M

Country : USSR
Category: Cultivated Plants. Potatoes. Vegetables.
         Cucurbits.

Abs Jour: RZhBiol., No 22, 1958, No 100301

replications, the average gross yield for
three years comprised 222.4 centners/ha with
irrigation with river water (control), and
with run-off water - 26.6 centners/ha (11.5%)
more. Irrigation with run-off water against
a background of N60, P_2O_5 60, K_2O 90 gave an
increase of 61.7 centners/ha (21.6%) in compari-
son with the control; in irrigation with run-
off waters with the background of precipitation
of 20 tons/ha - 93.6 centners (42.1%); with
the background of both - 174 centners/ha (78.4%).
Without irrigation and fertilizers, the yield

Card   : 2/3

Country : USSR   M
Category: Cultivated Plants. Potatoes. Vegetables.
         Cucurbits.

Abs Jour: RZhBiol., No 22, 1958, No 100301

          was lower by 22.9%. The yield of the first
          three pickings in terms of percentage of
          the gross yield, comprised 30.4 in the con-
          trol, with irrigation with run-off waters -
          38.7, the samr with the background of preci-
          pitation - 40.9, with the background of fer-
          tilizers - 45.0 and with the background of
          both - 48.6. The content of ash substances,
          proteins and sugars was greater with the
          irrigation with run-off waters, especially with
          the background of precipitation and mineral
          fertilizers. -- M.V. Dranishnikov

Card   : 3/3

                            M-60

BELYAK, B.S.

    Use of "fenoform-forte". Veterinariia 39 no.12:39 D '62.

                                           (MIRA 16:6)

    1. Moskovskaya gorodskaya veterinarnaya apteka.

                          (Insecticides)

S/035/61/000/012/008/043
A001/A101

AUTHORS: Pyaskovskaya-Fesenkova, Ye.V., Boyko, P.N., Belyak, G.M., Boyko V.V.

TITLE: Some data on attenuation and dispersion of light at various alti-
                tudes above sea level

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 12, 1961, 33,
                abstract 12A285 ("Izv. Astrofiz. in-ta AN KazSSR", 1961, v. 11,
                78 - 88, Engl. summary)

TEXT: Brightness of daily sky on the Sun's almucantar was measured simul-
taneously at two points $\theta = 57$ and 60° at the Mountain — Observatory of the Astro-
physical Institute, AS KazSSR, and on the Kumbel' mountain. A visual photometer
and a photoelectrical photometer with selenium photoelement were used. Trans-
parency coefficients (P), optical thicknesses of atmosphere (τ) and scattering
indicatrices $\mu(\theta)$ were determined from the measurement data. It is noted that
transparency coefficients over the lowland and mountains differ only slightly.
Linke's turbidity factor increases in afternoon hours in comparison with morning

Card 1/2

Some data on attenuation ...

S/035/61/000/012/008/043
A001/A101

hours, and this increase is more noticeable at the Observatory than on the Kumbel' mountain. Absolute scattering indicatrices on the Kumbel' mountain on 29 August prior and after noon increased by 30 - 85%.

V. Goitkov

[Abstracter's note: Complete translation]

Card 2/2

1. BELYAK, I.

2. USSR (600)

4. Geography & Geology

7. Land of fantastic rocks. Krasnoiarsk, Kraevoe izdatel'stvo, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February, 1953. Unclassified

BELYAK, I., inzh.

Capacity and operating coefficients of rotary compressors with revolving rotors. Khol. tekh. 35 no. 3:45-47 My-Je '58.(MIRA 11:7)

1. Rizhskiy zavod "Kompressor."
                              (Compressors)

BELYAK, Konstantin Nikitovich; VOROTNIKOVA, R.V., red.

[Central Chernozem Economic Region]TSentral'no-
Chernozemnyi ekonomicheskii. Voronezh, TSentral'no-
Chernozemnoe knizhnoe izd-vo, 1965. 149 p.
                                        (MIRA 18:11)
1. Predsedatel' sovnarkhoza TSentral'no-Chernozemnogo
ekonomicheskogo rayona (for Belyak).

BELYAK, V.I.; ZAIKIN, D.A.

Rotational states of nonspherical even-even nuclei. Izv.
AN SSSR. Ser. fiz. 25 no.9:1163-1168 '61.   (MIRA 14:8)

1. Fizicheskiy institut imeni P.N. Lebedeva AN SSSR.
              (Nuclei, Atomic)

40873

S/048/62/026/009/008/011
B125/B186

AUTHOR: Belyak, V. I.

TITLE: Excitation of the collective states of the nuclei in fast
            particle scattering

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26,
            no. 9, 1962, 1180-1187

TEXT: Relations between the scattering cross sections and the nuclear
parameters (reduced probabilities of electric transitions, quadrupole
moment) are derived without allowing for the nature of the collective
nuclear motions. The expansion of the scattering amplitude $f(\vec{k}_n, a_{\lambda\mu})$ in
a power series of $a_{\lambda\mu}$ or $q_{\lambda\mu} = a_{\lambda\mu}$ is broken off after the linear term.
$a_{\lambda\mu}$ are the parameters of the nuclear surface deformation. The total cross
section of all processes (elastic and inelastic scattering on polarized
nuclei is

$$\sigma'_{N,J,M'_0} = \frac{4\pi}{k} \operatorname{Im} f^{N,J,M'}_{N,J,M_0}(k_0) = \frac{4\pi}{k} \operatorname{Im} [F_0(k_0) + q\tau_{M_0}\sqrt{\frac{4\pi}{5}} Y_{20}(\theta, \varphi) F_{20}(k_0)]; \quad (11).$$

Card 1/4

Excitation of the collective states...

In this case $F_{2\mu}(\vec{k}_0) = \delta_{\mu 0} \cdot F_{20}(\vec{k}_0)$, $\vec{\sigma}_M = \sum_M \varrho_{MM}\sigma_M$ are the mean values

of the cross sections of the scattering from nuclei in an orienting axial field. Nuclear orientation is characterized by the parameter

$$\bar{\tau}_M = \sum_M \varrho_{MM}\tau_M \, (0 \leqslant \bar{\tau}_M \leqslant 1).$$

The particle scattering into small angles is considered as diffraction scattering from a black nucleus. The elastic scattering cross section is

$$d\sigma_{N,J,M_0}^{N,J,M'} = (kR_0^2)^2 \left(\frac{J_1(kR_00)}{kR_00}\right)^2 \left\{1 - q\ \bar{\tau}_{M_0} \sqrt{\frac{5}{4\pi}} \cdot \frac{kR_00}{J_1(kR_00)} \times \right.$$
$$\left. \times [J_0(kR_00)\left(1 - \frac{3}{2}\sin^2\vartheta\right) + J_2(kR_00)\frac{3}{2}\sin^2\vartheta\cos 2\Phi]\right\}d\Omega, \qquad (17).$$

The total cross section of all processes on non-oriented nuclei $(\bar{\tau}_{M_0})$ is

$$\sigma_{N,J,M_0}' = 2\pi R_0^2 \left[1 - q\ \bar{\tau}_{M_0} \cdot \sqrt{\frac{5}{4\pi}}\left(1 - \frac{3}{2}\sin^2\vartheta\right)\right]. \qquad (18).$$

Card 2/4

Excitation of the collective states...   S/048/62/026/009/008/011
                                            B125/B186

Orientation of the nuclei includes the angle ϑ with $\vec{k}_0$. The scattering cross section

$$d\sigma^{NJ}_{N_0J_0} = \frac{\overline{\beta^2}(kR_0^2)^2}{16\pi}\left[J_0^2(kR_0\theta) + 3|J_1(kR_0\theta) + \frac{4i\eta}{5}(kR_0\theta)^{-2i\eta} \times \right.$$
$$\left. \times \int_{kR_0\theta}^{\infty} x^{-1+2i\eta}J_2(x)\,dx|^2\right] b\,[E2, N_0J_0 \to NJ]\,d\Omega. \qquad (19)$$

with excitation of quadrupole oscillations differs from the scattering cross section on an axial rotor only by the factor $b(E2, N_0, J_0 \to NJ)$. The calculation of the excitation cross section of quadrupole oscillations ($\lambda=2$) and octupole oscillations ($\lambda=3$) in Born approximation is mentioned.

$$d\sigma^{NJ}_{N_0J_0} = B(E\lambda, N_0J_0 \to NJ)\cdot\frac{1}{\pi}\left(\frac{m|V_0|R_0^3}{\hbar^2}\right)^2 \cdot f_\lambda^2(\varkappa_n R_0)\frac{k_n}{k}\,d\Omega,$$

$$\overline{d\sigma^{N_0J_0M_0}_{NJM}} = \left(\frac{2m|V_0|R_0^3}{\hbar^2}\right)^2 \cdot \left(\frac{j_1(\varkappa R_0)}{\varkappa R_0}\right)^2\left[1 + \bar{q}\bar\tau_{M_0}\sqrt{\frac{5}{4\pi}} \times \right.$$
$$\left. \times \frac{\varkappa R_0}{j_1(\varkappa R_0)}j_3(\varkappa R_0)(1 - 3\sin^2\theta\cos^2\Phi)\right]d\Omega.$$

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Excitation of the collective states...

