Use of empirical constants ...

S/089/62/012/004/005/014
B102/B104

discussions. There are 4 figures, 5 tables, and 20 references: 9 Soviet and 11 non-Soviet. The four most recent references to English-language publications read as follows: G. Chapman, C. Storrs. Effective Neutron Removal Cross Sections for Shielding, Report AECD-3978, 1955; M. Clark. Nucl. Engng. 6, No. 56, 16, 1961; D. Wood. Nucl. Sci. Engng. 5, 45, 1959; J. Grundl, A. Usner. Nucl. Sci. Engng, 8, 598, 1960.

SUBMITTED: April 17, 1961

Card 3/3

BRODER, D.L., red.; VESELKIN, A.P., red.; YEGOROV, Yu.A., red.;
ORLOV, V.V., red.; TSYPIN, S.G., red.; FODOSHVINA, V.A.,
red.; NIKITINA, T.K., red.; VLASOVA, N.A., tekhn. red.

[Problems in the physics of reactor shielding] Voprosy fiziki
zashchity reaktorov; sbornik statei. Moskva, Gosatomizdat,
1963. 345 p.   (MIRA 16:12)
    (Nuclear reactors--Shielding (Radiation))

ACCESSION NR: AT4019058   S/0000/63/000/000/0243/0251

AUTHOR: Tsy*pin, S. G.

TITLE: Investigation of the passage of neutrons through a shielding with the aid of a unidirectional source (apparatus B-2)

SOURCE: Voprosy* fizikl zashchity* reaktorov; sbornik statey (Problems in physics of reactor shielding; collection of articles). Moscow, Gosatomizdat, 1963, 243-251

TOPIC TAGS: reactor shielding, nuclear reactor, unidirectional source, neutron, neutron beam attenuation, collimator, nickel shield, attenuation function, neutron energy distribution, neutron angular distribution

ABSTRACT: The purpose of this work was to study the attenuation of a neutron beam from a pointlike unidirectional source of monoenergetic neutrons. Knowing the attenuation function of this source, it is possible to construct the attenuation function for a source with an arbitrary angular distribution, and thus obtain data on the distribution of neutrons in shielding materials. An experimental set-up was constructed around the BR5 fast neutron reactor to obtain the above information and to create a model of an infinitely planar unidirectional source. The experimental B-2 apparatus consists of a channel with a mobile frame,

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ACCESSION NR: AT4019058

a reservoir and concrete niche-type shielding around the frame. Two dampers, one of water (150 cm thick) and one of cast iron (50 cm thick) were used to cover the channel exit. The flux of fast neutrons ($E > 2-3$ Mev) was about 10^{10} neutrons/cm^2·sec at the 5000 KW power level of the BR-5 reactor. Above $E > 3$Mev the neutron spectrum coincided with that of fission. The geometry of the well-collimated neutron beam (half-angle = 2.5°) from either a point or disk source is described in detail. Attenuation functions are derived for an anisotropic point source:

$$G_{T,a}(R) = C \int_0^{2\pi} d\varphi \int_0^\pi f(\theta) G_{T,M}(R,\theta) \sin\theta \, d\theta, \tag{1}$$

and for an infinite planar unidirectional source:

$$G_{\infty,M}'(R) = C \int_0^{2\pi} d\varphi \int_0^\infty G_{R,M}(R,h) h \, dh \tag{2}$$

Theoretical plots of these functions and of the functions

$$G_{T,M}(R,h) = \frac{C G_{R,M}^i(R,0) e^{-h/\lambda(R)}}{2\pi \{\lambda^2(R) - \lambda(R) e^{-a/\lambda(R)} [a + \lambda(R)]\}} \tag{3}$$

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ACCESSION HR: AT4019058

and

$$G^2_{A.\,N}(R,\,h) = CA(R) \int_0^a \varrho \, d\varrho \int_0^{2\pi} e^{-\frac{\sqrt{\varrho^2 + h^2 + 2h\varrho \cos \varphi}}{\lambda(R)}} \, d\varphi$$

(4)

are then compared with the experimental results for attenuation of neutrons in water, iron and uranium. In general, there was good agreement between calculated and experimental data. The author thanks A. I. Leypunskiy for his advice in setting up the problem, I. I. Bondarenko, V. V. Orlov, V. I. Kukhtevich, Yu. A. Kazanskiy, B. I. Sinitsy*n, Ye. S. Matusevich, B. P. Shemetenko, Sh. S. Nikolyayshvili, V. P. Mashkovich and A. A. Abagyan for their comments and evaluation of the results, D. S. Pinkhasik and N. N. Aristarkhov for help in building the apparatus, and V. A. Dulin and L. K. Fometskiy for contributing to the data." Orig. art. has: 2 tables, 7 figures and 10 formulas.

ASSOCIATION: none

SUBMITTED: 14Aug63

DATE ACQ: 27Feb64

ENCL: 00

SUB CODE: NP

NO REF SOV: 009

OTHER: 003

Card 3/3

ACCESSION NR: AT4019033   S/0000/63/000/000/0075/0085

AUTHOR: Sinitsy*n, B. I.; Tsy*pin, S. G.

TITLE: The use of empirical data in shielding computation

SOURCE: Voprosy*fiziki zashchity* reaktorov; sbornik statey (Problems in physics of reactor shielding; collection of articles). Moscow, Gosatomizdat, 1963, 75-85

TOPIC TAGS: nuclear reactor, reactor shielding, neutron, neutron distribution, removal cross section

ABSTRACT: The authors note that the use of removal cross sections for neutron shielding computation is still the simplest and most efficient method, with the result that it continues to be developed further. The present article represents an attempt to summarize the results of work relating to the determination and utilization of removal cross sections, to evaluate them critically, as well as to expand the area of applicability of empirical constants for the computation of various forms of neutron shielding. Basic definitions are given and formulas are derived for removal cross sections for both homogeneous and heterogeneous media. Monoenergetic neutron sources and fission spectrum neutron sources are considered. The removal cross sections for certain elements measured with detectors having different thresholds are compared with one another and with sections obtained from
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ACCESSION NR: AT4019033

Inverse relaxation lines. The effective energy threshold for different kinds of neutrons is determined and analyzed. The authors also compared the removal cross sections of asymptotic sections and sections derived from inverse relaxation lines for different elements. The article contains an extensive bibliography of Soviet and foreign papers in the general problem area. "The authors express gratitude to A. I. Leypunskiy for his valuable comments during the evaluation of the results, as well as to I. I. Bondarenko, V. I. Kukhtevich, Yu. A. Kazanskiy, A. A. Abagyan, D. V. Pankratov and A. P. Suvorov for valuable advice." Orig. art. has: 4 figures, 6 tables and 10 formulas.

