

SYSAK, N. S.

Anthropology - Tatar Republic

Anthropological features of the inhabitants of the so-called Eurtasi culture. N.S.
Sysak. Krat. soob. Inst. etn. AN SSSR 14, 1952.

9. Monthly List of Russian Accessions, Library of Congress, September 1952, UNCL.

MESHCHERYAKOV, A.M.;SYSAK, N.S.

Discussion on F. A. Volynskii's and E. P. Melman's article Synapses
of certain abdominal organs. Arkh. anat., Moskva 30 no.2:94-95 Mar-
Apr 1953. (CJML 24:3)

MESHCHERYAKOV, A.M.; SYSAK, N.S.

Letter to the Editor, in regard to Professor F.A.Volynskii's
reply to A.M.Meshcheriakov's and N.S.Sysak's article which
was published in "Arkhiv Anatomii, Gistologii i Embriologii"
no.3 in 1953. Arkh.anat.gist.i embr.30 no.6:88-89 N-D '53.

(MLRA 7:1)

(Volynskii, F.A.) (Meshcheriakov, A.M.) (Sysak, N.S.)
(Morphology)

SYS M, U. S.

"The Growth Morphology of the Human Skull." Dr. Med Sci, Chair
of Human Morphology, Kazan State Medical Inst, Kazan', 1954. (KL,
No 12, Mar 55)

30: Sum. No. 670, 29 Sep 55--Survey of Scientific and Technical
Dissertations Defended at USSR Higher Educational Institutions (15)

SYSAK, N.S.

NATADZE, T.G.(Tibilisi); SYSAK, N.S.(Kazan'); Andriyevskiy, I.I.(Novocherkassk)

Discussions. Arkh.pat. 16 no.2:65-72 Ap-Je '54. (MIRA 7:5)
(DAVYDOVSKII, IPPOLIT VASIL'EVICH, 1887-) (STRUKOV, A.I.)
(ANATOMY, PATHOLOGICAL)

SYSAK, N. S.

SYSAK, N.S.

Letter to the editor. Zhur. nevr. i psikh. 54 no.6:606-607
Je '54. (MLRA 7:7)
(SCHIZOPHRENIA)

SYSAK, N.S. (Kazan')

A case of microcephaly with absence of the pineal gland and underdeveloped genital organs. Probl.endokr. i gorm. 2 no.2:121-124
Mr-Apr '56. (MLRA 9:10)

1. Iz patologoanatomicheskogo otdeleniya Kazanskoy psikhonevrologicheskoy bol'nitsy (glavnyy vrach A.M.Kravtsov)

(MICROCEPHALY, compl.

absence of pineal gland & underdevelop. of genital organs)

(PINEAL BODY, abnorm.

agenesis, in microcephaly & underdevelop. of genital organs)

(GENITALIA, abnorm.

hypoplasia, with microcephaly & pineal body agenesis)

(ABNORMALITIES

agenesis of pineal body & hypoplasia of genital organs in microcephaly)

USSR / Human and Animal Morphology (Normal and Pathological).
Circulatory System. Blood Vessels.

S

Abs Jour : Ref Zhur - Biologiya, No 1, 1959, No. 2928

Author : Sysak, N. S.

Inst : Kazan Medical Institute

Title : Anastomoses of Cerebral Arteries and Their Practical
Significance

Orig Pub : Sb. nauchn. rabot. Kazansk. med. in-t, 1957, vyp 4,
248-257

Abstract : On the basis of personal (87 specimens of the human
brain of various age) and literary data, speculations
were made as to the possibility of development of
collateral circulation in the brain. Anastomoses between
various arteries are described and the frequency of
their occurrence is indicated. It is noted that normally
each peripheral branch of cerebral arteries supplies a

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USSR / Human and Animal Morphology (Normal and Pathological).
Circulatory System. Blood Vessels.

S

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001654320002-8"

Abs Jour : Ref Zhur - Biologiya, No 1, 1959, No. 2928

definite region of brain substance, but in spasms or
vascular occlusion the existing anastomoses help supply
the blood flow from other sources.

Card 2/2

USSR / Human and Animal Morphology (Normal and Pathological).
Circulatory System. Blood Vessels.

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USSR / Human and Animal Morphology (Normal and Pathological).
Circulatory System. Blood Vessels.

S

Abs Jour : Ref Zhur - Biologiya, No 1, 1959, No. 2927

presence of 2 rostral sulci there is a special rostral artery, etc. A defect in any segment of the brain causes a defectiveness in the supplying arteries. In microcephaly the number of arteries and their caliber is diminished. Variation of the size of the brain even within normal limits is associated with diminished or increased number of arterial branches. In the process of growth the changes of the arterial system occur simultaneously with the cellular reorganization in the hemispheres.

Card 2/2

SYSOK, N.S. (Kazan')

Alexandrians Herophilus and Erasistratus, pioneers of materialistic theory on the nervous system. Zhur.nevr. i psikh. 57 no.9:1166-1168 (MIRA 10:11)
'57.

(HEROPHILUS, 300 B.C.)

(ERASISTRATUS, 300 B.C.)

(NEUROLOGY, history,

contribution of Erasistrates & Herophilus (Bus))

Sysak, N.S.
SYSAK, N.S.

Pathogenesis of alcoholic encephalopathy; Wernicke's polioencephalitis [with summary in French]. Zhur.nevr. i psikh. 57 no.10:1223-1228 '57. (MIRA 10:12)

1. Kazanskaya psikhonevrologicheskaya bol'nitsa (glavnyy vrach A.M. Kravtsov)

(VITAMIN B DEFICIENCY, etiology and pathogenesis, Wernicke's encephalopathy (Rus))

SYSAK, N.S. (Kazan')

Views of Rudolph Virchow on the problem of the local and general
in medicine; on the centenary of Virchow's "Cellular Pathology".
Klin.med. 36 no.4:139-143, Ap'58 (MIRA 11:5)
(VIRCHOW, RUDOLF, 1821-1902)

EXCERPTA MEDICA Sec 5 Vol 12/4 Gen. Path. Apr 59

976. INHIBITION OF GROWTH THROUGH DISTURBANCES OF THE CENTRAL NERVOUS SYSTEM - Zur Frage der Wachstumshemmung bei Störungen des Zentralnervensystems - Sysak N. Lehrkanzel für Anat., Med. Inst., Kasan, USSR - VIRCHOWS ARCH. PATH. ANAT. 1958, 331/1 (23-25) Tables 1
Description of several cases in which either infections or auto-intoxications of the body (burns, meningoencephalitis) in early childhood caused inhibition of growth not only of the body itself but also of proportional growth of different parts and of the internal organs.

Strassmann - Waltham, Mass. (V. 8*)

SYSAK, N.S. (Kazan')

Paracelsus (Theophrast Bombast from Hohenheim). Vrach.delo no.6:
657-658 Je '59. (MIRA 12:12)
(PARACELUS, 1493-1541)

SYBAK, N.S. (Kazan')

Sixth All-Union Congress of Anatomists, Histologists, and Embryo-
logists. Klin.med. 37 no.11:143-145 N '59. (MIRA 13:3)
(ANATOMY--CONGRESSES)

SYSAK, N.S. (Kazan', u.Sverdlova, 49, kv.1)

Problem of ancestral characters in the structure of man. Arkh.
anat. gist. 1 embr. 38 no. 5:81-84 My '60. (MIRA 14:2)
(EVOLUTION) (ANATOMY, HUMAN)

SYSAK, H.S.

Problem of thromboendarteritis obliterans. Zhur.nevr.i psikh. 61
no.3:396-399 '61. (MIRA 14:7)

1. Kazanskaya psikhonevrologicheskaya bol'nitsa (glavnyy vrach
F.F.Davletshin).
(THROMBOSIS) (BRAIN)

SYSEL, Ivo

Batching device for preparing chill cast mixtures. Slevarenstvi 10
no.1:28 Ja '62.