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B125/B186

is the elastic scattering cross section determined in Born approximation on nuclei of arbitrary orientation. The total cross section $\sum\limits_{N} d\,\sigma_{oo}^2 = d\sigma_o^2$

in the models of collective nuclear motion under consideration depends only on the quadrupole deformation β^2 of the nucleus. This deformation can be dynamic (spherical nuclei) or static (non-spherical nuclei). The ratio $d\sigma_{oo}^{22}/d\sigma_{oo}^{12} = b(E2,00 \rightarrow 22)/b(E2,00 \rightarrow 12)$ (22)   of the scattering cross sections with excitation of the 2^+ levels depends only on the nature of the collective nuclear motion, which can be determined by measuring (22). The amount and the nature of the quadrupole moment and the static deformation of the nucleus connected therewith can be determined from the particle scattering by oriented nuclei.

Card 4/4

89259
S/048/61/025/001/025/031
B029/B063

26.2242

AUTHOR: Belyak, V. I.

TITLE: Scattering of fast neutrons by non-axial nuclei

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya,
              v. 25, no. 1, 1961, 139-142

TEXT: A study has been made of the scattering of neutrons by non-
spherical nuclei through small angles in diffraction approximation which
is possible if $kR \gg 1$. In this approximation, the wave function of the
respective system in the semispace $z \gg 0$ (the $z=0$ plane passes through
the nucleus perpendicular to the inciding particle current) satisfies
the equation $(T_{\vec{r}} + T_{\omega})\psi(\vec{r}, \omega) = 0$, where $T_{\vec{r}}$ is the operator of the
kinetic energy of the scattered particles, and T_{ω} is the operator of
nuclear rotational energy. If the particle energy is lower than ~ 50 Mev,
the particles may be considered to be black. The boundary condition

Card 1/5

$$\psi\,(\vec{\rho},0,\omega) = \begin{cases} 0 \\ \psi_0(\vec{\rho},0,\omega) = \varphi_0(\omega) \end{cases} \begin{matrix} \vec{\rho} \in S(\omega) \\ \vec{\rho} \notin S(\omega) \end{matrix} \text{ is imposed on the wave function}$$

of the system, which is represented as the sum of the incident wave
$\psi_0(\vec{r},\omega) = e^{ikz} \cdot \varphi_0(\omega)$ and the scattered wave $\psi(\vec{r},\omega)$. Accordingly,

$$\psi_s(\vec{\rho},0,\omega) = \begin{cases} \vec{\rho} \\ 0 \end{cases} {}_0(\omega) \begin{matrix} \vec{\rho} \in S(\omega) \\ \vec{\rho} \notin S(\omega) \end{matrix} . \text{ All the boundary conditions presented here}$$

take account of the adiabaticity of nuclear motion relative to the motion
of the incident neutron in the nucleus. After the expansion of
$\psi_s(\vec{r},\omega)$ in a series of the wave functions $\varphi_n(\omega)$ of the nucleus

$$\psi_s(\vec{r},\omega) = \sum_n \Phi_n(\vec{r})\varphi_n(\omega), \text{ it is possible to formulate the boundary problem}$$

for $\Phi_n(\vec{r})$, whose solution for $r \to \infty$ has the form

$$\Phi_n(\vec{r}) = \frac{e^{ik_n r}}{r} \cdot f_n(\Omega), \quad f_n(\Omega) = \frac{ik_n^z}{2\pi} \int d\omega \varphi_n^*(\omega) f(\omega,\Omega)\,\varphi_0(\omega).$$

Card 2/5

89259

Scattering of fast neutrons by ...   S/048/61/025/001/025/031
                                            B029/B063

$k_n(\vec{\chi}, k_n^z)$ is the wave vector of the scattered neutron exciting the n-th
rotational state of the nucleus. For small angles one obtains

$$f_n(\Omega) = \int d\omega\, \psi_n^*(\omega) f(\omega, \Omega) \psi_0(\omega) \text{ with } f(\omega, \Omega) = \frac{ik}{2\pi} \int_{S(\omega)} d\vec{\rho}\, e^{-i\vec{\chi}\vec{\rho}}, \quad \chi = k\theta.$$

Next, the differential cross sections with excitation of the rotational
states $d\sigma_n = \left| f_n(\Omega) \right|^2 d\Omega$ for even-even non-axial nuclei are determined:

$d\sigma_{2m\tau}(\gamma) = d\sigma_{2m1}(\gamma = 0) b(E2, 2\tau \to 0).$ $b(E2, 2\tau \to 0) = (a_\tau \cos\gamma + b_\tau \sin\gamma)^2$
is the reduced probability of electric quadrupole transition between the
ground state and the corresponding spin-2 state. In explicit form one

obtains $b(E2, 21 \to 0) = \frac{1}{2}\left[1 + \frac{3-2\sin^2 3\gamma}{\sqrt{9-8\sin^2 3\gamma}} \right]$, $b(E2, 22 \to 0) = \left[1 - \frac{3-2\sin^2 3\gamma}{\sqrt{9-8\sin^2 3\gamma}} \right].$

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Scattering of fast neutrons by S/048/61/025/001/025/031
                                              B029/B063

The differential inelastic scattering cross sections for non-axisymmetric
nuclei and small angles are thus equal to the corresponding differential
scattering cross sections for axisymmetric nuclei multiplied by the
reduced probability of the corresponding quadrupole transition between
the ground state and the corresponding spin-2 state. $d\sigma_{2m2}$ vanishes

for axisymmetric nuclei and for nuclei with $\gamma = 30°$, while for $\gamma = 15°-24°$

it accounts for 5-7% of $d\sigma_{2m1}$. In the case of non-axisymmetric spin-2

nuclei, a second spin-2 level is observed when measuring the energy of the
scattered neutrons or secondary photons. If $\beta kR \gg 1$, the following

relations are obtained for the total cross sections:

$$\sigma_0 = \pi R^2 (1 - (5/16\pi)^{1/2}\beta), \quad \sigma_{22} = \sigma_{2,-2} = (3/2)\sigma_{20}, \quad \sigma_2 = \sum_m \sigma_{2m} = (5/8)(5/16\pi)^{1/2}\pi R^2 \beta.$$

The condition $\beta kR \gg 1$ for real nuclei is satisfied only at energies at
which the nucleus may be considered to be black. The formulas derived
here can be used only for rough estimates since the scattering through
small angles is not the only important factor if $\beta kR \sim 1$. In the case
of axisymmetric nuclei, the relation $\sigma_2 = (1/3\pi)(kR\beta)R^2\beta$ holds if one

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89259

Scattering of fast neutrons by ...   S/048/61/025/001/025/031
                                            B029/B063

confines oneself to the first term of the series expansion. A. S. Davydov
and D. A. Zaikin are thanked for advice and discussions. This is the
reproduction of a lecture read at the Tenth All-Union Conference on
Nuclear Spectroscopy, Moscow, January 19-27, 1960. There are 5 references:
4 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR
                 (Institute of Physics imeni P. N. Lebedev, Academy of
                 Sciences USSR)

Card 5/5

BELYAK, V.I.

       Karst in the portion of the Yenisey Valley in the Eastern Sayan
       Mountains. Biul. MOIP Otd. geol. 40 no. 6:159-160 N-D '65.
                                     (MIRA 19:1)

    1. Submitted May 28, 1965.

BELYAK, V.I.

Use of collective variables in describing nuclear motion.
Izv. AN SSSR. Ser.fiz. 30 no.1:175-184 Ja '66.

(MIRA 19:1)

1. Fizicheskiy institut im. P.N.Lebedeva AN SSSR.

BELYAK, V.V., inzh. (g.Stanislav)

Increasing the discharge rate of bore holes by seepage feeding
of the water-bearing layer. Vod. i san. tekh. no.6:7-9 Je '62.
                                                    (MIRA 15:7)
                    (Water-supply engineering)

BELYAK, Ya.; ZEMEL'MAKHER, M.

