-432 My-Je'60.(MIRA 13:10)
(Elastic plates and shells)

S/124/62/000/005/040/048
D251/D308

AUTHOR: Chernykh, K. F.

TITLE: Conjugate problems of the theory of thin shells

PERIODICAL: Referativnyy zhurnal. Mekhanika, no. 5, 1962, 7,
            abstract 5V40 (V sb. Probl. mekhaniki sploshn. sredy,
            M., AN SSSR, 1961, 499 - 503)

TEXT: By conjugate problems are understood two problems such that
their solution may be obtained in some sufficiently elementary form
in a mutually single-valued relationship, from which, if the solu-
tion of one is known, the solution of the other may be easily ob-
tained. The author gives a simple method of establishing the con-
cept of conjugate problems on the linear theory of thin elastic
shells, based mainly on the well-known fact of the existence of the
statico-geometric analog. [Abstractor's note: Complete translation]

Card 1/1

PHASE I BOOK EXPLOITATION   SOV/6014

Chernykh, Klimentiy Fedos'yevich

Lineynaya teoriya obolochek. Ch. 1: Obshchaya teoriya (Linear Theory of Shells. Pt. 1: General Theory) [Leningrad] Izd-vo Leningrad-skogo Universiteta, 1962. 273 p. Errata slip inserted. 4000 copies printed.

Sponsoring Agency: Leningradskiy ordena Lenina gosudarstvennyy universitet im. A. A. Zhdanova.

Ed.: Z. I. Tsar'kova; Tech. Ed.: S. D. Vodolagina.

PURPOSE: This book is intended for engineers and scientific workers dealing with the stress analysis of thin-walled structures. It may also be used as a textbook by students in advanced courses and aspirants specializing in the theory of elasticity.

COVERAGE: The book gives a systematic explanation of the principles of the linear theory of thin shells, as well as solutions to a

Card 1/4

Linear Theory of Shells   SOV/6014

whole series of problems which arise in the practice of calcu-
lations. The author's exposition of the linear theory of shells
includes a number of special features. The relations of the
theory of shells are successively derived from the equalities of
the three-dimensional theory of elasticity related to a triorthog-
o n al system of coordinates connected with the middle of the shell
surface. A further development of V. V. Novozhilov's complex
method is used in the exposition. The membrane solution is re-
garded as a particular solution of the general problem of moments.
A number of illustrations demonstrate the convenience and suit-
ability of basing the exposition on the equations of the theory
of shells in the complex form. This method facilitates the trans-
formation of the equations of the theory of shells and the
qualitative investigation of the properties of their solutions,
and makes it possible to include in the number of solutions some
problems of practical interest. The following personalities, all
of the Institute of Mathematics and Mechanics, Leningrad University,
are mentioned: V. A. Gavrilov, V. Ya. Pavilaynen, and V. V.
Ponyatovskiy. There are 191 references, the majority of which are
Soviet.
Card 2/

NOVOZHILOV, Valentin Valentinovich; FINKEL'SHTEYN, R.M., kand. tekhn.
nauk, retsenzent; CHERNYKH, K.F., nauchnyy red.; KLIORINA, T.A.,
red.; FRUMKIN, P.S., tekhn. red.

[Theory of thin shells] Teoriia tonkikh obolochek. 2., dop. izd.
Leningrad, Sudpromgiz, 1962. 430 p.   (MIRA 15:6)
                    (Elastic plates and shells)

NOVOZHILOV, V.V. CHERNYKH, K.F.

Calculation involving shells under concentrated stress. Issl. po
uprug. i plast. no.2:48-58 '63.   (MIRA 16:8)
                    (Strains and stresses)

CHERNYKH, K.F.; SHAMINA, V.A.

Theory of, toroidal shells. Part 1. Issl. po uprug. i plast.
no.2:247-346 '63.   (MIRA 16:8)
(Elastic plates and shells)

CHERNYKH, K.F. (Leningrad)

Design of zero-torque roofs with a polygonal plan. Izv.AN SSSR.
Mekh. i mashinostr. no.4:147-148 Jl-Ag '63.   (MIRA 17:4)

L 24510-65   EWT(m)/T/EWP(t)/EWP(b)   Pad   JD/HW

ACCESSION NR. AM5002716

Chernykh, Klimentiy Fecdos'yevich

Linear theory of shells. pt. 2: Some _____ _____ _____ _____
cholechek. ch. II: Nekotoryye vc__ _ _____
_____, ____, ____, _____
_____ _____ _____