ASSOCIATION: none

SUBMITTED: 14Aug63   DATE ACQ: 27Feb64   ENCL: 00

SUB CODE: NP   NO REF SOV: 009   OTHER: 014

Card 2/2

ACCESSION NR: AT4019046   S/0000/63/000/000/0182/0190

AUTHOR: Mashkovich, V. P.; Sakharov, V. K.; Tsy*pin, S. G.

TITLE: Spatial-energy distribution of neutrons in thick layers of iron

SOURCE: Voprosy* fiziki zashchity* reaktorov; sbornik statey (Problems in physics of reactor shielding; collection of articles). Moscow, Gosatomizdat, 1963, 182-190

TOPIC TAGS: neutron energy distribution, iron prism, relaxation length, attenuation function, neutron spatial distribution, neutron, reactor shielding, iron shielding, neutron spectrum

ABSTRACT: The spatial and energy distribution of fast and intermediate neutrons in iron was studied because of the importance of iron in reactor shielding and the insuffici-. ency of existing data. A BR-5 reactor was used as a neutron source and the neutron spectrum was determined on 200μ thick photographic film with type K emulsion. The ' neutron beam was directed onto an iron prism (dimensions 1320 x 1360 x 1880 mm) after passing into a reservoir through a channel 250 mm in diameter. The angular divergence of the beam was 5°. For detection of fast neutrons, the following threshold detectors were used: $Sn^{32}(n,p) P^{32}$, $Mg^{24}(n,p,) Na^{24}$, $Al^{27} (n,\alpha) Na^{24}$, and a Th^{232} fission

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ACCESSION NR: AT4019046

chamber; for intermediate neutrons: a BF$_3$ counter type SNM-3, $Cu^{63}(n, \gamma)$ Cu^{64}, and the indicator $Au^{197}(n, \gamma)$ $Au.^{198}$ Detectors were placed at various distances r from the source and at different heights perpendicular to the beam. Counting rates from tin and aluminum detectors and the thorium chamber as a function of height for different distances r were evaluated separately. The spatial distribution as a function of height at fixed r as registered by copper and gold indicators and a boron counter is given in Fig. 1 of the Enclosure. Neutron attenuation for an infinite planar unidirectional neutron source was given by the equation

$$G_{\infty p}(r)C = \int_0^{\infty} G_{DM}(r, h)hdh$$

and is shown in Fig. 2 of the

Enclosure as determined by Cu, Au and BF$_3$. Relaxation lengths as measured by different detectors and calculated values of asymptotic cross-sections in the transport approximation for several energy groups are tabulated in the original paper. "The authors are indebted to O. I. Leypunskiy and V. V. Orlov for valuable comments during this work". Orig. art. has: 11 figures, 3 tables and 1 formula.

ASSOCIATION: None

SUBMITTED: 14Aug63

DATE ACQ: 27Feb64

ENCL: 02

SUB CODE: NP

NO REF SOV: 010

OTHER: 004

Card 2/4

ACCESSION NR: AT4019046

Fig. 1 – Measured neutron
distribution at
various value of
the distance r.
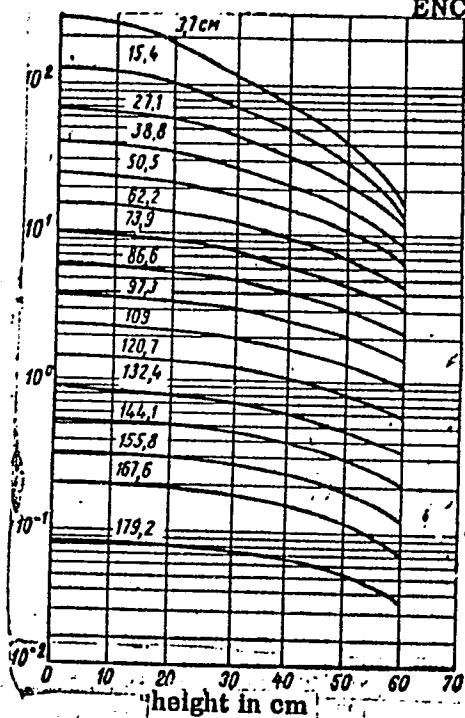
Card 3/4

ACCESSION NR: AT4019046

ENCLOSURE: 02
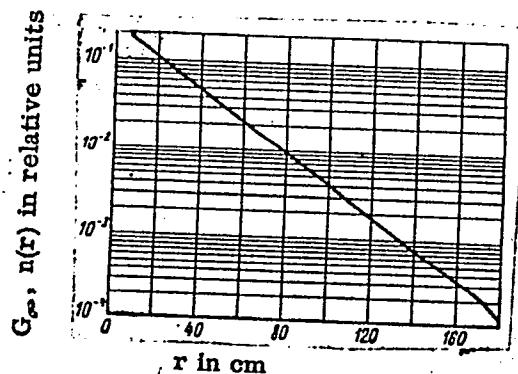
Fig. 2 – Attenuation function of neutrons from an infinite, planar, unidirectional source, measured by Cu, Au and BF_3 detectors.

Card 4/4

DARUGA, V. K.; LAZUTKIN, I. I.; NIKOLAYEV, A. N.; SAKHAROV, V. K.; SINITSYN,
B. I.; TSYPIN, S. G.

Neutron passage through carbon and an iron-carbon mixture. Atom.
energ. 17 no.1:60-63 Jl '64.   (MIRA 17:7)

DARUGA, V. K.; LAZUTKIN, I. I.; NIKOLAYEV, A. N.; PINKHASIK, D. M.;
SAKHAROV, V. K.; SINITSYN, B. I.; TSYPIN, S. G.

Space-energy distribution of neutrons from a BR-5 reactor in an
iron-ore medium. Atom. energ. 17 no.1:63-65 Jl '64.(MIRA L7:7)

ACCESSION NR: AP4042266   S/0089/64/017/001/0065/0066

AUTHORS: Mashkovich, V. P.; Nikolayev, A. N.; Sinitsy*n, B. I.;
Tsy*pin, S. G.