Culinary clubs. Obshchestv.pit. no.1:24 Ja '60.
(MIRA 13:5)

1. Instruktor proizvodstvennogo obucheniya, rukovoditel'
kulinarnogo kruzhka Zhitomirskoy shkloly torgovo-kulinarnogo
uchenichestva (for Belyak). 2. Zamestitel' direktora po uchebnoy
chasti Zhitomirskoy shkoly torgovo-kulinarnogo uchenichestva (for
Zemel'makher).
                    (Cooking schools)

BELYAK, Yu., kand.tekhn.nauk

Lifting heavy tonnage ships on longitudinal two-poppet slipways.
Rech. transp. 20 no. 3:21-22 Mr '61.   (MIRA 14:5)
           (Ships—Maintenance and repair)

BELYAK, Yu., kand. tekhn. nauk

      Use of ships in mixed transportation. Rech. transp. 22 no.8:
      26-27 Ag '63.   (MIRA 16:10)

            (Inland water transportation)
              (Coastwise navigation)

L 08199-67

ACC NR: AP6026350   (N)   SOURCE CODE: UR/0310/66/000/004/0036/0038

AUTHOR: Belyak, Yu. (Candidate of technical sciences)

ORG: None

TITLE: Results of operation of vessels of 576, 1000/800, 791 and 558 projects under sea conditions

SOURCE: Rechnoy transport, no. 4, 1966, 36-38

TOPIC TAGS: sea transportation, inland vessel data, shipbuilding engineering, marine engineering

ABSTRACT: An eight-year experience with using inland vessels for operations in various sea-coastal areas is reviewed and evaluated on the basis of investigations made by the LIVT Institute. Probable occurrence of rough weather with waves of 2 and 3 meters high is expressed in percent in a table covering various seas bordering the Soviet Union in Europe and Asia. In general, the percentages are relatively low and weather conditions for operating inland vessels are favorable. The analysis of experience also shows that the safety of navigation is sufficiently secured by presence of various intermediary harbors, bays, islands and other natural and artificial shelters. In this connection, various sea routes are cited as examples. The reliability of weather forecast is evaluated and the probable distribution of waves are graphically presented. The main construc-

UDC: 629.122:656.61

Card   1/2

L 08199-67

ACC NR: AP6026350

tion and performance characteristics of various freight motor-ships selected for sea navigation service are summed up in two tables. Their particular design features are mentioned and their class in the SSSR Register is determined. Various experimental tests conducted on the vessels during their navigations in different seas are generally described. The effect of waves on the vessel structure is discussed and the variations of stresses are graphically illustrated for two vessels. The preparations of vessels for experimental operations in a 20-mile coastal zone are described including the determination of admissible waves and weather conditions. The arrangement of additional protection equipment, safety measures, signal lights, lifeboats, etc. is reviewed. The economical aspect of operations is also examined for various shiplines and sea routes. In general, the use of river vessels of "M" and "O" classes for sea-coastal navigation is technically and economically possible on condition that some additional rearrangements and adjustments are made on the vessels. Orig. art. has: 4 tables and 2 graphs.

SUB CODE: 08, 13/ SUBM DATE: None

Card 2/2 dda

SOV/124-57-3-3095

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 3, p 63 (USSR)

AUTHOR: Belyak, Yu. L., Panshin, A. F.

TITLE: Experimental Determination of the Wave Stresses Exerted on the
           Hull of Oil Tankers (Eksperimental'noye opredeleniye volnovykh
           nagruzok na korpusa neftenalivnykh sudov)

PERIODICAL: Tr. Tsentr. n-i. in-ta rech. flota, 1956, Nr 32, pp 16-42

ABSTRACT: Results are given of full-scale strength tests on three types of oil
          barges of different tonnage. Bending moments, developing stresses
          of the order of the main allowable stresses, were created by a
          suitable distribution of ballast. This enabled the authors to con-
          duct a verification of the hull strength under the conditions indicated.
          Seaway tests of the vessels were conducted off the Astrakhan' road-
          stead with the aim of determining the stresses in the hull joints and
          the character of hull flexure in a seaway. The tests revealed that
          maximum additional stresses created by the action of waves upon
          the hull develop when the vessel is proceeding on a quartering or
          "off-the-bow" course. Propositions are tendered for changes of
Card 1/2   the "Instruction for the verification of the strength of vessels"

Experimental Determination of the Wave Stresses Exerted (cont.)   SOV/124-57-3-3095

compiled by the "River Register" and the TsNIIRF (Central Scientific Research Institute of the River Fleet). The test procedures and the measuring equipment are described in detail.

A. A. Kostyukov

Card 2/2

Belyak, Yu L.

BELYAK, Yu.L., kand.tekhn.nauk; STEPANYUK, Ye.I., kand.tekhn.nauk.

Investigating vibrations on the motor tugboat, "V. Kuibyshev\"
Rech.transp. 16 no.8:24-25 Ag '57.   (MIRA 10:11)
    ("V. Kuibyshev" (Ship))   (Vibration (Marine engineering))

BELYAK, Yu.L.   124-1957-10-12106

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 10, p 127 (USSR)

AUTHORS: Byelyak, Yu. L.,   Panshin, A. F.

TITLE: Investigation of the Loads Acting on Inland Water Vessels Subjected
            to Conditions of Heavy Waves, and Certain Suggestions for the
            Strengthening of Vessels (Issledovaniye nagruzok, deystvuyushch-
            ikh na suda vnutrennego plavaniya v usloviakh volneniya i
            rekomendatsii po podkrepleniyu sudov)

PERIODICAL: Tr. Tsentr. n.-i, in-ta rech. flota, 1957, Nr 36, pp 127-141

ABSTRACT: Bibliographic entry

Card 1/1

BELYAK, Yu.L., kand.tekhn.nauk

Important shortcomings in L.M.Volkov's book "Strength testing of inland waterway vessels" by L.M.Volkov. Reviewed by IU.L. Beliak). Rech.transp. 18 no.6:55-56 Je '59.

(MIRA 12:9)

(Ships--Testing) (Volkov, L.M.)

BELYAK, Yu.L., kand.tekhn.nauk

Testing the stability of cargo ships of the "Sixth Five-Year Plan"
class in the Sea of Okhotsk. Rech.transp. 18 no.7:24-25 Jl '59.
(MIRA 12:11)

(Stability of ships)

BELYAK, Yu.L., kand. tekhn. nauk; PANSHIN, A.F., inzh.

Effect of wave impact on ship hulls. Sudostroenie 25 no.7:10-11
Jl '59.   (MIRA 12:12)
    (Ships--Hydrodynamic impact) (Hulls (Naval architecture))

BELYAK, Yu.L., kand.tekhn.nauk; MAMONTOV, Yu.N., inzh.

Operational testing of strength and losses in propulsive speed
of barge tankers and diesel freighters. Trudy TSNIIRF
no.40:49-68 '59.   (MIRA 13:6)
      (Barges--Testing) (Freighters--Testing)
                (Ship propulsion--Testing)

STOROZHEV, Nikolay Fedorovich; ITSKOVICH, G.M., red.; BELYAK, Yu.L.,
retsenzent; KAN, P.M., red. izd-va; BODROVA, V.A., tekhn.
red.

[Elementary strength calculations of ship structures and
mechanisms]Elementarnye raschety prochnosti sudovykh kon-
struktsii i mekhanizmov; sbornik zadach. Moskva, Izd-vo
"Rechnoi transport," 1962. 260 p.   (MIRA 15:11)
(Naval architecture—Problems, exercises, etc.)

MATSKEVICH, Dmitriy Dmitriyevich, kand. tekhn. nauk; BELYAK, Yu.L.,
red.; SHILLING, V.A., red. izd-va; BELOGUROVA, I.A., tekhn.
red.

[Dynamometric electric scales with a summator]Dinamometriche-
skie elektrovesy s summiruiushchim ustroistvom. Leningrad,
1962. 28 p. (Leningradskii dom nauchno-tekhnicheskoi propagan-
dy. Obmen peredovym opytom. Seriia: Energetika, no.8)
                                              (MIRA 16:2)

      (Scales (Weighing instruments))

BELYAK, Yuliy L'vovich; NECHAYEV, V.I., inzh., retsenzent; PIVEN,
     I.D., kand. tekhn. nauk, retsenzent; KOZLYAKOV, V.V.,
     nauchn. red.; YEROMITSKAYA, Ye.Ye., red.

[Experimental investigation of the strength of ship hulls]
Eksperimental'noe issledovanie prochnosti korpusov sudov.
Leningrad, Sudostroenie, 1964. 229 p.   (MIRA 17:8)

BELYAKH, P.F.

NAGIRNYAK, F.I.; BELYAKH, P.F.