A. A. Ignaneva,

TOPIC TAGS: shell theory, elasticity theory

PURPOSE AND COVERAGE: This book presents cer___ _ ___ic problems in the theory
of shells: thermoelastic stresses, the ___ _ _____ _____ __
tubes with a round axis. variation me_ _ _ ___
theory. The method is given in its _ _ _ _ _ _ _
conclusion of basic relations in shell ___ _ _____ _ _ ___ ___ _ _
is given. For the convenience of the r_ _ _ _ _ ___ _ _____ _ _
principles of tensor analysis and theory _ _ ___ _ _ _ _ _ _ _
engineers and researchers concerned w__ ___ _ _ _ _ ___ _ ___ _ _
structures. In addition, it can serv_ __ _ _ _ _ _____ _ _ ____
classes and graduate students specializing _ _ _ _ _ty theory.

Card 1/2

L 24510-65

ACCESSION NR AM5002716   O

TABLE OF CONTENTS [abridged]:

SUBMITTED: Indute,   TA. AP

NO REF SOV: 131
Card 2/2

ACCESSION NR: AT4034318   S/2753/64/000/003/0003/0023

AUTHOR: Cherny*kh, K. F.

TITLE: The momentless theory of shells

SOURCE: Leningrad. Universitet. Matematiko-mekhanicheskiy fakul'tet.
Issledovaniya po uprugosti i plastichnosti, no. 3, 1964, 3-23

TOPIC TAGS: mechanics, shell, thin shell, moment theory, momentless theory

ABSTRACT: The author points out that the momentless theory of shells is, in gener-
al, much simpler than the moment theory, and that, moreover, for a sufficiently
broad class of shells, the momentless method gives the correct idea for the taste
of construction of the shells. The most difficult problem of the present time is
the determination of the applicability of the momentless theory and an estimate of
the accuracy of the momentless solution. The present paper deals with the following
two questions; (1) When is it possible (or necessary) to use a momentless solution
in exchange for a particular solution by the moment method, (2) For what kind of
conditions can the momentless solution provide as full a solution, in terms of
generality, as the moment solution. The author shows that the momentless method
is applicable, with no loss in accuracy compared to the moment method, in the case

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ACCESSION NR: AT4034318

of: a) smooth shell geometry (where the curves of mean surface and thickness are smooth, i.e., not increasing when the function is differentiated); b) smooth surface loading; c) a mean surface not consisting of a neighborhood of ordinary points. Orig. art. has: 3 figures and 93 formulas.

ASSOCIATION: Matematiko-mechanicheskiy fakul'tet Leningradskogo universiteta (Department of Mathematics and Mechanics, Leningrad University)

SUBMITTED: 00   DATE ACQ: 30Apr 64   ENCL: 00

SUB CODE: ME.   NO REF SOV: 006   OTHER: 000

Card   2/2

CHERNYKH, K.F. (Leningrad)

Simple edge effect and the division of boundary conditions in
the linear theory of thin shells. Izv. AN SSSR. Mekh. no.1:
89-98 Ja-F '65.   (MIRA 18:5)

L. 21776-66   EWT(m)/EWP(j)/T/EWA(h)/EWA(1)   IJP(c)   RM

ACC NR: AP6007815   SOURCE CODE: UR/0120/66/000/001/0090/0091

AUTHOR: Vedekhin, A. F.; Pavlov, Yu. P.; Chernykh, L. P.   32

ORG: none   B

TITLE: Selection of scintillators for counters used in recording gamma radiation in plateau conditions

SOURCE: Pribory i tekhnika eksperimenta, no. 1, 1966, 90-91

TOPIC TAGS: scintillator, crystal phosphor, gamma detector, scintillation counter, alkali halide, sodium compound, iodide, thallium

ABSTRACT: The authors study the counting characteristics of gamma detectors with various types of scintillators as well as the variation in plateau as a function of the dimensions and basic indices of the scintillators: luminescence yield and resolution with respect to Cs^{137}. FEU-35 and FEU-13 photomultipliers were used for measurements in an installation consisting of pickup, amplifier, high voltage unit and scaler. The γ-radiation source was a Cs^{137} preparation in a lead collimator. Industrial scintillators produced by the Irkutsk Chemical Combine were studied. The specimens included both inorganic ($NaI \cdot Tl$, $CsI \cdot Tl$ and $KI \cdot Tl$) and organic (stilbene, tolan, naphthalene, anthracene) types and a plastic scintillator packed with magnesium oxide reflector. It was found that thallium-activated sodium iodide is the best scintillator