TITLE: Attenuation of fission neutron fluxes in iron-water mixtures

SOURCE: Atomnaya energiya, v. 17, no. 1, 1964, 65-66

TOPIC TAGS: neutron moderator, neutron flux, fast neutron, thermal
neutron, relaxation time

ABSTRACT: The attenuation of fast, thermal, and intermediate neu-
trons in iron-water mixtures was investigated at an iron concentra-
tion exceeding 75% by volume. The measurements were made in the B-2
installation of the BR-5 reactor (A. I. Leypunskiy et al., in the
book "Trudy* Vtoroy mezhdunarodnoy konferentsii po mirnomu ispol'-
zovaniyu atomnoy energii" [Trans. 2d Geneva Conf.], Papers by Soviet
Scientists, v. 2, M. Atomizdat, 1959, page 215) for shielding inves-

Card   1/4

ACCESSION NR: AP4042266

...tigation (S. G. Tsy*pin, collection "Voprosy* fiziki zashchity*
reaktorov" (Problems in Reactor Shielding Physics), D. L. Broder,
et al., ed. 1963, page 243). The iron-water constituted iron stacks
measuring 1320 x 1360 x 117 mm, placed with certain gaps in a tank
full of water measuring 1370 x 1390 x 2170 mm. The iron used was
St-O with density 7.86 g/cm^2. The iron concentration in the water
could be varied by varying the gap. The method for measuring the
relaxation length is described. The results show that at concentra-
tion up to 18% of water by volume the efficiency for slowing down
fast, thermal, and intermediate neutrons is approximately the same.
In addition, the results agree with data on an iron-masonite mixture
(D. Wood, Nucl. Sci. Eng. v. 5, 45, 1959). It is also concluded
that in the case of light and medium nuclei (including iron), the
removal cross sections can be used for shielding calculations if the
number of hydrogen atoms in the mixture is about 10--12%. This value
is almost half that recommended by B. Price et al. (Shielding
Against Nuclear Radiation, Moscow, Izd-vo inostr. lit., 1959). Orig.

Card 2/4

ACCESSION NR: AP4042266

art. has: 1 figure.

ASSOCIATION: None

SUBMITTED: 07Mar64

SUB CODE: NP

NR REF SOV: 007

ENCL: 01

OTHER: 004

Card 3/4

Dependence of relaxation length of fast (1)
and thermal and intermediate neutrons (2)
on the volume concentration of iron in an
iron-water mixture (the true density of
the iron is 7.86 g/cc), as obtained from
different sources using different
indicators

Abscissas - iron concentration, %

Ordinates - relaxation length, cm
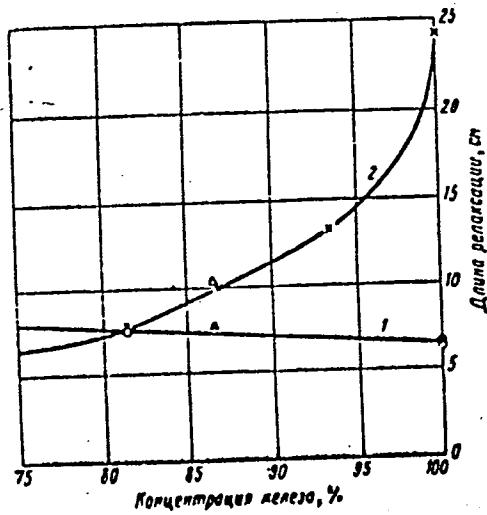
Card 4/4

L 2097-65   EWT(m)/EWA(h)   IM   S/0089/64/017/002/0145/0146   /2
ACCESSION NR: AP4043991   //

AUTHOR: Daruga, V. K. , Nikolayev, A. N. ; Pinkhasik, D. S. ; Sinitsy*n, B. I. ;
Tsy*pin, S. G.
TITLE: Study of passage of fast neutrons through sodium

SOURCE: Atomnaya energiya, v. 17, no. 2, 1964, 145-146

TOPIC TAGS: fast neutron range, neutron range, sodium, neutron detector,
proton recoil counter

ABSTRACT: The authors have determined the ranges for neutrons of greater
than 0.5 Mev energy in a sodium prism of 13 x 1370 x 18 mm. The measure-
ments were made in the B-2 arrangement of the BP-15 reactor (see C. G_{24} Tsy*pin,
Atomnaya Energiya 12, 300 (1962)). Detectors used were Al^{27} (n,) Na^{24} ,
S^{32}(n, p)P^{32} , Mg^{24}(n, p)Na^{24}, and a proton recoil counter. The ranges for neu-
trons with energy 3 Mev, measured with the first three detectors were about the
same (26 cm); however, the proton recoil counter gave 40 cm. "The authors are
grateful to N. N. Aristerkhov for the help with the experimental arrangement,

Card 1/2

L 2097-65
ACCESSION NR: AP4043991

and to M. Ga. Kulakovskiy for a helpful discussion." Orig. art. has: 2 figures
and 2 tables.

ASSOCIATION: None

SUBMITTED: 03Feb64   DATE ACQ: 13Sep64   ENCL: 00

SUB CODE: NP   NO REF SOV: 003   OTHER: 003

Card 2/2

BELOV, S.P.; DULIN, V.A.; KAZANSKIY, Yu.A.; TSYPIN, S.G.

Angular distribution of 3 and 15 Mev. neutrons in beryllium.
Atom. energ. 18 no.1:67-68 Ja '65.

(MIRA 18:2)

ISSERLIN, A.S., kand. tekhn. nauk; ESTERKIN, R.I., inzh.; TSYPIN, V.M., inzh.

Choice of single-nozzle ejection-type gas burners with complete mixing. Energomashinostroenie 11 no.5:42-43 My '65.

(MIRA 18:6)

ESTENKIN, R.I., inzh. (Leningrad); TSYPIN, V.M., inzh. (Leningrad)

Converting heating boilers to gas fuel. Vod. i san. tekh.,
no.12:3-8 D (64   (MIRA 18:2)

ESTERKIN, R.I.; TSYPIN, V.M.

    Eliminating vibrational combustion in a cast-iron heating
    boiler converted to gaseous fuel. Gaz. prom. 9 no.7:19-20
    '64.   (MIRA 17:8)

L 21567-66   EWT(1)/EPF(n)-2/EWG(m)   IJP(c)   AT

ACC NR: AP6008749   SOURCE CODE: UR/0386/66/003/006/0247/0250

AUTHOR: Mikhaylovskiy, A. B.; Tsypin, V. S.