Conditions for decoppering zinc concentrates in Ural ore-dressing plants. TSvet. met. 30 no.11:1-6 N '57.   (MLRA 10:11)

1. Uralmekhanobr.
             (Copper--Metllurgy)   (Zinc--Metallurgy)

BELYAKHOVA, M.B.

Controlling the apple sawfly. E. P. Gorjačeva and M. B. Belia-hova (*Sad i Ogorod*, 1954, No. 5, 78—79).—In the Leningrad area best results in controlling the sawfly were obtained by applying BHC dust (150 g. per tree) to the soil prior to blossoming before the insects appeared and again during the June "drop" when the caterpillars enter the soil.
HORT. ABSTR. (A. G. P.)

BELYAKIN, D.S.

Contemporary petrography
Izv. AN SSSR ser. geol., no. 6, 1951

L 55090-65   EWT(d)/EPA(s)-2/EWT(m)/EWP(w)/EPF(c)/EWP(v)/EPR/EWP(j)/T/EWP(k)/
EWA(h)   Pc-4/Pf-4/Pr-4/Ps-4/Pt-7/Peb   WW/EM/RM
ACCESSION NR AM 5004032   BOOK EXPLOITATION   UR/
                                                                       6P7.55 B 44

Belyakin, Fedor Pavlovich; Istsenko, Vladimir Filippovich; Dybenko, Georgiy
Ivanovich

Strength and deformation of laminated plastics (Prochnost' i deformativnost'
sloistykh plastikov), Kiev, Naukova dumka, 1964, 217 p illus., biblio.
2,300 copies printed. (At head of title: Akademiya nauk Ukrainskoy SSR.
Institut mekhaniki)

TOPIC TAGS: laminated material, glass product, reinforced plastic, nonmetal
strength, nonmetal deformation, temperature, mechanic measuring tool, industrial
instrument

PURPOSE AND COVERAGE: The book reports the results of experimental and theoretical
research on laminated plastics and describes methods for mechanical testing under
conditions of continuous loads or deformation, and the effects of static, cyclic,
and shock loads. The book discusses characteristics of strength, resistance, and
deformability of laminated wood plastics and glass reinforced plastics under
conditions of normal, elevated, and reduced temperatures during compression,
expansion, bending, and shearing. The book is intended for workers at scientific

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L 55090-65

ACCESSION NR AM5004032   2

and technical institutes, laboratories at institutions of higher learning, industrial laboratories, and design and planning departments.

TABLE OF CONTENTS (abridged):

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ACCESSION NR AM5004032

Effect of increased temperatures and moisture content on the mechanical
  characteristics of laminated plastics -- 115
Methods for determining mechanical characteristics of strength and deformability
  during prolonged action of static loads -- 142
Results of testing laminated plastics during prolonged action of static loads - 156
Characteristics of plastics during impact -- 190
Strength of laminated plastics under cyclic loads -- 200
Poisson's ratio and deformability -- 210

SUBMITTED: 23Jul64   SUB CODE: MT

NO REF SOV : 034   OTHER: 002

Card 3/3

30378
S/582/61/000/005/004/012
D222/D306

AUTHOR: Belyakin, N. V. (Pensa)

TITLE: The universality of a computer with a potentially infinite external memory

SOURCE: Problemy kibernetiki, no. 5, Moscow, 1961, 77-86

TEXT: The basic result of this paper is expressed by the following theorem: There exists a program which can evaluate any recursive function with a suitable allocation of information in the external storage. The external storage is represented by a tape which is infinitely long in both directions from the reading head. Obviously addresses cannot be used because they become exceedingly long. Instead, the computer is effectively converted into a Turing machine by using three auxiliary instructions to examine the next cell on the right or left of the reading head and to bring numbers into the internal memory. Otherwise the features of ordinary computers are retained, i.e. it can undertake addition; comparison; conjunction; conditional transfer. A metaprogram is defined as one for a three-

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The universality of a ...

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D222/D306

address machine, where the instructions may contain very large
numbers as addresses. A lemma is proved which states that every re-
cursive function can be given in the form of a metaprogram. The
essence of the proof of the main theorem is the transformation of
the metaprogram into machine instructions. This involves several
stages. First, the metainstructions are replaced by others which
do not contain addresses. It becomes necessary that the instruc-
tions replacing the transfer of control instructions be distin-
guished in some way - they are written in "red". Second, if the
operand numbers become very large they are divided into "zones" of
digits and the operations are resolved into successive phases.
Third, by introducing special marks on the tape and dividing it in-
to basic and intermediate cells it is shown how the tape can be
"stretched" to allow for the insertion of arbitrarily long numbers
at any place. When the transformation of the metaprogram into ma-
chine instructions is complete, the program is put on the left-
hand part of the tape. Combinations of basic and intermediate cells
are used to distinguish the "red" instructions. Now the author spe-
cifies a so-called universal program, to be put into the internal

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D222/D306

storage which can automatically evaluate any recursive function. A system of six general commands are given which are easily convertible into such a universal program described in terms of the machine instructions. The internal storage capacity requirements of the machine are estimated to be rather less than is available in modern digital computers. There are 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: C. Shannon, Universal Turing machine with two internal states (in: Automata Studies).

SUBMITTED: May 22, 1958

Card 3/3

9.7/4 0

S/044/62/000/007/067/100
C111/C333

AUTHOR: Belyakin, N. V.

TITLE: Universality of the computor with potential infinite
            extremal memory

PERIODICAL: Referativnyy zhurnal, Matematika, no. 7, 1962, 44,
            abstract 7V191. ("Probl. kibernetiki", no. 5. M.,
            Fizmatgiz, 1961, 77-86)

TEXT: The considered abstract digital computor is distinguished
from the real machines by the fact that it possesses an infinite address-
less external memory by which he is able to carry out the following
operations: 1) he can become aware of the following left cell; 2) he
can become aware of the following right cell; 3) he can transmit a
number out of the aware cell into the internal memory. The internal
memory of the machine contains a finite number of cells with fixed
capacity and with addresses. As a metaprogram one denotes the program
of a three-address machine, in the instructions of which arbitrarily
large number can appear as addresses. One proves the lemma that the
calculation of every generally recursive function can be prescribed

Card 1/2

Universality of the computor ...

S/044/62/000/007/067/100
C111/C333

as a metaprogram. Then one proves the theorem on the existence of a
universal program which at a convenient preserving of informations
in the external memory can be used for the calculation of each recursive
function. The proof of the theorem bases on the transformation of the
metaprogram. The commands of the metaprogram are arranged by and by
into a system of smaller hints which are written down as instructions
for the machine and stored in a certain way on the tape. The control
of the computing process follows by the universal program. The
necessary volume of the internal memory is determined by the length
of the universal program; one assumes that this volume is smaller
than that one of the modern computors.

[Abstracter's note: Complete translation.]

Card 2/2

44555
s/020/63/148/001/007/032
B112/B180

16.7000
16.0200

AUTHOR: Belyakin, N. V.

TITLE: A certain class of Turing machine

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 1, 1963, 47-49

TEXT: A Turing A-machine is defined as follows: The external alphabet
splits into a class of input letters and one of output letters. Input
letters may pass over to input as well as output letters, while output
letters always pass over to output letters. Each input letter of an
arbitrary sequence is replaced by an output letter after a finite number
of machine operations. The following theorems are derived: (1) The set of
all A-machines is not recursively denumerable. (2) Each finite operator,
but not each effective operator, can be computed by A-machines. (3) The
class of the effective operators with finite memory contains the class of
all finite operators. (4) An A-machine with finite signalization
represents a finite operator. There is 1 table.

Card 1/2

A certain class of Turing machine

S/020/63/148/001/007/032
B112/B180

ASSOCIATION: Institut matematiki s vychislitel'nym tsentrom Sibirskogo
otdeleniya Akademii nauk SSSR (Institute of Mathematics with
Computer Center of the Siberian Branch of the Academy of
Sciences USSR)

PRESENTED: June 30, 1962, by P. S. Novikov, Academician

SUBMITTED: June 26, 1962

Card 2/2

BELYAKIN, N.V.

Computation of effective operators by Turing machines with
limited erasure. Alg. i log. 2 no.1:19-23 '63   (MIRA 18:1)

ACCESSION NR: AR4039288   S/0044/64/000/003/A009/A009

SOURCE: Ref. zh. Matematika, Abs. 3A54

AUTHOR: Belyakin, N. V.