                                                        UDC: 539.16.07
Card 1/2

L 24776-66

ACC NR: AP6007815   O

for counters operating in plateau conditions. A scintillator made of this material measuring 30 mm in diameter and 20 mm long has a resolution of 18.5% with respect to Cs^{137}. The length of the plateau is practically independent of the radiation energy when these crystals are used for recording γ-radiation with an energy of >60 kev. A reduction in the length of the plateau is observed with a decrease in energy below this point. CsI·Tl and KI·Tl crystals show a satisfactory plateau for specimens with a diameter less than or equal to that of the photomultiplier and a length less than or equal to $\frac{1}{2}$ the diameter. These crystals have a luminescence yield of 0.9 or more. A comparison of the results of measurements on the FEU-35 and FEU-13 photomultipliers showed that the relative length of the plateau for the FEU-35 is approximately twice that for the FEU-13 with the same type scintillator.

SUB CODE: 18/   SUBM DATE: 06Jan65/   ORIG REF: 001/   OTH REF: 002

Card 2/2

STUKACH, A. G.; LEKARENKO, Ye. M. [deceased]; ZYKOV, Yu. S.;
POKROVSKAYA, G. N.; BOGOMOLOV, Yu. I.; CHERNYKH, K.P.

Increase in width and the coefficient friction during
the shape rolling of nonferrous metals and alloys.
TSvet. met. 36 no. 11:65-69 N '63.   (MIRA 17:1)

ACCESSION NR: AP4029706   S/0136/64/000/004/0061/0065

AUTHORS: Stukach, A.G.; Lyashkov, V.B.; Lekarenko, Ye.M. (Deceased);
         Pokrovskaya, G.N.; Zy*kov, Yu. S.; Cherny*kh, K.P.

TITLE: Deformation resistance During Impact Testing

SOURCE: Tsvetny*ye metally*, no. 4, 1964, 61-65

TOPIC TAGS: deformation resistance, impact test, static test, fric-
tion press hot rolling, alloy, copper, brass, zinc, bronze

ABSTRACT: The authors investigated the deformation resistance of
"M-1" copper, "TsO" zinc, "N1" nickel, "L62" brass, "BrKD1", "BrOTs4",
"BrKMts3-1", "BrB2" and "NMZhMts28-2,5-1,5" bronze and "NKh9"
chrome specimens. Impact tests approximated the service conditions
during hot rolling. 25 mm long cylindrical specimens with a 20 mm
diameter were reduced by 50% at a rate of deformation of 10 m/sec.
A 60-ton friction press was used in combination with an electric fur-
nace equipped with a Silite resistor. A study of the hardening dia-
grams showed that the hardening curves ascend sharply at low temper-
atures for most of the specimens submitted to increased deformation.

Card 1/2

ACCESSION NR: AP4029706

This shape of the curves is characteristic of high-melting and complex alloys. Low-melting resistant alloys show a peak which falls off as the degree of deformation is increased and deformation resistance declines (zinc, "BrBZ bronze alloy). For "L62" brass and copper the work hardening is eliminated above 700C owing to the high rate of recrystallization. These findings stand in good agreement with the results obtained by other authors. Bronze alloy "BrOts4-3" and "BrKD1" specimens were reduced at a rate of 0.045 m/sec in a series of static tests. This tremendous increase in the rate of deformation resulted in an increased specific pressure and, consequently, the deformation resistance of "BrOTs4-3" specimens was tripled. The same dependence was observed in "BrKD1" specimens. The results of static tests showed their unsuitability for the calculation of the industrial processes which occur at high rates of deformation. Changes in the rate of deformation by about 1.5 to 2 times do not affect the deformation resistance. Therefore, the specific pressures obtained at a 10 m/sec rate are applicable to similar rates. The orig. art. has: 3 figures.

Card 2/3

L 14443-65   EWT(m)/EWP(w)/FWA(d)/EWP(t   Pad   JSL m   T Sy

ACCESSION NR: AP4045413

AUTHOR: Lekarenko, Ye. M.; Pokrovskiy   Grafka, I. r.