ORG: Institute of Atomic Energy im. I. V. Kurchatov (Institut atomnoy energii)

TITLE: High-frequency instability of a plasma in a radial electric and longitudinal magnetic field

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 3, no. 6, 1966, 247-250

TOPIC TAGS: plasma heating, plasma instability, plasma charged particle, ion temperature

ABSTRACT: The purpose of the investigation was to check whether the ion heating observed in experiments on plasma in crossed fields (M. S. Ioffe et al., ZhETF v. 39, 1602, 1960) can be due to instabilities that cannot be described by the adiabatic theory. To this end the authors consider an idealized problem in which a plasma with low particle temperature is situated in mutually perpendicular static electric (radial) and magnetic (longitudinal) fields, and is subject to a potential perturbation of the electric field. The behavior of such a plasma is described in terms of two-fluid hydrodynamics and is analyzed for unstable oscillations in two cases, when the plasma density gradient is not too high, and when the plasma inhomogeneity is strong. The following interpretation is offered for the ion heating in the experiments of Ioffe et al.: The centrifugal force resulting from the finite mass of the ions causes the

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L 21567-66

ACC NR: AP6008749

electrons and ions to drift in the crossed fields with different velocities. The re-
lative motion of the plasma components leads to an instability, whose increment is
comparable with or larger than the ion-cyclotron frequency, and with a maximum of the
order of the ion Langmuir frequency. The instability develops until the ion veloci-
ties due to the fluctuating fields become of the same order as the difference between
the electron and ion drift velocities. Owing to the random phases of the fluctuations,
the energy acquired in this manner is retained by the particles even after the elec-
tric field that had initiated the instabilities is switched off. Although the ion
acceleration may possibly be connected with some other instability which lies beyond
the sope of the assumed theoretical model, the instability considered by the authors
can have a bearing also on other experiments, in which the radial electric field is
produced artificially or spontaneously. Orig. art. has: 1 formula.

SUB CODE: 20/   SUBM DATE: 03 Feb66/   ORIG REF: 002

Card 2/2

TSYPIN, Ya., inzh.

Organization of roadsteads. Rech. transp. 19 no. 2:5-7 F '60.
(MIRA 14:5)

(Inland water transportation)

KÒNSTANTINOV, V., inzh.; TSYPIN, Ya., inzh.; MIROSHNICHENKO, I., inzh.

Introducing automatic control in inland navigation and prospects
for its development. Rech. transp. 20 no. 2:12-14 F '61.
(MIRA 14:12)

(Inland navigation)   (Automatic control)

TSYPIN, YA. YE

Social Sciences

Prakticheskoe posobie dispetcheru divzheniia rechnogo flota. (Practical handbook for
the dispatcher of a river fleet) Moskva, Rechizdat, 1951.

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

IRKHIN, Aleksandr Petrovich, kand.tekhn.nauk; YERPICHEV, Mikhail Ivanovich,
inzh.; TSYPIN, Yakov Yevgen'yevich, inzh.; TIKHOMIROVA, Ye.N.,
red.; VOLCHOK, K.M., tekhn.red.

[Economic aspects and the organization of transportation by the
self-propelled freighter fleet] Ekonomika i organizatsiia pere-
vozok samokhodnym gruzovym flotom. Leningrad, Izd-vo "Rechnoi
transport," Leningr.otd-nie, 1960. 94 p.   (MIRA 13:9)
        (Inland water transportation)

TSYPIN, YA. E.

Organizatsiia raboty rechnogo flota po grafiku (Organization of river fleet operation according to schedule) Moskva, Vodtransizdat, 1954. 96 p.

SO: Monthly List of Russian Accessions, Vol. 7, No. 6, Sep. 1954

TSYPIN, Ya.Ye., LOZINSKIY, V.N., retsenzent; ARSEN'YEV, S.P., redaktor;
MAKRUSHINA, A.N., redaktor; BEGICHEVA, M.N., tekhnicheskiy redaktor

[Organization of river fleet operation according to schedule]
Organizatsiia raboty rechnogo flota po grafiku. Moskva, Gos. izd-
vo vodnogo transporta, 1954. 94 p.   (MLRA 7:10)
        (Inland water transportation)

TETERYATNIKOV, Mikhail Stepanovich; TSYPIN, Ya.Ye., red.; VLADIMIROV, A.I.,
    retsenzent; LOBANOV, Ye.M., red.izd-va; YERMAKOVA, T.T., tekhn.red.

[Work organization of the river fleet and ship accounting]
Organizatsiia raboty. flota i sudovaia otchetnost'. Izd.2. Moskva,
Izd-vo "Rechnoi transport." 1958. 250 p.   (MIRA 12:3)
                (Inland water transportation)

TSYPIN, IA.YE.

Organizatsiia dvizheniia flota po grafiku na Moskvoretskoi sisteme.
/ To put the fleet movement on the Moskva river system on time sched-
ule 7. (Rechnoi transport, 1949, no. 2, p. 7-9).   DLC: TC801.R4

SO: Soviet Transportation and Communications, A Bibliography, Library
      of Congress, Reference Department, Washington, 1952, Unclassifed.

TSYTNIK, Ya   Ya

Prakticheskoye posobiye dispetcheru dvizheniya rechnogo flota   (Handbook for the dis-
patcher of a river fleet) Moskva, lzd-vo Ministerstva Rechnogo Flota SSSR, 1951. 156 p.
tables. Contains bibliography. Cataloged from abstract. Information on planning of
transportation, compilation of traffic charts, rights and responsibilities of a dispatcher
and various operations.

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TSYPIN, Yakov Yevgen'yevich; IVANOV, L.A., red.; LOBANOV, Ye.M., red..
Izd-va; SALAZKOV, N.P., tekhn.red.

[Manual for dispatchers in inland water transportation] Posobie
dispetcheru dvizheniia rechnogo flota. Moskva, Izd-vo "Rechnoi
transport," 1957. 183 p.   (MIRA 11:2)
          (Inland water transportation)

IRKHIN, Aleksandr Petrovich, kand. tekhn.nauk; YERPICHEV, Mikhail
Ivanovich, inzh.; TSYPIN, Yakov Yevgen'yevich, inzh.;
CHERNYY, N.Ye., red.; VOLCHOK, K.M., tekhn. red.

[The economics and organization of transportation via a
self-propelled merchant marine fleet] Ekonomika i organi-
zatsiia perevozok samokhodnym gruzovym flotom. Izd.2.,
ispr. i dop. Moskva, Izd-vo "Rechnoi transport" 1963. 114 p.
(MIRA 16:10)

(Inland water transportation)

DONETS, S. (Rostov-na-Donu); KUZ'MIN, A. (Irkutsk); MEDVEDEV, N. (Saratov);
LICHKOV, G. (Arkhangel'sk); TSYPIN, Ye. (Sverdlovsk); GITCHENKO, I.
(Sochi); GRUZINTSEVA, A. (Novosibirsk); ALIMOV, R. (Alma-Ata);
GOLOBORODOV, M. (Syktyvkar)

Outposts of air transportation. Grazhd.av. 20 no.4:22-24 Ap
'63.   (MIRA 16:5)
                        (Aeronautics, Commercial)

TSYPIN, Yu.Ya., otv.red.