TITLE: A simulation of Turing machines on nets

CITED SOURCE: Sb. Diskretn. analiz. Vy*p. 1. Novosibirsk, 1963, 32-41

TOPIC TAGS: Turing machine, tape nucleus, nucleus recursive set, net increase re-cursive function, universal net, T-set, recursive T-set

TRANSLATION: Let $\mathcal{M}$ be a certain class of Turing machines with a tape which is infinite to one side, M a Turing machine, $M \in \mathcal{M}$, and L a recursive subset of the set of nuclei of the tape. The author introduces the following notation: $g_M(n, t)$ is the content of the nucleus with number n at the moment of time t; $\overline{G}_M(t)$ is the word recorded on the tape after t units of time; $\overline{T}_M(L, t)$ is the word recorded after t units of time in the nuclei belonging to L. The infinite recursive set of nuclei is called a net. Let M, $M^* \in \mathcal{M}$ and let R be a net, M* models M on the net

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ACCESSION NR: AR4039288

R if 1) from $n \in R$ it follows that $(\forall t)$ $[\bar{g}_{M*}(n,\ t) = \wedge]$; 2) there exists a net $L_M \subset R$ and an increasing recursive function $\omega_M(t)$ such that

$$(\forall t)\ [\bar{G}_M(t) = \tilde{F}_{M*}(L_M,\ \omega_M(t))]$$

The net R is called universal in the class M if for each $M \in \mathcal{M}$ there exists $M^* \in \mathcal{M}$ which models M on the net R. Let $\mathcal{M}_0$ be a class of machines with alphabet $\{\wedge,\ 1\}$ which cannot cancel the identity elements which have already been written. With each machine $M \in \mathcal{M}_0$ we associate the set $\pi(M)$ of numbers of those nuclei in which M at some time records the identity element. The set R is called a T-set if it is infinite and if there exists a machine $M \in \mathcal{M}_0$ such that $R = \pi(M)$. The following theorem is proven: For a net R to be universal in the class $\mathcal{M}_c$ it is necessary and sufficient that it contain a T-set. Also, a theorem 2 is cited (without proof): Each recursive set which contains a T-set is itself a T-set. From the previous theorems, theorem 3 follows: For a net R to be universal in the class $\mathcal{M}_0$, it is necessary and sufficient that it be a T-set. The author maintains that it is possible to construct a recursive T-set such that each periodic sequence of nuclei of the tape intersects with its (the T-set's) complement infinitely many times.
V. Shury*gin.

Card 2/3 -

ACCESSION NR: AR4039288

DATE ACQ: 22Apr64   SUB CODE: MA   ENCL: 00

Card 3/3

BELYAKIN, N.V.

Arrangement of intermediate information in computations using
noneffacing Turing machines. Dokl. AN SSSR 152 no.1:75-77 S
'63.   (MIRA 16:9)

1. Institut matematiki s vychislitel'nym tsentrom Sibirskogo
otdeleniya AN SSSR. Predstavleno akademikom P.S.Novikovym.
                        (Electronic computers)

L 44161-66   EWT(d)/EWP(1)   IJP(c)   BB/GG

ACC NR: AP6018048   SOURCE CODE: UR/0020/66/168/003/0502/0503

AUTHOR: Belyakin, N. V.   27

ORG: Institute of Mathematics, Siberian Branch, Academy of Sciences, SSSR (Institut   B
matematiki Sibirskogo otdeleniya Akademii nauk SSSR)

TITLE: Turing machines operating on a plane

SOURCE: AN SSSR. Doklady, v. 168, no. 3, 1966, 502-503

TOPIC TAGS: turing machine, function analysis

ABSTRACT: The generalized Turing machines considered are distinguished by recording on
a surface divided into squares rather than onto a tape. During each cycle the machine may
review any one of four squares by traveling vertically or horizontally. The discussion is
limited to nonerasing machines. It is assumed that for the machines considered the set of
minimum (maximum) symbols in the external alphabet is the same for all machines which are
designated (A, B)-machines (A and B, the minimum and maximum sets respectively). If ϕ
(x) is a nondecreasing function it may be said that a given machine ϕ computes the given
operator if at every moment η (t) $\leq \phi(\xi(t))$, ξ (t) and η (t) being the coordinates of the square
being reviewed. It is noted that if ϕ is a universal boundary its characteristic is maintained

Card 1/2   UDC: 517.11

L 44161-66

ACC NR: AP6018048

also by $[\phi/k] + 1$, where k is any constant. Hence it is concluded: 1) the function log x is a universal boundary; 2) if ϕ has a lower order of increase than log x/ log log x, then ϕ is not a universal boundary. It is pointed out that the choice of logarithm base is insignificant. The paper was presented by Academician Mal'tseyev, A. I., 25 Sept 65.

SUB CODE: 12/ SUBM DATE: 12Sep65/ ORIG REF: 001/ OTH REF: 001

Card 2/2

30612
S/058/61/000/008/013/044
A058/A101

24 3410

AUTHORS: Belyakina, R. V., Litvinova, P. S., Rabotkina, L. R., Razmazanov,
P. Ye.

TITLE: Investigation of the thermofluorescence of a ZnS-Cu,Al phosphor
incident to excitation by an AC field

PERIODICAL: Referativnyy zhurnal, Fizika, no. 8, 1961, 150-151, abstract 8V406
(Dokl. Mezhvuz. nauchn. konferentsii po spektroskopii i spektr.
analizu. Tomsk. Tomskiy un-t", 1960, 114-115)

TEXT: The investigated ZnS-Cu,Al electroluminescent phosphor was excited
by UV light and a 40-20000 c, 50-900 v sinusoidal voltage. Incident to thermo-
fluorescence of the phosphor after UV excitation there were observed two maxima
at $138°$ and $150°K$, respectively, while only one maximum was observed after
excitation by the electric field. In the latter case the curves are shifted to
the high temperature side. Increase of the excitation voltage and frequency
leads to an increase of the total amount of stored light. Determination of

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Investigation of the thermofluorescence ...

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S/058/61/000/008/013/044
A058/A101

the depth of localization levels leads to a value of 0.18 - 0.19 ev for weak fields; in strong fields the depth of the levels differs for different voltages and frequencies.

A. Burlakov

[Abstracter's note: Complete translation]

Card 2/2

BELYAKINA, T.S.; CHUGAYNOV, P.F.

Precision of the determination of spectral classes and color excesses of O-A2-class stars by the method of two-color diagrams. Izv.Krym.astrofiz.obser. 22:257-274 '60.   (MIRA 13:7)
         (Stars)

22091

8/035/61/000/003/018/048
A001/A101

$3,156\sigma$

AUTHORS: Belyakina, T.S. and Chugaynov, P.F.

TITLE: On accuracy of determining spectral classes and color excesses of stars O - A2 by means of the two-color diagram method

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 3, 1961, 38, abstract 3A348 ("Izv. Krymsk. astrofiz. observ.", 1960, v. 22, 257-274, Engl. summary)

TEXT: The authors discuss the problems of determining spectral classes and studying interstellar absorption by the method of two-color diagrams. Photoelectric observations were made of blue-yellow and blue-violet colors, C_{by} and C_{bv}, for 125 stars of spectral classes O - A2 in a system close to the U, B, V-system. The root-mean-square error of the catalogue value of colors $C_{by} \mathcal{E}_{by} = \pm 0.^m008$ and $C_{bv} \mathcal{E}_{bv} = \pm 0.^m005$. The color system was reduced to the U, B, V-system using stars for which determinations of colors B-V and U-B were available. A comparison of color characteristic Q with values of Balmer discontinuity D and estimates of spectral classes obtained by I.M. Kopylov (RZhAstr., 1959, no. 3, 1910) shows that: 1) there is a definite linear correlation between the values of Q and D; 2) re-

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S/035/61/000/003/018/048
A001/A101

On accuracy of determining spectral classes...

lationship between Q and Sp is non-linear and has a dispersion unexplained by ob-
servational errors; this dispersion is apparently caused by differences in color
temperatures of stars having the same spectral class. It is shown that dispersion
of true colors on the two-color diagram is small. The errors due to it which are
introduced into determinations of stellar color excesses do not probably exceed
$\pm$ 0^{m}02. There are 19 references.

Author's summary

[Abstracter's note: Complete translation]

Card 2/2

ACCESSION NR: AR4039237   S/0269/64/000/004/0024/0024

SOURCE: Ref. zh. Astronomiya, Abs. 4.51.187

AUTHOR: Belyakina, T. S.; Boyarchuk, A. A.; Gershberg, R. Ye.