1. Automobilove zavody, narodni podnik, Mlada Boleslav.

HURNIK, Stanislav, Promovany geolog; SYSEL, Pavel, promovany geolog

Determining the granularity of filter layers in the north
bohemian lignite basin. Uhli 6 no.5:169-172 My '64

1. Institute of Lignite Research, Most.

SYSEL, Vladimir, inz.

Permanent Commission for Standardization of the Council for Mutual Economic Assistance and Standardization Institute of the Council for Mutual Economic Assistance, their tasks and present activity. Normalizace 11 no.11:352-354 N°63.

1. Urad pro normalizaci a mereni, Praha.

SYSEL, Vladimir, inz.

List of recommendations accepted by the Permanent Commission
for Standardization of the Council for Mutual Economic
Assistance. Normalizace 12 no.1:28-29 Ja'64.

SYSENKO, I.

Strict observance of state discipline in construction.
17 no.4:68-72 Ap '56.

(Kirghizistan--Construction industry)

Fin.SSSR
(MLRA 9:8)

SYSENKO, I.

Control audits are an important means against padded entries in construction work. Fin.SSSR no.7:35-37 J1 '57. (MLRA 10:7)

1. Upravlyayushchiy Kirgizskoy respublikanskoy kontoroy Prontanka.
(Construction industry--Finance) (Fraud)

AUTHOR: SysenkO, P.I.

121-2-14/20

TITLE: Press tool for deep drawing in presses with a small ram stroke (Shtamp dlya glubokoy vytyazhki na pressakh s malym khodom polzuna)

PERIODICAL: "Stanki i Instrument" (Machine Tools and Tools), 1957, No.2, pp. 37 - 38 (U.S.S.R.)

ABSTRACT: A variant of a press tool with a floating die is described and illustrated in which the die is raised by a wedge and thereby the effective stroke of the press is increased by 30 mm.

There are 2 figures.

AVAILABLE:

1/1

LOGVINENKO, A.A.; PLUZHNIKOV, V.Kh.; PANOVA, G.V.; SYSHCHENKO, T.Ye.;
FIRAGO, B.A.; SHCHEGOLEV, D.Ye.; NEVEL'SKIY, A.V., nauchnyy sotrudnik

Results of photographic observations of artificial earth satellites.
Biul.sta.opt.nabl.isk.sput.Zem. no.11:20-28 '60. (MIRA 14:12)

1. Nachal'nik stantsii nablyudeniya iskusstvennykh sputnikov Zemli No.031 (for Logvinenko).
 2. Nachal'nik stantsii nablyudeny iskusstvennykh sputnikov Zemli No.60 (for Pluzhnikov).
 3. Glavnaya (Pulkovskaya) astronomicheskaya observatoriya AN SSSR (for Panova, Syshchenko, Firago, Shchegolev).
 4. Astronomicheskaya observatoriya Ural'skogo gosudarstvennogo universiteta (for Nevel'skiy).
- (Artificial satellites--Optical observations)
(Astronomical photography)

82479

S/035/60/000/04/16/017

A001/A001

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 4,
p. 71, # 3393

3.1230 3.2300

AUTHORS: Panova, G. V., Syshchenko, T. Ye., Firago, B. A., Shchegolev, D. Ye.

TITLE: Observations of the Second Earth's Artificial Satellite (1957 β) at
Station No. 039 (Pulkovo)

PERIODICAL: Byul. st. optich. nablyudeniya iskusstv. sputnikov Zemli, 1959, No.
6, pp. 1-5 (English summary)

TEXT: Results of observations and processing of photographs taken with two
standard cameras are described in detail. Coordinates were determined by the
method of A. A. Kiselev and partially by A. N. Deych's method. One "node" point
was obtained from one negative relative to which coordinates and time were inter-
polated several times. The following factors were taken into account: diurnal
rotation of the sky, refractional parallax of the sputnik, systematic errors in
measuring the edge of the sputnik track, track curvature and sputnik acceleration.
Relative time instants were reduced to the standard time of the USSR with \checkmark

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S/035/60/000/04/16/017
A001/A001

Observations of the Second Earth's Artificial Satellite (1957 β) at Station
No. 039 (Pulkovo)

allowance for the lag of the camera, chronograph and other units of the
equipment, the run and corrections of the printing chronograph and quartz clock.
Astrographic coordinates of the node points (68 in total) are published for the
epoch of 1950.0; other data include: instant in the system of standard time
and universal approximately-uniform time TU^2 , angular velocity and position angle
of the sputnik motion, and some other data. The accuracy of the published time
instant is characterized by the root-mean-square error of $\pm 0.005^S$; the inner
(in distinction from the error of instants) accuracy of coordinates is $\pm 0.2^S$ sec δ
and $\pm 3''$.

B. A. Firago

Card 2/2

OMAROV, T.B.; PANOVA, G.V.; SYSHCHENKO, T.Ye.; FIRAGO, B.A.; SHCHEGOLEV,
D.Ye.; LIYGANT, M.; SAVRUKHIN, A.P.

Results of photographic observations of artificial satellites.
Biul.sta.opt.nabl.isk.sput.Zem. no.10:17-24 '59.
(MIRA 13:3)

1. Astrofizicheskiy institut AN KazSSR (for Omarov). 2. Glavnaya
astronomicheskaya (Pulkovskaya) observatoriya AN SSSR (for Panova,
Syshchenko, Firago, Shchegolev). 3. Nachal'nik stantsii nablyudeni-
ya iskusstvennykh sputnikov Zemli, Institut fiziki i geofiziki AN
Tadzhiskoy SSR (for Savrukhin). 4. Nachal'nik stantsii Tartusskogo
gosudarstvennogo universiteta (for Liygant).
(Artificial satellites--Tracking)

SYSHCHENKO, T.Ye.; FIRAGO, B.A.; SHCHEGOLEV, D.Ye.; NEVEL'SKIY, A.V.,
mladshiy nauchnyy sotrudnik; KIRICHENKO, A.G., vychislitel';
BRATIYCHUK, M.V.; MAKSYUTOV, mladshiy nauchnyy sotrudnik;
KALIKHEVICH, F.F., mladshiy nauchnyy sotrudnik; IVAKINA, T.Ya.;
laborant; KLEPESHTA, I.; RAYKHL, R.; VRATNIK, A.

Results of photographic observations of artificial earth
satellites. Biul.sta.opt.nabl.isk.sput Zem. no.4:17-23 '60.

(MIRA 13:11)

1. Glavnaya (Pulkovskaya) astronomicheskaya observatoriya AN SSSR
(for Syshchenko, Firago, Shchegolev).
 2. Astrosovet AN SSSR (for
Nevel'skiy).
 3. Nachal'nik stantsii opticheskikh nablyudeni
iskusstvennykh sputnikov Zemli, Uzhgorod (for Bratiychuk).
 4. Stantsiya opticheskikh nablyudeni
iskusstvennogo sputnika
Zemli, Uzhgorod (for Kirichenko).
 5. Astronomicheskaya observatoriya
im.Engel'gardta, Kazan' (for Maksyutov).
 6. Nikolayevskoye
otdeleniye Glavnoy astronomicheskoy observatoriya v Prage,
Chekhoslovakiya (for Klepeshta, Raykhl, Vratnik).
- (Artificial satellites--Tracking)

SPC-2/EWC(A)/EFP/ESP(h)/ESS-2/EWT(1)/FS(v)-3/EBC(k)-2/EMG(s)-2/EMG(v)/
/Pa-5/Pq-4/Pac-4/Pae-2/Pg-4/

0000/033/0020/0025

AUTHORS: Panaiotov, L. A.; Syshchenko, P. Ye.