[Mathematics; program, method instructions, and quizzes for correspondence students in the first course of agricultural schools] Matematika; programma, metodicheskie ukazaniia i kontrol'nye zadaniia dlia uchashchikhsia-zaochnikov I kursa sel'skokhoziaistvennykh tekhnikumov. Zagorsk, M-vo sel'khoz. SSSR. Part 1. [Lessons 1,2,3] Zadaniia 1,2,3. 1958. 75 p.

(MIRA 13:2)

1. Vsesoyuznyy zaochnyy sel'skokhozyaystvennyy tekhnikum.
        (Mathematics--Study and teaching)

SHCHEPETINA, L.M., prepodavatel'; TSYPIN, Yu.Ya., otv.red.; AFANAS'YEV,
V.S., spets.red.

[Assignments and practical instructions for the course "Meteorology"
for students of agricultural schools] Uchebnoe zadanie i metodi-
cheskie ukazaniia po kursu "Meteorologiia" dlia uchashchikhsia
sel'skokhoziaistvennykh tekhnikumov. 1958 11 p.   (MIRA 12:3)

1. Vsesoyuznyy zaochnyy sel'skokhozyaystvennyy tekhnikum.
                        (Meteorology)

RENNE, I.P., kand. tekhn. nauk, dotsent; TSYPINA, M.N., inzh.; TYPIN, L.G., inzh.

Some factors affecting the measurement precision of dividing nets used in studying local deformations. Izv. vys. ucheb. zav.; mashinostr. no.6:138-145 '65.   (MIRA 18:6)

SIMANOVSKAYA, R.E.; LEVIN, A.M.; TSYPINA, E.I.

Technical and economic indices of the production of sulfur dioxide
and portland cement from phosphogypsum. [Trudy] NIUIF no.160:181-206
'58.   (MIRA 12:8)
  (Kazakhstan--Gypsum) (Sulfur dioxide) (Portland cement)

TSYPINA, E.I.

Economic testing of basic trends in utilizing local phosphorites.
(MIRA 15:5)
[Trudy] NIUIF no.164:96-99 '59.
(Phosphorites) (Fertilizers and manures)

LEVIN, A.M.; TSYPINA, E.I.

Economic analysis of superphosphate production.   [Trudy] NIUIF
no.164:94-95 '59.   (MIRA 15:5)
                         (Phosphate industry)

FEDORENKO, N.F.; TSYPINA, E.I.

Technical and economic comparison of the methods for the production of phosphoric acid. Khim. prom. 40 no.9:672-675 S '64.   (MIRA 17:11)

PETROV, K.A.; PARSHINA, V.A.; TSYPINA, G.M.; LUZANOVA, M.B.

Phosphorus-containing polymers based on polyamidophosphinites and
phosphites. Plast.massy no.1:20-23 '64.   (MIRA 17:6)

PETROV, K.A.; PARSHINA, V.A.; TSYPINA, G.M.

Phosphorus-containing polymers based on methylphosphines and
methylolphosphine oxides. Plast. massy no.11:11-13 '63.
(MIRA 16:12)

PETROV, K. A.; PARSHINA, V. A.; ORLOV, B. A.; TSYPINA, G. M.

Properties of phosphines. Part 5: Reactions of phosphines with chloroamines, sulfenyl chlorides, and amines. Zhur. ob. khim. 32 no.12:4017-4022 D '62.   (MIRA 16:1)

(Phosphine)   (Sulfenyl chlorides)   (Amines)

CHURINOV, M.V.; TSYPINA, I.M.; LAZAREVA, V.P.

Principles and methods for compiling general areal maps
of the U.S.S.R. on a 1:1,500,000 1:2,500,000 scale.
Sov.geol. 5 no.11:112-124 N '62.   (MIRA 15:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut
gidrogeologii i inzhenernoy geologii.
                (Engineering geology—Maps)

TSYPINA, L.M.

Division of the southern shore of Crimea for purposes of engineering geology. Vop. gidrogeol. i inzh. geol. no.15:113-133 '57.
(MIRA 11:5)

(Crimea--Geology)

RENNE, I.P.; TSYPINA, M.N.; YUDIN, L.G.

Experimental investigation of the accuracy and reliability of dividing grids with thin graduation lines. Zav. lab. 30 no.11: 1387-1390 '64.   (MIRA 18:1)

1. Tul'skiy politekhnicheskiy institut.

RENNE, I.P.; TSYPINA, M.N.; YUDIN, L.G.

Precision of applying and measuring graduation marks used in
studying deformations. Zav. lab. 30 no.8:1013-1016 '64.
(MIRA 18:3)

1. Tul'skiy politekhnicheskiy institut.

IJP(c)   JD/HW/DJ

L 36129-66   EWT(m)/EWP(w)/T/EWP(t)/ETI/EWP(k)   (N)   SOURCE CODE: UR/0182/66/000/005/0012/0015

ACC NR: AP6016577

AUTHOR: Renne, I. P.; Tsypina, M. N.

ORG: none

TITLE: Investigation of direct steady-state plane extrusion

SOURCE: Kuznechno-shtampovochnoye proizvodstvo, no. 5, 1966, 12-15

TOPIC TAGS: metal extrusion, flow field, friction, metal deformation

ABSTRACT: The authors describe a method of the theoretical calculation of the de-
formations of forgings produced by direct extrusion, which makes it possible to de-
termine both the local deformations and the total values of deformation intensity. It
is shown that the labor-consuming exact solution based on the use of the slip-line
field and the corresponding hodograph of flow velocities may be replaced with a suf-
ficiently accurate approximate solution if the slip-line field is replaced with a
discontinuous velocity field. For comparison with experimental findings, the authors
investigated the processes of direct extrusion with the ratio H/h = 3.42 in the pre-
sence and absence of friction at the surface of die and container. Lead specimens
on which a coordinate grid of lines was plotted were subjected to direct extrusion
until steady-state flow was accomplished and the region originally present in the
plastic zone was entirely displaced beyond the confines of that zone. Findings: The

UDC: 621.777.22

Card 1/2

L 36129-66

ACC NR: AP6016577

experimentally obtained pattern of distribution of deformation intensity over the width of specimen is in good agreement with the theoretically obtained pattern of distribution based on the theoretical solution for the discontinuous velocity field. The mean shear intensity in the case of friction-free extrusion is found to be higher than in the case of friction-involving extrusion. In other words, the proportion of the specific work expended on deformation alone is higher for friction-free extrusion than for friction-involving extrusion. Orig. art. has: 7 figures.