TITLE: Energy distribution in the continuous spectrum of novalike and symbiotic stars

CITED SOURCE: Izv. Kry*msk. astrofiz. observ., v. 30, 1963, 25-41

TOPIC TAGS: star, symbiotic star, novalike star, astronomy, astrophysics, stellar spectrophotometry, slitless spectrograph, emission line, nebula, planetary nebula

TRANSLATION: This article presents the first results of stellar spectro-photometric studies made using the 2.6-m reflector of the Crimean Astrophysical Observatory. There is a brief description of the slitless spectrograph used in the observations and a detailed discussion of the method used for investigation of the energy distribution in the stellar continuous

Card 1/3

ACCESSION NR: AR4039237

spectrum. On the basis of 30 spectrograms the authors obtained the energy
distribution in the spectrum of the novalike star AG Dra and in the spectra of
three symbiotic stars (Z And, AG Peg and BF Cyg). For each of these stars the
authors determined the energy distribution in the spectral region $\lambda \lambda$ 3300-5000
and have given a physical interpretation of the observed distribution. The
spectrum of AG Dra corresponds to the integrated spectrum of a star with a
spectrophotometric temperature of $2800^\circ K$ and ionized hydrogen at $T_e = 20000^\circ K$;
the spectrum of Z And is interpreted as the joint radiation of a star with
$T = 3600^\circ K$ and hydrogen plasma at an electron temperature of $30000^\circ K$. The
spectra of AG Peg and BF Cyg in the studied region of the spectrum are caused
by the luminescence of ionized hydrogen at electron temperatures of 30000 and
$80000^\circ K$ respectively. An estimate is made of the optical thicknesses of all
gas components of the studied objects; in the H δ line they are several units.
Estimates are given of the equivalent widths of the brightest emission lines
and the determined energy distribution in the continuous spectrum has been used
to compute the energy relationships between the emission lines. A preliminary
quantitative analysis of the emission lines made for BF Cyg confirms the
results obtained from the continuous spectrum. Investigation of the planetary

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ACCESSION NR: AR4039237

nebula IC 4997 served as additional control of the correctness of the method as a whole. Bibliography of 17 items. Author's abstract.

DATE ACQ: 12May64   SUB CODE: AS   ENCL: 00

Card 3/3

KOPYLOV, I.M.; BELYAKINA, T.S.; VITRICHENKO, E.A.

Quantitative spectral classification of "Metallic" stars. Izv.
Krym. astrofiz. obser. 29:181-218 '63.   (MIRA 16:10)

PROKOF'YEVA, V.V.; BELYAKINA, T.S.

    Spectrophotometric study of Nova Herculis, 1960 II.   Izv. Krym.
    astrofiz. obser.   29:278-290   '63.   (MIRA 16:10)

BELYAKINA, T.S.; BOYARCHUK, A.A.; GERSHBERG, R.Ye.

Energy distribution in the continuum of novalike and symbiotic
stars.   Izv. Krym. astrofiz. obser. 30:25-41 '63.   (MIRA 17:1)

L 25973-66   EWT(1)   GW

ACC NR: AP6015748   SOURCE CODE: UR/0388/66/002/001/0115/0120

AUTHOR: Belyakina, T. S.

ORG: Crimean Astrophysical Observatory (Krymskaya astrofizicheskaya observatoriya)

TITLE: Photometric observations of AG Dra in 1965

SOURCE: Astrofizika, v. 2, no. 1, 1966, 115-120

TOPIC TAGS: star brightness, ultraviolet range, stellar radiation, yellow spectral range, Balmer line

ABSTRACT: In 1962 and 1963, photoelectric observations of the star AG Dra were carried out at the Crimean Astrophysical Observatory using three colors. Results of observations showed that the brightness of the star was constant and its radiation in the ultraviolet spectral range was very weak. In 1965, the same observations were repeated with little-changed instruments. Results of the last observation are given in a table in the original article. The stellar radiation in the yellow spectral range changed gradually, increasing during one month by $0^{m}04$ and from then on remaining constant. The radiation in the blue spectral range was subject to unsystematic variations. The radiation in the ultraviolet spectral range showed significant variations with systematic increases and decreases. In 1962, the mean variation was $+1^{m}1$, and in 1965 it was $+0^{m}5$. Testing the possible influence of the changed instrumental system on the observational data, it was found to be $0^{m}2$ at most. The radia-

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L 25973-66

ACC NR: AP6015748

tion change in ultraviolet light is real and has natural sources. The range investigated includes the Balmer jump and Balmer lines which are generated by the gas component of the star. Thanks are expressed to A. A. Bayarchuk, R. Ye. Gershberg, and K. K. Chuvayev for useful advice and discussion of results. Orig. art. has: 1 table, 1 figure, and 4 formulas. [EG]

SUB CODE: 03/ SUBM DATE: 26Jan66/ ORIG REF: 003/ ATD PRESS: 4257

Card 2/2 FW

BELYAKOV, A.

5A

B C'4
f

2379. **Paths of Lightning Strokes.** I. S. Stekolnikov and A. Belyakov, *International Conference on Large H.T. Systems, Paris,* Paper No. 327. [10 pp.] 1937. In French.—Describes tests carried out in the Electrotechnical Institute of the Soviet Union in which it has been found that the chief factors in determining the path of a spark discharge in air is the tangents field developed by the current in the spark and the general conditions in the neighbourhood, i.e., conductivity of the electrodes and surrounding bodies. The tests were carried out on models in which the earth was simulated by sand or other materials of appropriate conductivity. The conclusions were confirmed by the results of the 1936 Geophysical Expedition of the Académie des Sciences.   E. O. T.

A.S.M.-S.L.A.   METALLURGICAL LITERATURE CLASSIFICATION

Sokol'nikov, Il'ia Samuilovich, Akopian A. and Beliakov A. Molniia i zachchita ot ee

"Discipline in Flight", Vest. Vozdush. Flota, No. 4, 1949.   General Leytenant Air Force,

Dr. Geographical Sciences and Hero of the Soviet Union, -c1949-.

BELYAKOV, A.

AID - P-22

Subject   : USSR/Aeronautics

Card   : 1/1

Author   : Belyakov, A., Lt. Gen. of the Air Force, Professor,
                Doctor of Geographical Science, Hero of the Soviet
                Union.

Title   : Pilot Hero - Innovator, (Fiftieth Anniversary of
                V. P. Chkalov's Birthday).

Periodical   : Vest. vozd. flota, 2, 9 - 12, February 1954

Abstract   : A short biography of Chkalov, V. P. Born in 1904, he
                became famous by his non-stop flight from the USSR to
                the US through the North Pole in 1937. Chkalov is
                famous also as an acrobatic pilot. He cooperated
                with famous designers in development of new ideas. When
                working in a scientific research institute, he took
                part in the development of new methods of fighter air-
                craft use. Photo shows Chkalov in uniform.

Institution : None
Submitted   : No date

AUTHOR: Belyakov, A.   2-58-6-3/16

TITLE: Registration of Equipment and Machinery (Perepis' oborudovaniya
            i mashin)

PERIODICAL: Vestnik statistiki, 1958, Nr 6, pp 20-31 (USSR)

ABSTRACT: An All-Union inventory of industrial equipment and machinery in
            the Soviet Union is scheduled to begin on August 1, 1958. Its
            purpose is to record the technical equipment of various branches
            of the national economy in order to determine the exact number
            of machines in Soviet industrial enterprises and on construction
            sites. The inventory was necessary because of the rapid growth
            of the machine stock during the past ten years, owing to the
            great productivity of the Soviet machine building industry
            (table on p 21), especially in the fields of machine tools,
            electric, heavy, transportation and road-building machinery.
            The inventory will be carried out according to a plan elaborated
            by the TsSU by means of questionnaires which have to be filled
            out by each industrial enterprise. By comparing these lists
            with the results of the former inventory (1938-1947), the sov-
            narkhozes and local authorities will determine the production
            capacity of various industries over the period of the 6th
Card 1/2   Five-Year Plan and decide on the modernizations that might be

Registration of Equipment and Machinery   2-58-6-3/16

                    necessary.
                    There is 1 table and 1 sample questionnaire.

Card 2/2

OSTROUMOV, Valentin Sergeyevich; GORELIK, Vera Semenovna; BELYAKOV, A.,
    otv.red.; KONDRAT'YEVA, A., red.izd-va; TELEGIHA, T., tekhn.red.

    [Organization of work on the revaluation of fixed assets] Orga-
    nizatsiia raboty po pereotsenke osnovnykh fondov. Moskva, Gos-
    finizdat, 1959. 101 p.   (MIRA 12:12)
                        (Valuation)

30(5)   SOV/2-59-5-2/10

AUTHOR: Belyakov, A.