101
100
371

TITLE: Results of photographic observations of artificial earth satellites

NOTE: AN SSSR. Astronomicheskii sovet. Byulleten' stantsii opticheskogo
nauchnogo tsentra imeni L. N. Gikhalo, No. 1, 1962, pp. 1-5

TOPIC TAGS: artificial earth satellite, satellite tracking/ UDM 21 microscope

ABSTRACT: The methods used and results obtained in photographing Soviet artificial earth satellites (ISZ) in 1961 and 1962 were reviewed. A photographic station was established at Pulkovo in 1961 and was equipped with a motion film camera having a "Uran 12" objective. The camera was mounted on a triaxial azimuth stand so that one axis was free to follow the orbit of the satellite. The camera mount permitted a wide range of observation and flexibility of tracking speed. An electronic film exposure time register was integrated with the quartz timer system of the observation. In all 30 photographs of two satellites (1960 E₂ and 1960 E₃) were made,

equipment used in the tests. Measurements and photoprocessing were carried out

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L 32709-65

ACCESSION NR: AT5003594

with the use of a UIM-21 microscope and were done according to methods set forth by L. A. Paniatov (AZh, XXXVIII, vyp. I, 145, 1961). A discussion of the manner of measuring time and determining coordinates is given. Angular coordinates in two orthogonal directions were found to be within error limits on the order of $\pm 3-4$ seconds. A table showing the observed angles and corresponding position calculations is given. 2 figures and 1 table.

ASSOCIATION: Glavnaya astronomicheskaya observatoriya, AN SSSR (Main Astronomical Observatory, AN SSSR)

SUBMITTED: 03Jan63

ENCL: 00

SUB CODE: AA, ES

NO REF SOV: 002

OTHER: 000

Card 2/2

BROVKO, I.A., inzh.; SYSHCHIKOV, B.S., inzh.

USM-500 universal welding manipulator. Svar. proizv. no. 3:32-34 Mr '61.
(MIRA 14:3)

1. Vsesoyuznyy proyektno-tekhnologicheskii institut tyazhelogo
mashinostroyeniya.

(Welding—Equipment and supplies)

L 11105-63

EPF(n)-2/T-2/EDS AFFTC/ASD/AFWL/SSD Pu-4 DM

ACCESSION NR: AP3001176

S/0089/63/014/005/0465/0468

64

AUTHOR: Ibragimov, Sh. Sh.; Sy*shchikov, L. A.; Voronin, I. M.; Kudryashov, V. G.

TITLE: Investigation of spent fuel elements of the First Atomic Electric Station 19

SOURCE: Atomnaya energiya, v. 14, no. 5, 1963, 465-468

TOPIC TAGS: spent fuel element, First Atomic Power Plant, fuel burnup, micro-structure, microhardness, tensile strength, microcrack

ABSTRACT: Tests have been made of three spent tubular fuel elements used in the Pervaya atomnaya elektrostantsiya (First Atomic Power Plant) for 111, 324.5, and 557 days with mean fuel burnups of 11.8, 28, and 59%, respectively. The fuel elements consisted of two concentric steel tubes whose annular clearances were filled with fuel (a uranium-molybdenum alloy containing 9% molybdenum and metallic magnesium). During operation, the fuel elements were water cooled. Water inlet temperature was 175-190C and exit temperature, 260-280C. The maximal temperature of the external surfaces did not exceed 360-370C. The tests involved external examination of the elements, exact measurement of the diameter, metallographic investigation, and mechanical tests of ten tubes. Although no external damage

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ACCESSION NR: AP3001176

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to the elements was found, a thin (about 1μ) oxide film, varying in color from light-brown to dark-grey, formed on the element surfaces, and some swelling appeared along the length of the fuel element; the maximal increase in diameter, which occurred at the middle point, amounted to 0.10, 0.15, and 0.20 mm for fuel elements operated for 111, 324.5, and 557 days, respectively. The microstructure of the tube material did not undergo significant changes. Interaction between steel, magnesium, fuel, and the surrounding medium was confined to the fuel elements which operated for 111 and 324.5 days. Microcracks up to 100μ deep were found in fuel elements which operated for 557 days. The tensile strength and microhardness of the tubes increased and the elongation decreased. These changes were most pronounced for external surfaces. With an increase in fuel burnup, and consequently of integral neutron flux, the strengthening of the tube material increased. The results are recommended for use in designing similar type reactors. Orig. art. has: 5 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 21Jun62

DATE ACQ: 21Jun63

ENCL: 02

SUB CODE: NS

NO REF SOV: 005

OTHER: 000

Card 21/2

FD-971

Syshchikov, L. I.
USSR/Chemistry - Carbon black

Card 1/1 Pub. 50 - 14/19

Authors : Yermilov, P. I., Polyakov, Z. N., Syshchikov, L. I.

Title : The temperature of spontaneous ignition of carbon black

Periodical : Khim. prom., No 7, 435-436 (51-52), Oct-Nov 1954

Abstract : Determined the temperature of spontaneous ignition of 8 grades of carbon black in dry air, moist air, and dry oxygen and list the data obtained. Five references, all USSR, all since 1940. One table.

S/138/60/000/011/008/010
A051/A029

AUTHORS: Kudryavtsev, L.D., Akimenko, V.I., Syshchikov, L.I.

TITLE: Experience in Synthetic Latex Production at the Voronezh
Synthetic Rubber Plant im. S.M. Kirov

PERIODICAL: Kauchuk i rezina, 1960, No. 11, pp. 33-35

TEXT: In the present article the authors have outlined their attempts to produce new latexes for the tire industry. The method for preparing the solutions and their resultant characteristics are given. The VNIISK and other scientific research institutes have developed the new formulation and the production procedures for the new type of latexes. In 1959 at the Voronezhskiy zavod SK im. S.M. Kirova (Voronezh SR Plant im. S.M. Kirov) a new shop was put into operation intended for the production of several types of commercial synthetic latexes including that of CKC-30 ШХП(SKS-30ShKhP) and CKД-1 (SKD-1), CKC-65ГП(SKS-65GP) (deep polymerization) for the production of emulsion dyes, CKC-50ПГ(SKS-50PG) ("foam hot rubber") for the production of foam rubber articles, etc. The shop is said to have begun production of 8 types of synthetic latexes on an in-
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ustrial scale. The SKS-30ShKhP and SKD-1 latexes, the production methods of which are described, are said to have significantly increased the stability of adhesion between rubber and cord and thus improved the quality of the casings. The solutions were prepared in the following manner: An aqueous-alkaline solution of the emulsifier (aqueous phase) was prepared in a cylindrical sealed apparatus (1) supplied with a mixer (Fig.1). Desalted water is pumped into the apparatus 1, then through the apparatus 2, through a measuring tank 3 a 25-30% solution of fatty acid soap is poured and through a measuring tank 4 a 32-37% solution of leuconal. An ammonium solution enters the apparatus 1 through a measuring tank 5. After measuring out all the components water is added to the final level and sodium sulfite is also added. In order to remove the iron salts and other admixtures the ready aqueous phase is left to stand for several hours. The soap solution is prepared in apparatus 2. Desalted water is pumped into the apparatus and alkali is added. The alkaline solution is heated to 60-70°C, after which fatty acids are added according to calculation. A
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2-5% emulsion of cumene hydroperoxide in a soap solution, prepared in apparatus 8, is used as the initiating agent of the polymerization process. The activator of the process is prepared in apparatus 10, where desalted water is pumped and hydroquinone and sodium sulfite are added. Trilon B is also added, which forms a complex compound with iron salts. The regulator of the polymerization process is diperoxide or bisethylxanthogenate. In order to simplify the dosaging, the regulator in apparatus 9 is first dissolved in styrene. The thin suspension of the stabilizer (Neozone D) is obtained on a colloidal mill 13, where a raw suspension of Neozone D enters from apparatus 12. From the capacity holder 14 serving as the collector the suspension is pumped off by a pump into the measuring tank 16. The polymerization is conducted in the polymerizer 24 with a capacity of 12 m³ supplied with a mixer, from which first the oxygen is removed prior to the loading. The aqueous phase is poured from the measuring tank 17, the activator solution enters from the measuring tank 11. After the activator from the measuring tank 18 is added, styrene is then also