SUB CODE: 13,   11/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 001

Card 2/2

SHILOV, S.V.; TSYPINA, O.N.; KORNEV, K.A.

Improving the adhesion of bitumen and stone materials. Avt. dor. 27 no.7:19 Jl '64. (MIRA 17:12)

L 05074-67 EWT(d)

ACC NR: AP6013321   (N)

SOURCE CODE: UR/0413/66/000/008/0137/0138

AUTHORS: Muratikov, L. N.; Otvagin, Ye. F.; Chentsov, B. V.; Tsypina, S. F.; Kuz'min, V. G.

ORG: none

TITLE: An automatic steering device for a ship, Class 65, No. 180974

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 137-138

TOPIC TAGS: ship component, ship navigation, rudder, automatic central design

ABSTRACT: This Author Certificate presents an automatic steering device for a ship. The device includes a gyro induction compass with a course angle signal controller coupled with the course angle signal receiver of the follow-up system and with the output signal amplifier. The device also contains coarse and fine readout scales, reducing gear trains, and a tachometer-generator. The design increases the reliability of the automatic stabilization of the motion to any current value of the course and insures smooth turns of the ship with a given angular circulation rate. The course angle signal controller of the gyro induction compass and the receiver of the follow-up system are connected by electrical circuits. The motor of the follow-up system processes the cumulative signal of the controller and receiver. The stator of the course angle controller and the tachometer-generator are kinematically connected with the reducing gear train of the follow-up system when the controller rotor is stationary.

UDC: 629.12.014.6-523

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L 05074-67

ACC NR: AP6013321

The reducing gear train generates electric signals proportional to the deviation of the ship from the course and to the angular rate of the change of the course. Each of the signals enters the amplifier and is sent to the operating motor of the rudder cross arm (see Fig. 1).

Fig. 1. 1 - gyro induction compass; 2 - course angle signal detector; 3 - signal receiver; 4 - output signal amplifier; 5 - fine readout scale; 6 - tachometer-generator; 7 - motor of the follow-up system; 8 - stator of the course angle controller; 9 - rotor of the course angle controller; 10 - amplifier; 11 - operating motor of the rudder cross arm; 12 - rudder negative feedback detector; 13 - negative feedback coefficient regulator; 14 - reducing gear train of the turn controller of the ship; 15 - scale of a given change of the course; 16 - crank; 17 - motor-integrator; 18 - reducing gear train
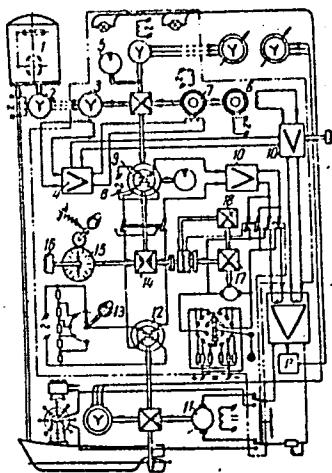
The reducing gear train generates electric signals proportional to the deviation of the ship from the course and to the angular rate of the change of the course. Each of the signals enters the amplifier and is sent to the operating motor of the rudder

Card 2/3

L 05074-67
ACC NR: AP6013321

cross arm (see Fig. 1). The rotor of the controller is electrically connected with
the negative feedback detector. This feedback detector is equipped with a negative
feedback coefficient regulator. The rotor of the course controller is kinematically
connected with the reducing gear train of the turn controller of the ship for a
relative given course. This turn controller reducing gear is equipped with a course
change scale, a friction clutch, and with a crank which is used for establishing the
new course readout on the scale. To match the position of the course controller rotor
with the stator, the rotor winding may be connected to the input of the amplifier, and
the negative feedback detector winding may be disconnected. To make the selection of
the integration coefficient more precise, the output axis of the motor-integrator is
connected to the mechanical differential by a reducing gear train.   Orig. art. has: 1
figure.

SUB CODE: 13/ SUBM DATE: 02Apr64

Card 3/3   fv

ASTAF'YEVA, Ye.V., kand.tekhn.nauk; BERNSHTEYN, M.L., kand.tekhn.nauk; KIDIN, I.N., doktor tekhn.nauk; KATOK, A.M., inzh.; TSYPINA, Ye.D., inzh.

Hardening alloyed steel for machine building by thermomechanical treatment. Metalloved. i term. obr. met. no.8:54-56 Ag '61. (MIRA 14:8)

(Steel alloys--Hardening)

BEZRUKAVNOVA, L.I., kand.ekonom.nauk, red.; ZEYDER, N.B., prof., red.;
LOPATKINA, V.S., dotsent, red.; TSYPKIN, A.L., prof., red.

[Problems in the development of collective farming at the present
stage] Nekotorye voprosy razvitiia kolkhoznogo stroia na sovre-
mennom etape; sbornik statei. Saratov, 1960. 166 p.
(MIRA 14:4)

1. Saratov. Yuridicheskiy institut.
(Collective farms)

TSYPKIN, B.N.

DECEASED

c1961

1962/4

SEE ILC

MEDICINE (ORTHOPEDICS)

TSYPKIN, B.N., professor; ZAPOROZHETS, A.A.

Ewing's sarcoma. Ortop., travm. i protez. 17 no.4:16-17 Jl-Ag '56.
(MLRA 9:12)

1. Iz Minskogo nauchno-issledovatel'skogo instituta ortopedii i
vosstanovitel'noy khirurgii (dir. - prof. R.M.Minina, nauchnyy
rukovoditel' - prof. B.N.TSypkin)
        (SARCOMA, EWING'S, case reports)

VIRNIK, D.I., starshiy nauchnyy sotrudnik; KHAR'KOVA, A.G., mladshiy
nauchnyy sotrudnik; SHAKHNAZAROVA, M.Sh., mladshiy nauchnyy
sotrudnik; VLASOV, A.P., inzh.; ROSTOVTSEVA, V.I., inzh.;
CHEKANOVA, G.V., inzh.; Prinimali uchastiye:ARTEMOVA, N.N.;
TSYPINA, N.D.; KUST, Ye.F.

Preparation of gelatin from raw materials processed with the
acid method. Trudy VNIIMP no.13:52-63 '62.   (MIRA 17:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy
promyshlennosti (for Khar'kova, Shakhnazorova, Artemova).
2. Moskovskiy zhelatinovyy zavod (for Vlasov, Rostovtseva,
Chekanova, TSypina, Kust.).

TSYPKIN, B. V., N. A. SPITSYN and R. D. BEIZEL'MAN

Podshipniki kacheniia. Raschet i vybor podshipnikov kacheniia, konstruirovanie podshipnikovykh uzlov. Moskva,Mashgiz, 1945.