TITLE: Electroslag melting of monel metal

SOURCE: Tsvetny*ye metally*, no. 9, 1964,

TOPIC TAGS: monel metal, monel metal melt   monel metal electroslag melting,
electroslag melting

ABSTRACT: Since monel metal ingots   quality
                        as battling
                                    casting,
                        diameter, use
                          Ingots of
     quality and a dendritic structure,   any shrinkage porosity of hair-
line cracks. The manganese content of the ingots was 7—10% lower than that of
the consumable electrodes. No loss of other components was observed. The high
     ity of electroslag melted mone.
penditures and complications connected   slag melting.

Cord 1/2

L 14443-65
ACCESSION NR: AP4045413

has: 2 figures.

ASSOCIATION: none

SUBMITTED: 00   ENCL: 00   SUB CODE: MM

NO REF SOV: 002   OTHER: 000

Cord   2/2

KAVERIN, A.A.; KUKLIN, G.G.; CHERNYKH, N.S.; CHERNYKH, L.I.

Observations of the transit of Mercury across the sun's disk
on May 6, 1957, in Irkutsk. Astron. tsir. no.181:16-17 Je '57.
(MIRA 13:3)

1.Irkutskaya gorodskaya astronomicheskaya observatoriya Gosudarstvennogo
universiteta im. Zhdanova.
(Mercury (Planet), Transit of)

CHERNYKH, L.I.

KULAGIN, S.G.; KOVBASYUK, L.D.; DAGAYEV, M.M.; ROZENBLYUM, N.D.; YEGORCHENKO,
I.F.(Irkutsk); KAVERIN, A.A. (Irkutsk); KONSTANTINOVA, T.G. (Irkutsk);
KUKLINA, V.A. (Irkutsk); KUKLIN, G.V. (Irkutsk); SAZONOVA, Z.G.,
(Irkutsk); CHERNYKH, L.I. (Irkutsk); CHERNYKH, N.S. (Irkutsk);
DEMIDOBICH, Ye.G.; BRONSHTEN, V.A.; YAKHONTOVA, N.S. (Leningrad);
PEROVA, N.B.; DOKUCHAYEVA, O.D.; KATASEV, L.A.; KLYAKOTKO, M.A.;
PARENAGO, P.P.; SHCHERBINA-SAMOYLOVA, I.S.; MASEVICH, A.G.;
RYABOV, Yu.A.; SHCHEGLOV, V.P.; PEREL', Yu.G.; MARTYNOV, D.Ya.;
FEDYNSKIY, V.V.; VORONTSOV-VEL'YAMINOV, B.A.; ZIGEL', F.Yu.;
BAKULIN, P.I., otv.red.; RAKHLIN, I.Ye., red.; AKHLAMOV, S.N.,
tekhn.red.

[Astronomical calendar] Astronomicheskii kalendar'. [A yearbook;
variable section for 1959] Ezhegodnik. Peremennaia chast', 1959.
Red.kollegiia P.I. Bakulin i dr. Moskva, Gos.izd-ve fiziko-
matem.lit-ry, 1958. 370 p. (Vsesoiuznoe astronomo-geodezicheskoe
obshchestvo, no.62)   (MIRA 12:2)

1. Gosudarstvennoye astronomo-geodezicheskoye obshchestve (for Kulagin,
Kovbasyuk, Demidovich). 2. Moskovskoye otdeleniye Vsesoyuznogo astro-
nomo-geodezicheskego obshchestva (for Dagayev, Rozenblyum, Bronshten,
Perova).
                        (Astronomy--Yearbooks)

SHCHUKAREV, S.A.; VASIL'KOVA, I.V.; PERFILOVA, I.L.; CHERNYKH, L.V.

Enthalpy of vanadium trichloride formation. Zhur.neorg.khim. 7 no.7:
1509-1511 Jl '62.   (MIRA 16:3)
        (Vanadium chloride)   (Heat of formation)

LILICH, L.S.; CHERNYKH, L.V.; SHALYGIN, V.M.

Solubility in the systems $Ca(ClO_4)_2$ – $HClO_4$ – H_2O and $Cd(ClO_4)_2$ – $HClO_4$ – H_2O. Zhur. neorg. khim. 8 no.12:2773-2777 D '63. (MIRA 17:9)

CHERNYKH, M.I., assistent

Air curtains of gates. Trudy Ural.politekh.inst. no.85:136-142
'60.   (MIRA 14:8)
(Air curtains)

CHERNYKH, MK.