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added and from the measuring tank 19 divinyl is introduced. The initiator is measured from the measuring tank 20, using a measuring plunger pump 21. The loading of the components is carried out at 10-12°C. The reacting mixture in the polymerizer is heated to 20-20°C. This temperature is kept up to the end of the process. Removal of the heat formed during the polymerization process is accomplished by supplying cold water to the container and a brine solution to the spiral tube of the apparatus. At a depth of polymerization equalling 15, 30 and 45% the regulator solution is measured out in equal amounts from the measuring tank 22. by means of a pump 23. The polymerization process is completed when the depth reaches 60% corresponding to a content of 27-28% dry substance in the latex. The polymerization duration is 60-20 hours. The latex is cooled to 10°C and poured into a cistern 25, previously treated with a solution of complex phenols. The non-degasified latex contains a large number of free monomers which are distilled off on a two stage distilling column 28. By

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means of a pump 27 the latex is fed to the top part of the first stage of the column 28 and from there it is pumped over to the top part of the second stage. From the vat of the column the degasified latex passes through a hydro-lock 30 and is poured down into the capacity holder 31, from where it is pumped with a pump to a storing house. Live steam is fed to the top part of the 2nd stage. From the vat of the 2nd stage aqueous vapor and monomer vapors enter the 1st stage, from where they pass to condensation. The monomer distillation from the latex is done under a vacuum of 600-650 mm Hg created by a water-ring vacuum pump of the PMK-3 (RMK-3) type. The commercial SKS-30ShKhP latex is said to satisfy the following technical conditions: dry substance content in the latex, %.... no less than 24, Neozone D content, %..... 1.2-2, pH....9.5-11, dissolution threshold.....1:100, gelatinization temperature, °C.. not below +5, hardness of the copolymer, according to Defoe, g.....1,500-4,000. The shortcoming of the latex is a lowered stability compared to SKS-30 latex. The measuring out of the initiator and the regulator

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directly carried out from the measuring tanks by means of leveling lines causes the foam of the latex to clog the measuring tanks leading to a disruption of the measuring accuracy. In order to eliminate these shortcomings it was suggested to establish measuring pumps of the plunger type. One of the main aspects in perfecting the recommended flow-sheet is the change-over from the batch-type to the continuous method. The latter would improve the production standard and quality and to increase the output. Another shortcoming is said to be the presence of "dead levels" in the cisterns of the non-degasified and degasified latex. In changing from one type of latex to another a great deal of work is involved, in order to free the cisterns of latex remains, leading to irreversible loss of the finished product. In discussing the production method of the SKD-1 latex, it is said that the polymerization is carried out in an acidic medium formed by an organic unsaturated acid. The principal scheme is the same as for that of the SKS-30ShKhP latex. A

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Experience in Synthetic Latex Production at the Voronezh Synthetic Rubber Plant im. S.M. Kirov

solution of Nekal is dissolved and kept for 24 hours in order to eliminate the iron salts. A 5%-emulsion of hydroperoxide in Nekal is used as the initiator. At a depth of the polymerization of 53-56% the latex is poured into the cistern. The SKD-1 latex is said to have the following characteristics: dry substance content, %..... no lower than 18, Neozone D, %..... 1-2 of the dry substance, pH.....8.5-9.0, threshold of dissolution.....1:100, gelatinization temperature, °C..... not below 5, copolymer hardness, according to Defoe, g.....1,500-4,000. There is one flow-sheet.

ASSOCIATION: Voronezhskiy zavod SK im. S.M. Kirova (Voronezh SR Plant im. S.M. Kirov)

Card 7/9

PANAOTOV, L.A.; SYSHCHENKO, T.Ye.

Positions of Soviet artificial earth satellites (1960 ϵ_2 and 1960 ϵ_3) in 1961-1962 obtained from photographs with a sliding-film camera in Pulkovo. Biul. sta. opt. nabl. isk. sput. Zem. (MIRA 17:7) no.33:20-25 '63.

1. Glavnaya astronomicheskaya observatoriya AN SSSR.

SYSHCHIKOV, V.I., inzh. (Leningrad)

Unit for drying the air using concentrated solutions of
liquid sorbents. Vod. i san. tekhn. no.8:16-18 Ag '62.
(MIRA 15:9)

(Sorbents)
(Air conditioning)

SYSHCHIKOV, V.I., inzh.

Mobile calcium chloride air-drying apparatus. Khim.mashinostr.
no.4:11-13 JI-Ag '63. (MIRA 16:9)
(Air--Drying)

Syshchikov, V.I.

137-58-2-4254

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 281 (USSR)

AUTHORS: Chechulin, B.B., Syshchikov, V.I.

TITLE: The Cyclic Strength of Titanium (Tsiklicheskaya prochnost' titana)

PERIODICAL: V sb.: Metallovedeniye. Leningrad, Sudpromgiz, 1957, pp 196-205

ABSTRACT: A study was made of the cyclic strength characteristics of industrially pure Ti, i.e., of σ_w , of the character of the curve of endurance and notch sensitivity in the presence of cyclic loads, and of the influence exerted by a corrosive medium and by the admixture of H. An ingot of magnesium-fusion-process Ti, produced in an arc furnace (wherein $\sigma_b = 58.8 \text{ kg/mm}^2$, $\delta = 24\%$, $a_k = 5.9 \text{ kg/mm}^2$), was forged into test specimens at temperatures of 750-900°C, which were subsequently annealed for 45 minutes at 650-680°. The tests consisted in 10⁷ cycles of bending in alternate directions of a rotating cantilever bar. The clear emergence in the curves plotted in semilogarithmic coordinates of a dependence of σ_w on the number of cycles is a good indication that the Ti does have a σ_w . Even when the test specimens were not very

Card 1/2

137-58-2-4254

The Cyclic Strength of Titanium

carefully polished, σ_w in the case of the smooth bars equalled 30.8 kg/mm², i. e., was equal to 0.525 σ_b (or 0.61 σ_s). When circular notches were cut into the specimens, the base radii of the notches being 0.75 and 0.15 mm, this markedly lowered the σ_w (to 21 and 11 kg/mm² respectively). A comparison of the effective stress concentration factors in the case of Ti and that of various grades of steel (carbon steels and alloy steels) revealed that the Ti possessed the least notch sensitivity when the cyclic ratio (σ_w smooth/ σ_w notched) = 1.46. Tests made with the smooth and notched bars in synthetic sea water (similar in composition to that of the Pacific Ocean) showed that, in contrast to the steels and ordinary nonferrous alloys, a corrosive medium has practically no effect on the σ_w of Ti. Annealing the Ti in a 10⁻³ mm Hg vacuum at 950° for 2-10 hours more than doubled its σ_w but affected hardly at all (with respect to relative grain size) its σ_w and its notch sensitivity in the cyclic tests. The presence of H did not exert any decisive influence on the fatigue characteristics of the Ti.

G. T.

1. Titanium alloys--Characteristics

Card 2/2

V.F. Syshchikov

SOV/2050

PHASE I BOOK EXPLOITATION

25(1)

Sverka sbornik statyi [svy]z l (Welding). Collection of Articles. Br. 1) Leningrad, Svyazgiz, 1958. 246 p. 4,000 copies printed. Ed.: O. I. Kaprin. Candidate of Technical Sciences; Ed.: I. A. Zhirumskaya; Tech. Ed.: K. M. Volchok.

PURPOSE: This collection of articles is intended for use in research institutes, institutes of higher learning, design offices, and plants.

COVERAGE: These technical papers deal with the results of research in welding technology. The main purpose of this work was to investigate the effects of various welding regimes and heat treatments on the mechanical properties of welds of austenitic and ferritic composition. A number of experiments also dealt with the welding properties and weldability of titanium-base alloys and a number of nonferrous metals. The mechanical properties of the welds were studied in the laboratory under the geometry of the weld seam and its physical properties. The crystallization of the weld, its mechanical properties, and the various factors affecting the grain structure of the metal were studied by a number of scientists. Of special practical interest is the study of the behavior of a welded structure in which the elasticity of the material and of the welded joint are not mechanically independent. These considerations lead to experiments with mechanically induced changes in the properties of the metal. Another problem which is presented in the papers is the study of the behavior of the metal in the heat-affected zone next to the welded joint. One of the papers deals with experiments in this field. A description is given of the equipment and the technique used in electroslag welding, which is regarded as one of the major advances in modern welding technology. Several papers deal with welding techniques of nonferrous alloys and with the use of special fluxes for this work. Most of the papers are profusely illustrated with graphs, diagrams, and photographs. References are given after each article.