Bearings with rolling contact. Calculations and selection of rolling contact bearings, designing bearing units.

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

TSYPKIN, B. V.

    Podshipniki kacheniia. (Kratkii spravochnik) Moskva, Mashgiz, 1948. 239 p.

    Antifriction bearings. (Concise handbook).

    SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library
        of Congress, 1953.

TSYPKIN, B. V. and R. D. BEIZEL'MAN

Podshipniki kacheniia; spravochnik. Moskva, Mashgiz, 1949. 423 p.

Bibliography: p. 421.

Bearings with rolling contact;handbook.

DLC: TJ1061.B47

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

TSYPKIN, B. V.

Metod rascheta podshipnikov kacheniia s uchetom vliianiia radial'nogo zazora.
(Vestn. Mash., 1951, no. 5, p. 15-28)

Includes bibliography.

Method of calculating anti-friction bearings while taking into consideration
the influence of the radial clearance.

DLC: TN4.V4

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library
     of Congress, 1953.

TSYPKIN, B.V.

BEYZEL'MAN, R.D.; TSYPKIN, B.V.; TIKHONOV, A.Ya., tekhnicheskiy redaktor.

[Antifriction bearings] Podshipniki kacheniia; spravochnik.
Izd. 2-oe, ispr. i dop. Moskva, Gos.nauchno-tekhn.izd-vo
mashinostroitel'noi lit-ry, 1951. 525 p.   (MLRA 9:1)
        (Bearings(Machinery))

BEYZEL'MAN, R. D., TSYPKIN, P. V.

BEYZEL'MAN, R. D., TSYPKIN, P. V.

Beyzel'man, R. D.

"Rolling contact bearings." Reviewed by L. D.
Chasovnikov, I. Ya. Al'shits, A. A. Korolev.
Vest. Mash. 32, no. 3, 1952.

Monthly List of Russian Accessions. Library of Congress October 1952. UNCLASSIFIED.

TSYPKIN, B. V.

TSYPKIN, B.V., inzhener; AL'SHITS, I.Ya., kandidat tekhnicheskikh nauk;
TOMASHOV, A.D., inzhener; REVIN, I.A., inzhener, retsenzent;
GOLOVIN, Ye.S., kandidat tekhnicheskikh nauk, redaktor.

[Bearing units for rolling machinery] Podshipnikovye uzly prokatnogo
oborudovaniia. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. i sudo-
stroit. lit-ry. 1954.   290 p.   (MLRA 7:7)
          'Rolling-mill machinery) (Bearings (Machinery))

TSYPKIN, B. V.

PHASE I   TREASURE ISLAND BIBLIOGRAPHICAL REPORT   AID 723 - I

BOOK   Call No.: AF650589
  Author: BEYZEL'MAN, R. D., and B. V. TSYPKIN.
  Full Title: ANTIFRICTION BEARINGS. MANUAL. 3rd ed., rev. and suppl.
  Transliterated Title: Podshipniki kacheniya. Spravochnik. Izd. 3-e, isprav. i dopol
PUBLISHING DATA
  Originating Agency: None
  Publishing House: State Scientific and Technical Publishing House of Machine-
                     Building and Shipbuilding Literature (MAShGIZ)
  Date: 1954   No. pp.: 451   No. of copies: 20,000
  Editorial Staff: None
PURPOSE: To systematize available material on types, theories of calculation,
     selection, and use of antifriction bearings, and to serve as a manual for
     designers and technicians in their daily work. In colleges where courses on
     Machine-Building are taught this book may be used as a textbook.
TEXT DATA
  Coverage: This book contains exhaustive information on antifriction bearings.
     Their classification, characteristics, sizes, and the distribution of load,
     friction and stresses are fully described and supplemented with formulae
     for calculation of carrying capacities

NOTE: See card for BEYZEL'MAN R. D. for page 2 of the abstract.

TSYPKIN, B. V.

"Investigation of the Effect of a Radial Clearance on the Load-Lifting Capacity and Life of Rocker Bearings." Cand Tech Sci, Central Sci-Res Inst of Technology and Machine Building, Min Heavy Machine Building USSR, Moscow, 1955. (KL, NO 17, Apr 55)

SO: Sum. No. 704, 2 Nov 55 – Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16 .

Tsypkin B.V.

TSYPKIN, B.V., kand.tekhn.nauk.

Comparative evaluation of assembly techniques of parallel-coupled
and tripled ball bearings having angular ball contacts. Vest.mash.
37 no.12:41-47 D '57.   (MIRA 10:12)
                        (Ball bearing)

TSYPKIN, B.V.

25(2)

PHASE I BOOK EXPLOITATION

SOV/2483

Beyzel'man, Rafail Davidovich, and Boris Vladimirovich Tsypkin

Podshipniki kacheniya; spravochnik (Antifriction Bearings; Handbook)
    4th ed., rev. and enl. Moscow, Mashgiz, 1959. 608 p.
    30,000 copies printed.

Ed.: N. F. Golovanov, Candidate of Technical Sciences; Eds. of
    Publishing House: A. I. Varkovetskaya and N. Z. Simonovskiy;
    Tech. Ed.: R. G. Pol'skaya; Managing Ed. for Literature on the
    Design and Operation of Machinery (Leningrad Division, Mashgiz):
    F. I. Fetisov, Engineer.

PURPOSE: This handbook is intended for machine and parts designers
    and mechanics. It may also be useful to students of machinery -
    construction vtuzes.

COVERAGE: This handbook, a fourth edition, revised and enlarged,
    contains basic information on the design of antifriction bearings

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Antifriction Bearings (Cont.)   SOV/2483

and related parts. Maintenance and lubrication of bearings,
selection of the proper type of bearing for a given operation,
and the design of bearing units are discussed. Technical
specifications for large-size four-row taper roller bearings
according to two new standards are presented. No personalities
are mentioned. There are 33 references, 31 Soviet, 1 German, 1
English.

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Antifriction Bearings (Cont.)

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Antifriction Bearings (Cont.)   SOV/2483

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Antifriction Bearings (Cont.)