TITLE: To Carry Out a Successful Revaluation of the General
               Capital Funds

PERIODICAL: Vestnik statistiki 1959, Nr 5, pp 25-39   (USSR)

ABSTRACT: The author states that from 1913 to 1956, the General
               Capital Funds of the USSR increased almost 8 times.
               Included in them are Productive Capital Funds which
               increased almost 15 times, while Non-productive Ca-
               pital Funds increased just over 4 times. Industrial
               and Building Capital Funds increased about 33 times.
               Such a comparison presumes uniformity of valuation of
               capital funds carried out at different times and
               places, of amortization rates and of the stability
               of prices. The author admits that none of these
               factors operated in a uniform fashion throughout
               the given period (1913 to 1959) with the result
               that some of the capital funds are now undervalued
Card 1/3   and some are overvalued, in the latter case, because

SOV/2-59-5-2/10
To Carry Out a Successful Revaluation of the General Capital Funds

of the reduction of the wholesale prices, such as
occurred in July 1955. Consequently, the Soviet
Government decided to carry out a General (and the
first of this kind in the USSR) Revaluation of Capital
Funds (buildings, constructions, equipment, transporta-
tion, houses, etc.) to take place between 1 September
and 31 December 1959. This measure, which should bring
uniformity in Capital Funds Evaluation by 1 January
1960, will be accompanied by uniformity in amortiza-
tion rates, in various branches of the national econo-
my. The author then lists objects which will be re-
valued and exemptions from revaluation. The revalua-
tion will be based on the costs of replacement, under
existing conditions, of each of the objects, according
to the price lists issued by the Gosstroyem SSSR and
the TsSU of the USSR. The author describes the pro-
cedure of the revaluation work, the composition of
the committees set up for this purpose, and stresses
the necessity of keeping proper records of the exist-
Card 2/3   ing objects (inventory records, index cards, etc).

SOV/2-59-5-2/10

To Carry Out a Successful Revaluation of the General Capital Funds

The records from the individual concerns will be com-
bined by March 1960, into the summary reports of each
ministry in each of the Allied Soviet Republics.
There are 2 tables.

Card 3/3

S/002/60/000/010/001/001
C111/C222

AUTHOR: Belyakov, A.

TITLE: Some Results of the New Estimate of Capital Assets of the National Resources of the USSR

PERIODICAL: Vestnik statistiki, 1960, No.10, pp.3-11.

TEXT: These are the results of an inventory and new estimate of the capital assets of the national resources of the USSR according to the state of January 1, 1960. Value of the basic capital reserves of the state and cooperative enterprises 2,001 milliards of Rubels, with kolkhozes 2,438 milliards of Rubels, with private property 2,965 milliards of Rubels. The resources of industry and of the capital building projects are greater by 33 times than in 1929. The resources of the agriculture amount 14% of all capital assets of the resources and are grown by 2 times since 1940. The resources of the industry amount 27%, of the transport 12%, of the erection of lodgings 32%, others 15% of all capital assets of the resources. The resources of the industry decompose into: 20% construction of machines, 17% heat economy, 12% electricity economy, 10% metallurgical engineering, 9% food industry, 5% industry of consumption goods, 5% building materials, 6% wood industry. A table gives a survey of the distribution of the

Card 1/4

S/002/60/000/010/001/001
C111/C222

Some Results of the New Estimate of Capital Assets of the National Resources of the USSR

resources according to kind and aim:

table	all capital assets of the national resources estimated anew	industrial capital assets of resources
totality	100	100
therefrom:		
buildings	44.8	27.5
edifices and transmission equipments	26.9	33.7
motors and equipment	4.2	8.3
machines and equipment	13.0	24.2
measuring and control devices, laboratory equipment	0.7	0.8
means of transportation	7.5	4.0
instruments, industrial and economic inventory	1.0	0.8
others	1.9	0.7

Card 2/4

S/002/60/000/010/001/001
C111/C222

Some Results of the New Estimate of Capital Assets of the National
Resources of the USSR

77% of the capital belongs to the department of the union repubilcs.
About 60% of the total resources of the union republics falls to the
share of Sovnarkhoze.

                        table

	percentage by which the new estimate is greater (+) or smaller (-) than the original estimate
totality	+12
therefrom:	
buildings	+22
edifices and transmission equipment	+27
motors and equipment	- 9
machines and equipment	-10
means of transportation	- 8

Card 3/4

S/002/60/000/010/001/001
C111/C222

Some Results of the New Estimate of Capital Assets of the National
Resources of the USSR

The new estimate effected a uniform valuation of the capital assets
of the national resources corresponding to the values of the present.
time. The consideration of the wear and tear showed that it is
different according to the branches of political economy and ground
and districts. The new estimation was carried out during two years.
The methodological and organizatoric questions in connection with
the estimate were decided together by Ts SU SSR, Gosstroy SSSR,
Gosplan SSSR and Ministerstvo finansov SSSR.   Ш

Card 4/4

DELYAKOV, A.

USSR/Scientists - Engineering

Card 1/1   : Pub. 77 - 2/22

Authors   : Belyakov, A.

Title   : At the Narva river falls

Periodical   : Nauka i Zhizn' 8, 3-5, Aug 1954

Abstract   : A hydro-electric station project, which is now under the construction, is outlined. The following Soviet scientists who helped to make the project possible, are mentioned: member correspondent of the Acad. of Scs. of the USSR, Professor Florin; Doctor of Technical Scs., Professor Chertousov; Doctor of Technical Scs., Professor Zegonda; candidate in Tech. Scs., Bibikov; candidate in Tech. Scs., Okorokov, and many others. Illustrations.

Institution : .....

Submitted   : .....

BELYAKOV, A.A.

BELYAKOV, A.A.; ERISTOV, V.S.; DEMENT'YEV, M.A.; BORODIN, P.V.; FOGEL'SON,
S.B.; PLATONOV, V.A.; IORISH, Ye.L.; GAL'PERIN, R.S.

Letter to the editors. Gidr. stroi. 26 no.4:52-53 Ap '57.
(Dams)   (MLRA 10:6)

BELYAKOV, A.A.

MALENKOV, G.M.; PERVUKHIN, M.G.; KUCHERENKO, V.A.; ZHIMERIN, D.G.; LOGINOV, F.G.; PAVLENKO, A.S.; YERMAKOV, V.S.; VINTER, A.V.; DMITRIYEV, I.I.; UGORETS, I.I.; BEKHTIN, N.V.; VOZNESENSKIY, A.N.; VASILENKO, P.I.; BOROVOY, A.A.; NOSOV, R.P.; KRISTOV, V.S.; BELYAKOV, A.A.; RUSSO, G.A.; VASIL'YEV, A.F.; REPKIN, V.P.; TERMAN, I.A; ORLOV, G.M.; CHUMACHENKO, N.A.; BESCHINSKIY, A.A.; YAROSH, V.F.

Pavel Pavlovich Laupman; obituary. Gidr. stroi. 26 no.5:62 My '57.
(Laupman, Pavel Pavlovich, 1887-1957)   (MIRA 10:6)

OVSYANKIN, V.I., otv.red.; BELYAKOV, A.A., red.; BYLINKIN, N.P., red.;
    VLASOV, A.V.; red.; GALKIN, Ya.G., red.; LIFATOV, A.P., red.;
    RUBANENKO, B.R., red.; SKRAMTAYEV, B.G., red.; CHERNOV, T.P.,
    red.; KHOLIN, N.A., red.; UDOD, V.Ya., red.izd-va; GILENSON,
    P.G., tekhn.red.

[Proceedings of the 5th session of the Academy of Construction
and Architecture on problems in introducing industrial building
methods, 17-19 December 1959] Trudy V sessii Akademii stroi-
tel'stva i arkhitektury SSSR po voprosam industrializatsii stroi-
tel'stva, 17-19 dekabria 1959 g. Moskva, Gos.izd-vo lit-ry po
stroit., arkhit. i stroit.materialam, 1960. 743 p.
                                                (MIRA 13:12)
1. Akademiya stroitel'stva i arkhitektury SSSR. 2. Deystvi-
tel'nyye chleny Akademii stroitel'stva i arkhitektury SSSR (for
Ovsyankin, Belyakov, Vlasov, Lifatov, Rubanenko, Skramtayev,
Chernov, Kholin).
    (Precast concrete construction)

BELYAKOV, A.A.(Borisoglebsk)

     Vertical nystagmus. Vest.oft.34 no.4:36 Jl-Ag '55 (MLRA 8:10)
        (NYSTAGMUS)

BELYAKOV, A.A.

Case of brucellar serohemorrhagic synovitis of the knee joint. Ortop.,
travm.i protez. 20 no.11:80-81 N '59.   (MIRA 13:4)

1. Iz onkologicheskogo otdeleniya (zaveduyushchiy - N.P. Silitrin)
Respublikanskoy bol'nitsy g. Saranska, Mordovskaya ASSR (glavnyy
vrach - V.G. Mirskov).
          (BRUCELLOSIS compl.)
          (SYNOVITIS etiol.)
          (KNEE ·dis.)