TABLE OF CONTENTS:

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Burakov, S.S., Candidate of Technical Sciences; I.V. Goryuda; and N.A. Blinov, Engineer. Determination of Properties of the Heat-Affected Zone of Constructional Steels	144
Chuchulin, B.B., Candidate of Technical Sciences, and V.I. Syshchikov, Engineer. Study of Fatigue Strength of WIGGT Titanium Joints	156
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Buryak, I.V., Engineer. 4B-AB-1 Electrodes for Manual Welding of Aluminum-Magnesium Alloys	175
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CHECHULIN, B.B., kand.tekhn.nauk; SYSHCHIKOV, V.I., inzh.

Investigating the fatigue strength of welded titanium joints.
Svarka 1:156-165 '58. (MIRA 12:8)
(Titanium--Welding) (Titanium--Fatigue)

KAPTYUG, I.S., kand. tekhn. nauk; SYSHCHIKOV, V.I., inzh.

Some results of testing titanium and its alloys for friction and
wear. Sudostroenie 24 no.8:46-48 Ag '58. (MIRA 11:10)
(Titanium--Testing)

SYSHCHIKOV, V.I., inzh.; CHECHULIN, B.B., kand.tekhn.nauk

Fatigue strength of welded titanium sheet joints under the effect
of bending. Svarka 2:174-181 '59. (MIRA 14:5)
(Titanium--Welding) (Welding--Testing)

CHECHULIN, B.B., kand.tekhn.nauk; SYSHCHIKOV, V.I., inzh.; REYNBERG, Ye. S,
kand.tekhn.nauk

Investigating the fatigue strength of titanium. Metallovedenie 3:263-
278 '59. (MIRA 14:3)

(Titanium—Fatigue)

SOV/129-59-4-5/17

AUTHORS: Kaptyug, I.S. (Candidate of Technical Sciences) and Syshchikov, V.I. (Engineer)

TITLE: Influence of Alloying on the Friction Properties of Titanium (Vliyaniye legirovaniya na friktsionnyye svoystva titana)

PERIODICAL: Metallovedeniye i Termicheskaya Obrabotka Metallov, 1959, Nr 4, pp 22-27 (USSR)

ABSTRACT: The authors investigated the friction properties of some titanium alloys produced in an induction furnace from a de-gassed sponge metal containing 0.01% C, 0.14% Si, 0.16% Fe, 0.08% Mg. The smelting and the alloying were effected in graphite crucibles in an argon atmosphere. The chemical compositions and the mechanical properties of the heats are entered in Table 1 (p 23), and it can be seen that 0.38 - 0.80% C passed from the crucibles into the alloy. Ingots of 70 - 90 mm diameter were forged into rods of 15 mm diameter which were then cooled in air. From the latter, specimens were produced for tensile tests and also for friction tests. In the experiments the coefficient of friction and the tendency to seizing were investigated (at specific pressures of 10, 100 and 300 kg/cm²; at each of these 30 sliding

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SOV/129-59-4-5/17

Influence of Alloying on the Friction Properties of Titanium

motions were made), as well as the wear resistance, the hardness and the microstructure. The obtained results are entered in tables and plotted in graphs. The authors arrived at the following conclusions: 1) Alloying of titanium brought about only a slight reduction in the static friction coefficient (from 0.55 to 0.45 in a rubbing pair with titanium and from 0.20 to 0.15 in a rubbing pair with brass) and in the depth of penetration of the damage in the case of dry sliding friction. 2) Titanium and the investigated titanium alloys proved to have a very low wear resistance against sliding friction; the wear was 15 - 30 times as high as that of brass, bronze or stainless steel. 3) The investigated titanium alloys as well as pure titanium are unsuitable for components subjected to friction under high pressure. However, they can be used in rubbing pairs with brass or

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SOV/129-59-4-5/17

- Influence of Alloying on the Friction Properties of Titanium
bronze in the case of relatively low loads.
There are 5 figures and 4 tables.

Card 3/3

KOVALEV, N.G.; ZMEYEV, A.A.; LUKIN, Ye.I.; FADINA, G.I.; KATIN,
V.K.; SYSHCHIKOV, Yu.T.; VLASOV, A.V.; KARPOV, I.N.;
ASTAKHOV, A.S.; DARONYAN, M., red.; MOSKVINA, R., tekhn.
red.

[Africa in figures; a statistical manual] Afrika v tsif-
rakh; statisticheskii spravochnik. Moskva, Sotsekgiz,
1963. 566 p. (MIRA 16:11)

(Africa--Statistics)

BEREZKINA, Y.K. (Leningrad); SEMENOV, A.N. (Leningrad); SYNGHINOVA, M.P.
(Leningrad)

Some methods for studying nonstationary effects in shock tubes.
PMR no.5:154-157 1964. (MIRA 18:4)

L 22213-65 EWT(1)/EWP(m)/EWJ(v)/EWA(h)/FCS(k)/EWA(1) Pd-1/Pe-5/Pi-4 SSD/AEDC(a)/
SSDB/BSDB/AFWL/AEDC(b)/ASDF-3/ASDP-3/AFETR/AFTC(a)/ESDG(s)/ESDT
ACCESSION NR: AP5002881 S/0207/64/000/005/0154/0159

AUTHOR: Berezkina, M. K. (Leningrad); Semenov, A. N. (Leningrad) 1
Syshchikova, M. P. (Leningrad) B

TITLE: Certain methods for investigating nonstationary phenomena in shock tubes

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 5, 1964, 154-159

TOPIC TAGS: shock tube, shock wave, detached shock, detachment distance, boundary layer, nonstationary flow, reflected shock wave, shock wave diffraction, bow shock wave

ABSTRACT: An experimental investigation is presented of nonstationary phenomena in shock tubes, such as formation and development of flow near a model generated by a travelling shock wave. The process of flow formation consisting of the reflection and diffraction of shock waves, the formation of a bow shock wave ahead of a body, the generation and development of a boundary layer, and the formation of flow in the wake of a body are of particular interest to the theory of non-

Card 1/2

L 22213-65

ACCESSION NR: AP5002881

stationary gasdynamic processes and are of great practical value. A detailed description of the shock tube (with a 150 x 50 mm cross section and 8 m long) and a block diagram of the experimental setup are given and various photographic methods for data recording are outlined. The data obtained make it possible to determine the velocities of the incident shock wave, of the flow in heated and cold regions, and of the contact surface, and also to determine the duration of flow between a shock wave and contact surface, and the Mach number of the flow from the detachment distance of the shock in homogeneous regions of flow. It is also possible to determine the time necessary for a shock wave to reach a steady state, and the dependence of this time on the parameters of the shock wave. Orig. art. has: 10 figures. [AE]

ASSOCIATION: none

SUBMITTED: 14Mar64

ENCL: 00

SUB CODE: ME

NO REF SOV: 004

OTHER: 001

ATD PRESS: 3169

Cord 2/2

L 14481-65 EWT(l)/EWP(m)/EWG(v);FCS(k)/EWA(l) Pd-1/Pe-5/Pi-4 BSD/ASD(f)-2/SSD,
AFWL/AEDC(a)/SSD(b)/AS(dp)-3/AFETR/AFTC(a)/AEDC(b)
ACCESSION NR: AP4049043 S/0057/64/034/011/2015/2020

AUTHOR: Sy*shchikova, M. P.; Berezkina, M. K.; Semenov, A. N. B

TITLE: Formation of a bow shock wave ahead of a body in a shock tube

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 34, no. 11, 1964, 2015-2020

TOPIC TAGS: hypersonic flow, bow shock wave, shock wave, shock tube, shock detachment distance, shock wave reflection

ABSTRACT: A theoretical and experimental investigation of the formation of a bow shock wave ahead of a body in a shock tube is described. The bow shock wave is generated by the interaction of a shock wave produced in the shock tube with a spherical obstacle. The investigation was carried out in nitrogen and CO₂. The phenomena are described in detail and expressions for determining the reflected shock velocity and the shock detachment distance are given. The experimental procedure and associated apparatus are described. The theoretical and experimental shock detachment distances are given in graphical form for

Card 1/2

L 1481-65

ACCESSION NR: AP4049043

Incident shock waves ranging from 2.75 M to 4.65 M in nitrogen and 3.98 M to 7.53 M in CO₂. The time required for shock wave formation is determined from shlieren photographs. Orig. art. has: 7 figures and 2 formulas.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad (Physicotechnical Institute, AN SSSR)

SUBMITTED: 09Mar64

ENCL: 00

SUB CODE: ME

NO REF SOV: 004

OTHER: 007

ATD PRESS: 3136

Card 2/2

SYSHCHUK, D.L.