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Antifriction Bearings (Cont.)   SOV/2483

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AVAILABLE: Library of Congress (TJ 1061.B47 1959)

                                                           GO/ajr
                                                           10-27-59
Card 11/11

SOV/122-59-4-4/28

AUTHOR: Tsypkin, B.V. (Candidate of Technical Sciences)

TITLE: On the Service Life of Rolling Bearings Operating under
            Oscillating Conditions (O dolgovechnosti podshipnikov
            kacheniya, rabotayushchikh pri kachayushchemsya
            dvizhenii)

PERIODICAL: Vestnik Mashinostroyeniya, 1959, Nr 4, pp 25-29 (USSR)

ABSTRACT: The part played by the lubricant in "False Brinelling"
            is attributed to the repetition of pressure on a surface
            from which the lubricant has just been squeezed out.
            With very small amplitudes, the lubricant is permanently
            absent. This condition is aggravated in the presence of
            vibrations and when a viscous grease is used. The
            conditions prevailing in continuous rotation are present
            in oscillating bearings only when the paths of adjacent
            rolling bodies overlap. The geometric conditions for
            this state are formulated. An expression is given
            (Eq 2) to compute the service life of oscillating
            bearings from the service life formulae of rotating
            bearings. This expression is based on the accepted
            assumption that the number of load cycles for fatigue
Card 1/3   failure in a bearing is inversely proportional to the

SOV/122-59-4-4/28

On the Service Life of Rolling Bearings Operating under Oscillating Conditions

m-th power of the contact stress. The service life of the rotating bearing is transformed by using the ratio of load cycles and the m-th power of the inverse ratio of the contact stresses. The effective contact stress in an oscillating bearing can be computed as a mean value of the contact stresses experienced by the most highly loaded point of the race when traversed by the rolling bodies during the displacement of the bearing between one extreme position and the other. The formulation of the mean value is given (Eq 4). A quantity repeatedly occurring in this formulation is tabulated for various values of the amplitude in terms of the minimum angle for the overlapping of two rolling bodies. In spherical ball and roller bearings the greatest contact stresses occur on the outer race. It is shown that, in this case, when the inner race oscillates, the service life, compared with that of a rotating bearing, takes into account solely the ratio of the number of cycles. When the paths of the rolling bodies do not overlap, the

Card 2/3   service life computations are not applicable. Under

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On the Service Life of Rolling Bearings Operating under
Oscillating Conditions

these conditions, greases with zinc oxide additives or
lithium greases are recommended.   The grease should fill
the empty bearing space. Baffles should be installed
between two bearings. Feeding of lubricant under
pressure is desirable. A maximum grease volume and a
minimum oxygen volume are advisable. Frequent changes
of lubricant are beneficial. Bearings with an
oscillating outer race are preferable. The rolling
bodies should rotate about their own axes by at least
$180°$.
There are 1 table and 6 references, of which 4 are
Soviet and 2 English.

Card 3/3

CHURIN, Kh.D., kand. sel'khoz. nauk, dots.; VASIL'YEV, B.M., dots.;
BELOV, A.I., kand. ekon. nauk; ASHIRYAYEV, Sh.V., dots.;
TSYPKIN, G.I., kand. sel'khoz. nauk; KAPLINA, G.T., dots.;
ANDRONOV, I.G., dots.; VASIL'YEV, V.I.; KONDION, A.K.,;
MAKAROV, A.P., nauchnyy sotr.; ZHIZNEVSKIY, F.V., red.;
MOSIYASH, S.P., red.; KRINITSKIY, V.A., red.; NAGIBIN, P.,
tekhn. red.

[Economics of Kazakhstan agriculture]Ekonomika sel'skogo kho-
ziaistva Kazakhstana. Alma-Ata, Kazsel'khozgiz, 1962. 325 p.
            (Kazakhstan--Agriculture--Economic aspects) (MIRA 16:3)

SOKOLOV, N.I.; ANDRIANOVA, K.I., red.; BELOV, A.I., red.; DMITRIYEV, B.V., red.; LOZA, G.M., red.; UDOVENKO, Ye.Ya., red.; TSYPKIN, G.I., red.

[Problems in the economy and organization of production on state farms in Kazakhstan] Voprosy ekonomiki i organizatsii sel'sko-khoziaistvennogo proizvodstva v sovkhozakh Kazakhstana. Alma-Ata, 1958. 200 p.
(MIRA 12:2)

1. Kazakh S.S.R. Upravleniye sel'skokhozyaystvennoy nauki i propagandy. 2. Nachal'nik planovo-ekonomicheskogo upravleniya Ministerstva sel'skogo khozyaystva Kazakhskoy SSR (for Sokolov). 3. Direktor Kazakhskogo nauchno-issledovatel'skogo instituta ekonomiki sel'skogo khozyaystva (for Belov).
(Kazakhstan--State farms)

FLORINSKIY, Aleksandr Vasil'yevich; TSYPKIN, I.S., redaktor; SENCHILO, K.K.,
tekhnicheskiy redaktor

[New techniques used in laboratory research] Novye tekhnicheskie
priemy laboratornykh issledovanii. Moskva, Gos. izd-vo med. lit-ry.
Medgiz, 1954. 85 p. [Microfilm]   (MLRA 8:2)
(Pathological laboratories)

SAVINOV, A.P.; TSYPKIN, L.B.

Studies on stable cultures of the heart Cynomolgus monkeys in rat experiments. Vop. onk. 6 no.3:27-34 Mr '60.   (MIRA 14:2)
        (HEART—TUMORS)   (TISSUE—CULTURE)

TSYPKIN, I.L., kand.med.nauk

IAkov Nikolaevich Rodin, 1903-. Ortop., travm, i protez. 25
no.5:72 My '64.

(MIRA 18:4)

TSYPKIN, I. L.: Master Med Sci (diss) -- "Hemonovocaine blockade in treating

patients with certain severe pain syndromes". Saratov, 1958. 11 pp

(Min Health RSFSR, Saratov State Med Inst), 200 copies (KL, No 2, 1959, 126)

TSYPKIN, I. L. Cand Med Sci -- (diss) "The Treatment of Certain Major Pain Syndromes With Hemonovocaine." Saratov, 1957. 8 pp 22 cm. (Min of Health RSFSR, Saratov State Medical Inst), (KL, 26 57, 114)

- 138 -

TSYPKIN, I.S. (Moskva)

Properties of sputum in some diseases of the respiratory system.
(MIRA 12:10)
Med.sestra 17 no.4:18-23 Ap '58.
(SPUTUM)   (RESPIRATORY ORGANS--DISEASES)

COUNTRY   :   USSR   U
CATEGORY   :   General Problems of Pathology.Tumors
                   Comparative Oncology.Human Neoplasms.

ABS . JOUR.   :   RZhBiol., No.23   1958, No.   107145

AUTHOR   :   Pogozheva,L.N.;Tsypkin,I.S.

INST.   :
TITLE   :   The Value of Microscopical Examination of
                   the Urine in the Diagnosis of Neoplasms of
                   the Urinary Bladder.

ORIG. PUB.   :   Urologiya, 1957, No.1,27-31.

ABSTRACT   :   No abstract.

CARD: 1/1