USSR/ Chemistry - Solid fuels

Card 1/1   Pub. 116 - 26/29

Authors   : Kuznetsov, V. I.; Govorova, R. P.; Fadeycheva, A. G.; Gigel', T. B.; and
               Chernykh, M. K.
Title   : Complex utilization of brown coal in the Ukr. SSR. Part 13, Tars from
               semicoking of smut coal with the solid heat carrier - semicoke

Periodical   : Ukr. khim. zhur. 21/6, 804-809, Dec 1955

Abstract   : Tars obtained by semicoking of brown coal with the solid heat-carrier (semi-
               coke) were found to offer a higher yield of benzene and lower yield of paraf-
               fin fractions as compared with tar obtained during the semicoking of the very
               same coal with a gaseous heat carrier. The primary decomposition products
               during the semicoking of brown coal with a solid heat carrier - semicoke -
               submit to cracking to a greater extent than during semicoking with a gaseous
               heat carrier. The increase in fractions in tars of unsaturated compounds
               was found to be due to cracking. The phenols obtained from such fractions
               offer a somewhat lower yield of phenol-cresol fractions; and the paraffin
               yield is much lower. Tables; graph.

Institution : Acad. of Sc., Ukr. SSR, Inst. of Heat Power Engineering, Lab. for Chem. Proc.

Submitted   : June 17, 1955

MAGIDOVICH, Iosif Petrovich; KUMKES, S.N., red.; CHERNYKH, M.P.,
        mladshiy red.; KISELEVA, Z.A., red. kart; VILENSKAYA, E.N.,
        tekhn. red.

        [The history of the discovery and exploration of North America]
        Istoriia otkrytiia i issledovaniia Severnoi Ameriki. Moskva,
        Gos. izd-vo geogr. lit-ry, 1962. 475 p.   (MIRA 15:3)
                (North America—Discovery and exploration)

SUSHKINA, Nadezhda Nikolayevna; PROKHODTSEVA, S.Ya., red.; CHERNYKH,
     M.P., mladshiy red.; KOSHELEVA, S.M., tekhn. red.

     [There are volcanos, whales and ice along the path]Na puti
     vulkany, kity, l'dy. Moskva, Geografgiz, 1962. 157 p.
                                             (MIRA 15:8)
        (Kurile Islands--Description, Geography)
          (Spitsbergen--Description, Geography)
        (Chukchi National Area--Description, Geography)

KREPS, Yevgeniy Mikhaylovich; PROKHODTSEVA, S.Ya., red.;
    CHERNYKH, M.P., red.; KISELEVA, Z.A., red. kart;
    KOSHELEVA, S.M., tekhn. red.

[The "Vitiaz'" in the Indian Ocean] "Vitiaz'" v Indiiskom
okeane. Moskva, Geografgiz, 1963. 275 p.   (MIRA 16:6)
        (Indian Ocean—Oceanographic research)

DITMAR, Andrey Borisovich; ROMASHOVA, V.D., red.; CHERNYKH, M.P.,
mladshiy red.; MAL'CHEVSKIY, G.N., red. kart; VILENSKAYA,
E.N., tekhn. red.

[To the countries of tin and amber] V strany olova i iantaria.
Moskva, Geografgiz, 1963. 70 p.   (MIRA 16:12)
    (Phytheas, of Massilia) (Explorers)

SEMINSKIY, V., tokar'; CHERNYKH, N., starshiy val'tsovshchik, Geroy Sotsial-
isticheskogo Truda

Green light to the council of efficiency promoters! Sov. profsoiuzy
17 no.20:31-32 O '61.   (MIRA 14:9)

1. Zavod "Krasnyy ekskavator", g. Kiyev (for Seminskiy). 2. Verkh-
Isetskiy metallurgicheskiy zavod, g. Sverdlovsk (for Chernykh).
(Suggestion systems)

CHERNYKH, N.

"Cleaning the Blades of Gas Turbines," by V. Parfenov and N. Chernykh, Grazdanskaya Aviatsiya, No 11, Nov 56, p 24

The development of intercrystalline microscopic fissures along the edges of the metal surface grains of jet engine gas turbine blades, with subsequent deeper penetration due to thermal and mechanical stresses, results in blade failures. The unsatisfactory results of removing the chrome and aluminum oxide film by other methods led to the development of a chemical reagent, R-77, which consists of 4.3% fluoboric (fluoric) acid (sp wt, 1.34-1.4) and 19.2% nitric acid (sp wt, 1.3-1.4) in water. The compound formed by the action of the reagent can be easily cleaned with a hairbrush and a stream of water. Any flaws can then easily be detected with a binocular lens.