Main ions and biogenic elements in Kayrakum Reservoir during its filling. Trudy Inst. zool. i paraz. AN Tadzh. SSR no.26:25-33 '63
(MIRA 17:3)

1. Institut khimii AN Tadjhikskoy SSR.

CHUPRIKOV, I., elektrik; AVERKIN, G., starshiy stalevar; KAREV, Ye., kuznets;
IVANOV, I., master; SYSHINOV, A.

New norms but old usages. Okhr. truda i sots. strakh. 4 no.5:42-44
My '61. (MIRA 14:5)

1. Spetsial'nyy korrespondent zhurnala "Okhrana truda i sotsial'noye
strakhovaniye" (for Sushinov).

(Work clothes)

L 41746-66 EWT(1) IJP(c) GG/AT

ACC NR: AP6018037

SOURCE CODE: UR/0185/66/011/006/0644/0652

AUTHOR: Savchenko, M. A.; Syshkin, L. A.--Shishkin, L. A.

57
56
B

ORG: Physicotechnical Institute, AN UkrSSR (Fizyko-tekhnichnyy instytut AN URSSR);
Physicotechnical Institute of Low Temperatures, AN UkrSSR (Fizyko-tekhnichnyy instytut
niz'kykh temperature AN URSSR)

TITLE: Coherent amplification of magnetostatic oscillations by an electron beam in antiferromagnets

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 11, no. 6, 1966, 644-652

TOPIC TAGS: antiferromagnetism, magnetic susceptibility, magnetization, oscillation, electron beam

ABSTRACT: The authors calculate the growth increments of the magnetostatic oscillations induced in an antiferromagnet by an electron beam, the antiferromagnet being assumed for simplicity to be in the form of a plate. Maxwell's equations are used and the components of the susceptibility tensor are written out for various types of antiferromagnets: (i) with anisotropy of the easy plane type, (ii) with weak ferromagnetism, (iii) with magnetic anisotropy of the easy axis type, in a field weaker than the reversal field, (iv) with magnetic anisotropy of the easy axis type, in a field stronger than the reversal field. The dependence of the growth increments on the susceptibility of the medium and on other parameters is determined. It is shown that the amplification of the magnetostatic oscillations takes place in the antiferro-

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T. 41746-66

ACC NR: AP6018037

magnets in certain strictly defined frequency intervals, which are evaluated for the different types of antiferromagnets under consideration. The authors thank V. G. Bar'yakhtar for a discussion of the results. Orig. art. has: 4 figures and 26 formulas.

SUB CODE: 20/ SUBM DATE: 21Jul65/ ORIG REF: 008/ OTH REF: 002

Card 2/2 *20*

SYSIN, A. N., ZIL'BER, L. A., SHABAD, L. M., RYAZANOV, V. A.

Declassified

"Tasks of Hygiene in the Field of Problems of Cancer."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists
and Infectionists, 1959.

' SYSIN, A. N. Declassified 1956

VINOGRADOVA, T.S., kandidat meditsinskikh nauk; SKLYAR, I.B.; SYSIN, A.Ya.,
inzhener

Measuring the piston-like movements of a thigh stump in a prosthesis.
Ortop., travm. i protez.17 no.2:60 Mr-Ap '56. (MIRA 9:12)

1. Iz Tsentral'nogo nauchno-issledovatel'skogo instituta proteziro-
vaniya i protezostroyeniya Ministerstva sotsial'nogo obespecheniya
RSFSR (dir. professor B.P.Popov)
(ARTIFICIAL LIMBS)

From A Ya

AUTHORS: Kobrinskiy, A. Ye., Breydo, M. G., Gurfinkel', V.S., 20-1-20/42
Sysin, A. Ya., Tseytlin, M. L., Yakobson, Ya. S.,

TITLE: A Bioelectric Control System (Bioelektricheskaya sistema upravleniya)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 1, pp. 78-80 (USSR)

ABSTRACT: At first something on the general situation of this problem is said. The authors of the present papers wanted to work out a bioelectric system, which according to a certain programme controls a mechanical servo drive. This programme was worked out in the form of oscillations of the bioelectric potential of the muscles. The possibility of realizing such a system is based on the results of different investigations in which the dependence of the oscillations of the bioelectric potential of a muscle on its functional condition was investigated. The results of these investigations briefly indicate the following: 1) The oscillations of the biopotential of a muscle are a constant and inalienable phenomenon of the stimulating process. 2) The penetration of the biocurrent always occurs before a shortening of the muscle. 3) There is an unequivocal relation between the amount of the biopotential and the tension developed by the muscle, this relation being approximately linear to the tension up to a certain

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A Bioelectric Control System.

20-1-20/42

level. An added diagram illustrates an oscillogram of the bio-currents which were deduced from different stretched finger-joint by applied electrodes. These deduced biocurrents develop by the total effect of the muscle fibres of a certain muscle and the numerous oscillations of the fibres of the adjacent muscles provide an additional noise-background. The first problem in the experiments with these complicated signals was the elimination of the informations on the orders from the central nervous system, which regulate the level of the tension of the muscle. As carrier of the useful information in the here discussed system only one parameter of the bioelectric system is used, that is efficiency. The authors hope for application of further parameters. The block scheme of the control system is illustrated by a graph and its function method briefly described. The system is constructed so that the biocurrents are deduced by two antagonal muscles at the same time. In the case of technical application it is well possible to connect a circuit with feed-back coupling into the wiring diagram of the control system, which circuit is based on the application of special, automatic transmitters. There are 2 figures, and 2 references, 1 of which is Slavic.

Card 2/3

A Bioelectric Control System.

20-1-20/42

Mechanics
ASSOCIATION: Institute of ~~Mechanics~~ of the AN USSR, Central
Scientific Research Institute for the Construction of Arti-
ficial Limbs, Moscow State University imeni M.V.Lomonosov
(Institut mashinovedeniya Akademii nauk SSSR. Tsentral'nyy
nauchno-issledovatel'skiy institut protezirovaniya i protezo-
stroyeniya, Moskovskiy gosudarstvennyy universitet im. M.V.
Lomonosova)

PRESENTED: June 20, 1957, by A.A.Blagonravov, Academician

SUBMITTED: June 19, 1957

AVAILABLE: Library of Congress

Card 3/3

SySIN, A.Ya.

9(5) PHASE I COMM EXPLOITATION SOV/3176

Problemy kibernetiki, N.Ye. 2 (Problems of Cybernetics, No. 2) Moscow, Fizmatgiz, 1959. 323 p. Errata slip inserted. 18,000 copies printed.

Ed.: A. A. Lyapunov; Compilers-Editors: O. B. Lupanov, B. N. Pil'chak, S. V. Yablonskiy, and Yu. I. Yanov; Eds.: A. A. Konoplyanskiy, and M. L. Smolyanskiy; Tech. Ed.: S. N. Akhramov.

PURPOSE: The purpose of this collection of articles is to organize scientific papers on cybernetics and to unite the efforts and interests of Soviet scientists working in this field.

COVERAGE: This is the second volume of "Problemy kibernetiki" dealing with problems of biology, mathematics and engineering as they relate to cybernetics. The first volume, published in 1958, considered problems of programming, machine translation and computer design. Articles related to cybernetics. The editors greater number of articles related to cybernetics. The editors with 5 scientific books (including 2 translations) dealing with cybernetics. They thank the following persons for their help in preparing the book: or publication: G. V. Vukolovskaya, T. P. Gavrilova, A. A. Muzhnik, B. I. Pinikov, M. L. Testlin and V. S. Shtarkman. References follow each article.