BELYAKOV, A.A.

Results of work of the commission for the selection of the site
of the Nurek Hydroelectric Power Station. Gidr. stroi. 30 no.4:
58 Ap '60.   (MIRA 14:4)

1. Zamestitel' predsedatelya Tekhnicheskogo soveta Ministerstva
stroitel'stva elektrostantsiy, predsedatel' komissii po vybory
stvora Nurekskoy gidroelektrostantsii, deystvitel'nyy chlen
Akademii stroitel'stva i arkhitektury SSSR.
          (Nurek Hydroelectric Power Station (Proposed))

BELYAKOV, A.A.; GOTMAN, T.P., red.; TOROPOV, L.N., red.; BORUNOV,
    N.I., tekhn. red.

[Construction of the Novosibirsk hydroelectric development]
Opyt stroitel'stva Novosibirskogo gidrouzla.   Moskva, Gosenergo-
izdat, 1962.   203 p.   (MIRA 15:12)

1. Deystvitel'nyy chlen Akademii stroitel'stva i arkhitektury
SSSR, Zamestitel' predsedatelya Tekhnicheskogo Soveta Minister-
stva stroitel'stva elektrostantsiy (for Belyakov).
    (Novosibirsk Hydroelectric Power Station)

NOVIKOV, I.T.; NEPOROZHNIY, P.S.; LAVRENENKO, K.D.; BONDAREV, N.M.;
PINOGENOV, Ya.I.; PLATONOV, N.A.; SHIKTOROV, I.S.; BELYAKOV,
A.A.; SEVAST'YANOV, V.I.; ERISTOV, V.S.; ERISTOV, V.S.
RAZIN, N.V.; MHATSAKANOV, L.N.; PLATONOV, V.A.; SHKUNLIN, B.M.
SHKUNDIN, B.M.; ROZANOV, K.A.; LIVSHITS, A.Ya.; LOPATIN, N.A.;
BYSTROV, P.S.

Sergei Borisovich Fogel'son. Gidr. stroi. 31 no. 1:59-60
Ja '61.   (MIRA 14:2)
          (Fogel'son, Sergei Borisovich, 1911-1960)

NOVIKOV, I.T.; NEPOROZHNIY, P.S.; GINZBURG, S.Z.; BELYAKOV, A.A.;
ERISTOV, V.S.; VOZNESERSKIY, A.N.; IVANTSOV, N.M.;
BOROVOY, A.A.; TERMAN, I.A.; ALEKSANDROV, B.K.;
YURINOV, D.M.; NOSOV, R.P.; MIKHAYLOV, A.V.; NICHIPOROVICH, A.A.;
ABELEV, A.S.; PROSKURYAKOV, B.V.; MENKEL', M.F.; KRITSKIY, S.N.;
BELYY, L.D.

Mikhail Evgen'evich Knorre. Gidr. stroi. 32 no.5: My '62.
(MIRA 15:5)
(Knorre, Mikhail Evgen'evich, 1876-1962)

GUBIN, F.F., doktor tekhn. nauk; KUPERMAN, V.L., kand. tekhn.
   nauk; BELYAKOV, A.A., retsenzent; KVARDAKOV, A.F.,
   dots., retsenzent; ORLOV,V.A.,kand.tekhn.nauk,dots. nauchn.red.

[Economics of water management and hydraulic construction]
Ekonomika vodnogo khoziaistva i gidrotekhnicheskogo
stroitel'stva. Moskva, Stroiizdat, 1965. 302 p.
                                    (MIRA 18:8)
1. Zamestitel' Tekhnicheskogo Soveta Gosudarstvennogo
proizvodstvennogo komiteta po energetike i elektrifika-
tsii SSSR (for Belyakov). 2. Zaveduyushchiy kafedroy gidrav-
liki i gidrosooruzheniy Novosibirskogo inzhenerno-
stroitel'nogo instituta im. V.V.Kuybysheva (for Kvardakov).

KNORRING, G.M., kandidat tekhnicheskikh nauk; BELYAKOV, A.A.; KRESLIN'SH,
E.K., inzhenér; SHERMAZANYAN, Ya.T.; LEYBOVICH, D.S.

Use of PPv wires. Prom.energ. 11 no.12:22-25 D '56.   (MIRA 10:1)

1. Gosudarstvennyy proyektnyy institut Tyazhpromelektroproyekt (for
Knorring).2. Gor'kovskoye otdeleniye Gosudarstvennogo proyektnogo
instituta Elektroproyekt (for Belyakov). 3. Energosbyt Latvenergo
(for Kreslin'sh). 4. Respublikanskiy proyektnyy institut, Yerevan
(for Shermazanyan). 5. Trest "Moselektromontazh-2" (for Leybovich).
          (Electric wire, Insulated)

BELYAKOV, A. A.

ZEL'TSBURG, L.M.; BELYAKOV, A.A.; ZHUKOV, A.A.

Universal autotransformer induction-resonance noncontact track
switch. Priborostroenie no.4:28-29 Ap '57.   (MLRA 10:5)
                    (Automatic control)

ZASYAD'KO, A.F.; KUCHERENKO, V.A.; PAVLENKO, A.S.; GRISHMANOV, I.A.;
    FROLOV, V.S.; SHASHKOV, Z.A.; YEFREMOV, M.T.; SMIRNOV, M.S.;
    CHIZHOV, D.G.; NOVIKOV, I.T.; NOSOV, R.P.; ASKOCHENSKIY, A.N.;
    NEKRASOV, A.M.; LAVRENENKO, K.D.; TARASOV, N.Ya.; GABDANK, K.A.;
    LEVIN, I.A.; GINZBURG, S.Z.; ALEKSANDROV, A.P.; KOMZIN, I.V.;
    OZEROV, I.N.; SOSNIN, L.A.; BELYAKOV, A.A.; NAYMUSHIN, I.I.;
    INYUSHIN, M.V.; ACHKASOV, D.I.; RUSSO, G.A.; DROBYSHEV, A.I.;
    PLATONOV, N.A.; ZHIMERIN, D.G.; PROMYSLOV, V.F.; KRISTOV, V.S.;
    SAPOZHNIKOV, F.V.; KASATKIN, M.V.; ALEKSANDROV, M.Ya.; KOTILEVSKIY,
    D.G.

    Fedor Georgievich Loginov; obituary. Elek.sta. 29 no.8:1-2
    Ag '58.   (MIRA 11:11)
            (Loginov, Fedor Georgievich, 1900-1958)

BELYAKOV, A.A.

KRISTOV, V.S., otvetstvennyy red.; BELYAKOV, A.A., red.; GROSHEV, N.I., red.; NOSOV, R.P., red.; POD"YAKOV, A.S., red.; ROGOVIN, N.A., red.; STEKLOV, V.Yu., red.; TISTROVA, O.N., red.; FRIDKIN, A.M., tekhn. red.

[Electric power development in the U.S.S.R. during the past 40 years, 1917-1957] Energeticheskoe stroitel'stvo SSSR za 40 let (1917-1957 gg.) Moskva, Gos. energ. izd-vo, 1958. 397 p.   (MIRA 11:5)

1. Russia (1923-   U.S.S.R.) Ministerstvo elektrostantsiy. Tekhnicheskoye upravleniye.
          (Electric power)

SOV/94-58-8-9/22

AUTHORS: Belyakov, A. A., Engineer and Zhukov, A. A., Engineer

TITLE: Minimum voltage protective circuits with time delay operated by a.c. (Skhemy zashchity minimal'nogo napryazheniya s vyderzhkoy vremeni na peremennom operativnom toke)

PERIODICAL: Promyshlennaya Energetika, 1958, Nr 8, pp 21-24 (USSR)

ABSTRACT: When operating circuits are converted from d.c. supply with storage batteies to a.c. supply it is minimum voltage protection that gives rise to the greatest difficulties. Several circuits have been developed for this purpose and are briefly described but none of them is quite satisfactory. The Gor'kiy Division of the State Planning Institute Elektroproyekt has developed new minimum voltage protective circuits which are much better than previous ones. The special feature of these circuits is the use of one relay type EN-500 connected to two (Fig.1) or three (Fig.2) line voltages through selenium or other rectifiers. A capacitance is connected in parallel with the relay winding so that if one of the transformer fuses blow the voltage on the relay is almost unaltered. If the circuit of Fig.1 is used the voltage on the relay is
Card 1/3 halved but this difficulty is overcome by the circuit of