It is stated that R-77 has no effect on nonoxidizing metals. Blade stability is not reduced. However, blades made of EI-437 type alloys are negatively affected owing to the vigorous consumption of the reagent and prolonged pickling. The temperature of the reagent should be held to within 25-30°, and the pickling time should not exceed 40 minutes.

SUM. 1305

ZOZ, I.G.; CHERNYKH, N.A.

Comparative study of Far Eastern and East European lilies-of-the-valley. Bot. zhur. 46 no.4:562-569 Ap '61.   (MIRA 14:3)
(Lilies-of-the-valley)

ZOZ, I.G.; CHERNYKH, N.A.

Biology of Eriosynaphe longifolia (Fisch.) DC. Dokl.AN SSSR 138
no.3:699-701 My '61.   (MIRA 14:5)

1. Khar'kovskiy nauchno-issledovatel'skiy khimiko-farmatsevticheskiy
institut. Predstavleno akademikom V.N.Sukachevym.
                        (Ferula)

CHERNYKH, N.I.

Approximation of functions by polynomials with connections.
Dokl. AN SSSR 162 no.2:290-293 My '65.   (MIRA 18:5)

1. Sverdlovskoye otdeleniye Matematicheskogo instituta im. V.A.
Steklova AN SSSR. Submitted December 2, 1964.

ZUBOV, V.V.; ANTIPINA, Ye.N.; CHERNYKH, N.N.

Temperature dependence of the magnetostriction of
certain ordering alloys. Izv. vys. ucheb. zav; fiz.
no.1:49-51 '63.   (MIRA 16:5)

1. Kuybyshevskiy industrial'nyy institut imeni Kuybysheva.
                (Magnetostriction)   (Alloys)

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 263 (USSR)

SOV/137-58-11-23714

AUTHOR: Chernykh, N. P.

TITLE: Effect of Hydrogen on the Creep-rupture Strength of Some Steels (Vliyaniye vodoroda na dlitel'nuyu prochnost' nekotorykh staley)

PERIODICAL: Dokl. 7-y Nauchn. konferentsii, posvyashch. 40-letiyu Velikoy Oktyabr'sk. sots. revolyutsii. Nr 2. Tomsk, Tomskiy un-t, 1957, pp 74-75

ABSTRACT: The author proposes a technique for the investigation of creep-rupture strength and creep in a gaseous or liquid medium flowing under pressure. A description is given of the construction and operation of an apparatus for testing pipes for creep-rupture strength under shop conditions. Results of testing of EI579 steel in an H_2 medium under laboratory and shop conditions are adduced. The author points out that the method widely used up to present time for investigating the effect of H_2 on the properties of steel with saturation of the surface of the specimens with H_2 in special autoclaves or under electrolysis does not reproduce the actual conditions of the H_2 effect on metal operating under conditions of creep. Therefore the strength characteristics obtained in such investigations do not represent the actual

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Effect of Hydrogen on the Creep-rupture Strength of Some Steels (cont.)

strength of the metal and cannot be used as a basis for stress analysis.

L. G.

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SOV/139-58-4-16/30

AUTHORS: Chernykh, N. P., Molchanova, V.D. and Mil', M. I.

TITLE: Long Duration Strength of Certain Steels Subjected to
          the Pressure of Hydrogen and Nitrogen (Dlitel'naya
          prochnost' nekotorykh staley pod davleniyem vodoroda
          i azota)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Fizika,
          1958, Nr 4, pp 97-104 + 1 plate (USSR)

ABSTRACT: Paper presented at the 7th Scientific Conference of
          the Tomsk State University, November, 1956.
          Some equipment of the petroleum industry has to operate
          at temperatures of 400 to 550°C with pressures of 325 and
          700 atm in presence of hydrogen and other gases. Under
          such conditions the material is in a state of creep and
          several instances are known in which sudden brittle
          failure of the steel of such apparatus occurs after long
          duration operation in presence of hydrogen under pressure.
          It was found that the metal in such apparatus became
          brittle and decarburized. This problem has been
          extensively investigated in numerous countries. According
          to Class (Ref 10), the rate of decarburisation is
Card 1/7 proportional to the stress in the tube walls, the long