PART IV. CONTROL SYSTEMS AND COMPUTERS

Kramlin, A.M., and V.K. Smirnov (Moscow). Operational Cathode-ray Tube Storage Device 191
The authors describe the principle of operation of the storage device for the "Soyuz" computer, which consists of a magnetic core of the "Potentsialoskop" type, with a storage capacity of 2048 words of 13 bits. No references are given.

Ryzko, M.D., V.S. Guntchik, A.Ye. Kobrinskiy, A.Ya. SySIN, M.L. Testlin, and Ya.S. Yakobson (Moscow). On the Biological System of Control. 203
The article deals with the utilization of biological myoelectric currents in the operation of technical devices. It also describes the principles of operation and design of a model of a servo-drive built for this purpose. There are 12 references. 5 Soviet (1 translation), 2 German and 5 English.

PART V. CONTROL PROCESSES IN LIVING ORGANISMS

Shchegolev-Rozovskiy, N.V. (Sverdlovsk) and V.R. Rando (Berlin). On Statisticity and Amplifier Principle in Biology. 213
The article concerns problems of circulation of hereditary information from generation to generation and the physical process of its biological storage in living organisms. The authors summarize investigations in that field. There are 52 references, 16 Soviet (5 translations), 18 English, 14 German, and 4 French.

Krushinskiy, L.V. (Moscow). Investigation of Extrapolative Reflexes in Animals. 229
The article deals with the physiology of the activity of the nervous system in animals. The article, according to the editor, is of great interest for the study of cybernetics since it concerns relations between biology, engineering and mathematics in the investigation of control processes occurring in living organisms. There are 11 references: 9 Soviet (2 translations), and 2 English.

PART VI. PROBLEMS OF MATHEMATICAL LINGUISTICS

Kulagina, O.S., and O.V. Vukolovskaya (Moscow). Experimental Translations From French Into Russian on the "Strela" Computer 263
The programming algorithms for the machine translation of mathematical texts from French into Russian were developed by O.S. Kulagina and I.A. Malichuk. These algorithms assume the existence of a special vocabulary which contains not words but stems. The authors give examples of translations obtained and methods used in eliminating errors. No references are given.

Kulagina, O.S. (Moscow). Operational Description of Translation Algorithms and Automating the Process of their Programming. 289
Mathematicians of the Soviet Union have been developing a technique of operational programming based on an external working language. This technique is applied to the machine translation of programming languages. The author describes the process of operational programming was tested on translations from French into Russian. The author describes the class of logical operators used. The sequence of operators will indicate their sequence of performance. The following types of operators are used: condition, resulting and neutral (finish, halt, iteration, etc.). The author explains the method of compiling programs using these operators. No

KOBRINSKIY, A.Ye.; BREYDO, M.G.; GURFINKEL', V.S.; POLYAN, Ye.P.;
SLAVUTSKIY, Ya.L.; SYSIN, A.Ya.; TSMILIN, M.L.; YAKOBSON, Ya.S.

Research on the development of bioelectric control systems.
Trudy Inst.mash.Sem.po teor.mash. 20 no.77:39-50 '59.

(MIRA 13:4)

(Electrophysiology)

Sysin, A. Ya.

Report to be presented at the 1st Intl Congress of the Intl Federation of Automatic Control, 25 Jun-5 Jul 1960, Moscow, USSR.

BYKHOVSKIY, M. L. - "Ultra stability in electronic calculating devices in the solution of nonlinear equations in indefinite form"

CHERNOZHUK, A. A. - "The problem of regulating devices in systems for the automatic control of rolling mills"

CHERNOZHUK, V. K. - "Concerning some problems of the organization of self-adjusting and self-teaching systems of automatic control, based on principles of random search"

DAVIDOV, N. I. - "Development of automatic control systems for boiler units"

DUDNIKOV, Ye. G. - "Determination of optimum adjustments of industrial automatic regulation systems according to initial data obtained from experience"

DURVIZ, A. I., and BOKHVALSKAYA, E. N. - "Methods of organizing hydraulic functions in the theory of nonlinear regulating systems"

FRIZENBERG, N. S. - "Balanced regulation and inter-communications of a multi-motor electric drive and technology in continuous rolling mills"

FREIDMAN, A. B. - "Problems of statistical theory of automatic optimization systems"

FRIDMAN, Y. I. - "The determination of a reversible cold rolling mill for continuous casting"

KALITVINSKIY, M. P. - "Application of the theory of differential equations with a discontinuous right side to nonlinear problems of automatic regulation"

KAVALILOV, M. A. - "Structural surplus and operational reliability of relay devices"

GABRIEL, M. Z. - "Automation of irrigation systems"

GRIGOROVICH, G. R., KASHEVILAY, V. S., HIGRENKO, M. P., KESKAL, L. B., and SHIRY, M. S. - "Power regulation of disturbances and problems of the stability of electric power systems"

CHERNOZHUK, S. A. - "Logical method of synthesis of functional converters"

IL'IN, V. A. - "Methods of transmission of information and the structure of telemechanical systems for dispersed control"

INGBOV, V. L., and LITVINENKO, V. M. - "Code-impulse system of tele-measurement for dispersed operations of truckline gas pipe lines"

IVAKHIN, A. G. - "The problem of the synthesis of a control system for a multi-motor system for synchronous adaptation systems"

KALANDAROV, L. B., and SHUMAYEV, G. A. - "A quasi-equilibrated bridge as an element in a system of automatic control"

KALAYEVICH, V. V. - "Concerning the process of extra regulation of inert objects in the presence of disturbance"

KUZANOV, I. E. - "Some problems of the theory of statistical linearization and its application"

KULIK, P. M. - "Some problems of the theory of impulse systems with time selectors"

KURKOVSKIY, A. B., BOLJAKOVICH, S. V., VOSEKROVITSEV, L. M., KOPPE, D. M., POLJAK, M. P., POPOV, B. P., SHAYDINOV, Ye. I., SVETIK, A. Ya., and YAKOVLEV, Ye. S. - "The problem of automatic control of a gas turbine engine"

KOROVNIKOV, M. T. - "New types of non-resonance and their field of use"

KOROVNIKOV, M. T., KURKOVSKIY, G. G., and SHUMAYEV, I. A. - "System of automatic control and regulation of blast distribution in the dynamic of a copying lathe"

KOROVNIKOV, M. T. - "Investigation of the dynamics of the hydraulic control of a copying lathe"

KRASOVSKIY, A. A. - "Dynamics of continuous systems of automatic regulation with extra self-adjustment of corrective devices"

KRASOVSKIY, M. M. - "Concerning the selection of parameters of optimum stability systems"

KRUMHOLTZ, A. I. - "The dynamics of devices imitating living organisms"

KULIKOV, V. S. - "The invariant theory of automatic regulation and control systems"

YAKOVLEV, I. D. - "Pneumatic calculating devices as a means of insuring the reliability of complex automation systems"

YAKOVLEV, V. M., and FRIEDBERG, P. P. - "Mechanization of processes of analysis and synthesis of the structure of relay devices"

L 23296-66

26

ACC NR: AP6012127

SOURCE CODE: UR/0413/66/000/007/0046/0046

INVENTOR: Dol'nikov, Yu. I.; Bryksin, V. I.; Kushnirov, R. I.;
Yakobson, Ya. S.; Delov, V. I.; Sysin, A. Ya.; Tikhomirov, I. S.