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duration strength of tubes in the presence of hydrogen
under pressure is lower than in presence of nitrogen
under pressure, also,addition to hydrogen of moisture
and other gases affects the long duration strength of the
steel. On the basis of analysis of published work
and taking into consideration experience gained in
hydrogenation plants in 1955, the Irkutsk Branch of
NIIKhIMMASh decided to investigate the influence of gaseous
media on the long duration strength of high temperature
steels. The basic aim of the investigations was to
determine the limit long duration strength of such steels
in a gaseous medium to obtain more accurate stressing
data, since such data are not available either in Soviet
literature or in foreign literature. The second aim of
the investigations was to study the nature of the action
of hydrogen in steel in the state of slow plastic
deformation. Solving the main task necessitated establish-
ing the influence of hydrogen on the long duration strength
at various temperatures and pressures and various stress
states. The choice of the test rig was such as to obtain
Card2/7 test conditions for the metal resembling as closely as

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possible those pertaining to the hydrogenation equipment
and particularly to the tubes. The through flow of
hydrogen was provided for removing corrosion products
(methane) which may appear as a result of the interaction
of hot hydrogen and the steel. For elucidating the
influence of hydrogen pressure on the properties of steel
under creep conditions and for determining the long
duration strength of the tubes under the pressure of the media
being processed, an original pilot plant set-up was
produced in accordance with a design patented by one of
the authors of this paper (Ref 15), a diagrammatic sketch
of which is shown in Fig.1. The equipment was designed with
the following considerations in mind: there should be a
possibility of testing the tubes under conditions approach-
ing normal operating conditions, i.e. the flow must be
ensured of various media through the tubes; it must be
possible to investigate the tubes at various temperatures,
pressures and with various media; it should be possible to
ensure long duration operation at a given regime maintain-

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ing accurately the temperature and the pressure; it
should be possible to test simultaneously several
specimens under mutually independent test conditions;
the test rig must be safe to operate. The hydrogen or
nitrogen is fed from a 600 atm industrial system
through valves into a vessel intended for equalisation
and for inter-mixing the gases, whereby the pressure is
recorded on a self-recording pressure gauge. The
gaseous medium is made to flow from this vessel into a
collector vessel which feeds simultaneously six tube
specimens each of 1000 mm length and an external diameter
of 14 to 35 mm. The specimen is placed into a chamber
furnace representing a protective tube of the heat and
hydrogen resistant steel EI579. The temperature is
automatically maintained at a desired value. The chemical
compositions and the mechanical properties of the
investigated steels are given in Tables 1 and 2. The
measured times to failure as a function of the stress are
graphed in Fig.3 and entered in Table 3. By extra-
Card4/7 polation of the graphs, the limit long duration strength

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was determined for the steel EI579 subjected to the
pressure of hydrogen and nitrogen; for a temperature of
550°C and a pressure of 600 atm these values (in kg/mm^2)
were as follows: after 10 000 hours - 17 for hydrogen
and 24 for nitrogen; after 100 000 hours - 7 for
hydrogen and 16 for nitrogen. Fig.2 shows the outside
view of tubular specimens of the steel 30KhMA after
fracture at 550°C caused by differing long duration
load conditions; Fig.6 shows a photograph of an oval
tube of the Steel 20 which failed after 2 hours at a
hydrogen pressure of 600 atm at 500°C. Figs. 4 and 5
show micro-photos of the structure at various states of
the material. The results of the work are summarised thus:
1. A test rig was built and tested which is intended for
investigating the long duration strength of tubes under
pressure produced by any flowing medium at temperatures
between 0 and 700°C and pressures up to 1000 atm. This
set-up enables investigating pieces of tubes as well as
welded tubes to determine the long duration corrosion
Card5/7   strength under the influence of the pressure of a

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flowing medium.
2. Testing the long duration strength of tubes under the effect of the pressure of a flowing medium permits determining more accurately the qualitative and quantitative indices for operation of tubes under normal operating conditions (strength, corrosion, diffusion).
3. The long duration strength of tubes made of the steels EI579, ZOKhMA and Steel 20 is lower if subjected to hydrogen under pressure than if subjected to nitrogen under pressure and the difference increases with the test duration, as can be seen from the values quoted above. It was established that an increase in the stress of the tube wall brings about an increase of the speed and depth of decarburization.

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There are 6 figures, 4 tables and 16 references,
9 of which are Soviet, 4 English, 3 German.

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konstruktorskiy institut khimicheskogo mashinostroyeniya,
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SUBMITTED: February 7, 1958

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