ORG: none

TITLE: Device for studying movements in the large joints of upper
extremities. Class 30, No. 180296

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 7,
1966, 46

TOPIC TAGS: biomechanics, prosthesis

ABSTRACT: An Author Certificate has been issued for a device used to
study movements in the large joints of the upper extremities. It
consists of splints and sensors for recording angular parameters. To
obtain quantitative assays of extremity movements and their biotech-
nological characteristics, it is operated in the form of sleeves which
are linked by splints fitted with hinged-joint potentiometers. These
are aligned above the center of, or coaxially to, joint rotation.
A variation of the above device is equipped with a rotation sensor
attached to the shoulder assembly. This sensor is operated in the form
of two sleeves mounted on bushings. The wrist is fitted with a forearm

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UDC: 615.47:612.745-087

L 23296-66

ACC NR: AP6012127

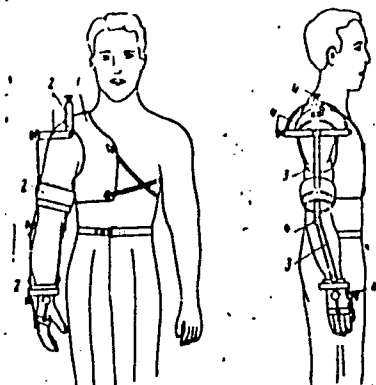


Fig. 1. Diagram of the device.

1 - Shoulder Assembly; 2 - sleeves;
3 - splints; 4 - potentiometers.

rotation sensor with hinged rods attached to the hand. This assembly permits the desired attachment and separate recording of movements in mutually perpendicular planes (see Fig. 1). Orig. art. has: 1 figure. [CD]

SUB CODE: 06/ SUBM DATE: 07Jan65/ ATD PRESS: 4230

Card 2/2

SYSTINA, L. A., Sand Chem Sci -- (also) "Study of the protective
properties of coatings ^{made of} ~~with~~ polytrifluorochlorethylene." ~~Leningrad,~~
~~GLISA~~ State Inst of Applied Chemistry, 1959. 12 pp (State Com-
mittee of the Council of Ministers USSR on Chemistry. State Or-
der of Labor Red Banner Inst of Applied Chemistry). 150 copies
(KL, 39-59, 101)

16

28(5), 15(7)

SOV/64-59-4-5/27

AUTHORS: Sysina, L. A., Kargin, V. A.

TITLE: Investigation of the Process of the Formation of Films out of Polytrifluoro Chloro Ethylene (Izucheniye protseesa formovaniya plenok politriflorkhloroetilena)

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 4, pp 20-23 (USSR)

ABSTRACT: The practice shows that the coats of polytrifluorochloro ethylene (P) detach from the basis which in spite of the corrosionproof properties of (P) causes a corrosion of the base. It is assumed that this phenomenon is caused by the occurrence of stress during the formation of the film. In order to investigate the processes occurring in the formation of the film from (P), two methods already described in publications were applied in the present case; the examination of the stresses occurring in films which are applied to easily deformable bases (with the apparatus of Polyan'i) or on solid metal bases (according to the method of concentric circles) and investigations of the relaxation of the stresses of finished films at 100-220° by means of the apparatus of Polyan'i and at 270° after alteration of the linear dimensions of the films. A fine glass texture was used as easily deformable base and an aluminum foil of the type F. G. (OST MPTU 2104-49) of a thickness of 0.05 - 0.02 mm as solid base. In the first case

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SOV/64-59-4-5/27

Investigation of the Process of the Formation of Films out of Polytri-
fluoro Chloro Ethylene

it was found that the above mentioned stresses do not occur during the drying process and the melting of the film but during a quick cooling of the (P)-films which may also be observed with the Al-foils (Table). In the case of a slow cooling in a heating apparatus, however, no stresses occur in the (P)-films. These films, however, have low adhesion and a higher degree of crystallization. This is explained by the fact that in a slow cooling the polymer chains have enough time for relaxation. Since (P), however, belongs to the crystallizing polymers the relaxation process becomes complicated and it is not possible to obtain an amorphous film without stresses. Investigations on the stress relaxation carried through with (P)-films on the Polyan'i apparatus without base (the films were extended to 170% and heated to 100-200°) showed a sharp decrease of the stresses. The heating to 100-200° does not permit the production of amorphous films free from stresses because crystallization takes place in the above-mentioned relaxation. By melting on the (P)-films at 265-270° on a teflon-base in order to obtain stress relaxation, released (P)-films could be obtained. It was found that the stresses of the (P)-films have not the decisive im-

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SOV/64-59-4-5/27
Investigation of the Process of the Formation of Films out of Polytri-
fluoro Chloro Ethylene

portance of the behavior of these coats. There are 3 figures,
1 table, and 9 references, 8 of which are Soviet.

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15(9), 18(7)

AUTHORS: Sysina, L. A., Kargin, V. A.

SOV/64-59-5-2/28

TITLE: Investigation of the Mechanism of the Protective Action and Crystallization Process of Polytrifluorochloro Ethylene Films

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 5, pp 378-383 (USSR)

ABSTRACT: Polytrifluorochloro ethylene has a very good protective effect against corrosion owing to its chemical properties. It was found, however, that corrosion spots form under the coatings and that a detachment of the coating film occurs. It was assumed (Ref 1) that this detachment is caused by tensions occurring in the coating film while drying. Since these tensions are but small and do not occur at all in the case of crystallization (in the coating film), but on the other hand crystallization spoils the protective effect against corrosion, investigations of this problem were continued. The adhesion of the coating film is of special importance when the latter is detached, since a coating film of good adhesion, though permeable to corrosive media, has a better protective effect against corrosion than detaching films. In order to investigate the protective effect against corrosion of polytrifluorochloro ethylene film, the solubility of water (I), nitric acid (II), and mesitylene (III)

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Investigation of the Mechanism of the Protective Action SOV/64-59-5-2/28
and Crystallization Process of Polytrifluorochloro Ethylene Films

in polytrifluorochloro ethylene was tested and the difference between amorphous and crystalline coating films, as well as their packing density determined. Sorption tests were carried out by means of Mac Ben's sorption balance (Ref 4) in high vacuum (10^{-5} mm Hg) at 25°C, which proved that (I) and (III) diffuse polytrifluorochloro ethylene films and that there is no protective effect against corrosion. It was further found that the latter is determined by adhesion of the coating film on the metal surface, which was also confirmed by tests with the badly adhering polymer of trifluorochloro ethylene of low molecular weight. The degree of adhesion (Table 1, measured on AD-1M aluminum and 12Kh5MA steel) depends on the material to be protected as well as on the structure of the coating film (crystallization, preliminary treatment, etc). Investigations of the crystallization of polytrifluorochloro ethylene by the dilatometric (Figs 1-4) and roentgenographic methods (Figs 5-8, radiographs) showed that in the case of reannealing of amorphous thermoset coating films their volumes are reduced, condensation takes place, and crystallization occurs. The influence exerted by the formation of spherulites on the

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Investigation of the Mechanism of the Protective Action SOV/64-59-5-2/28
and Crystallization Process of Polytrifluorochloro Ethylene Films

specific volume of the coating films was also investigated (Table 2). The effect of the crystallization degree on the mechanical properties of the polytrifluorochloro ethylene films was investigated by means of the RMM-30A dynamometer as well as the modulus of elasticity on the Polanyi device (Table 3). Thus, it was ascertained that with increasing degree of crystallization the resistance of the coating films is raised, simultaneously reducing adhesion. For the preparation of highly effective protective coatings against corrosion, the surface state of the metal must be taken into consideration and thermosetting the coating film must be carried out under conditions excluding crystallization. There are 8 figures, 3 tables, and 21 references, 7 of which are Soviet.

Card 3/3

SYSINA, N. A.

"Embryological Investigation of Lathyrus Articulatus L. and Lathyrus Clymenum L.,"
Dok. AN, 58, No. 9, 1947

SYBINA, N. A.

"The Morphogenesis of the Gladiolus." Cand Biol Sci, Moscow State U,
Moscow, 1953. (RZhBiol, No 1, Sep 54)

SO: Sum 432, 29 Mar 55

SZAFER, W.; POPIAVSKAYA, G.I. [translator, deceased]; SUKACHEV, V.N., redaktor
SYSINA, N.A., redaktor; NIKIFOROVA, A.N., tekhnicheskiy redaktor

[Elements of general plant geography. Translated from the Polish]
Osnovy obshchei geografii rastenii. Perevod s pol'skogo G.I.
Poplavskoi. Pod red. i s predisl. V.N.Sukacheva. Moskva, Izd-vo
inostrannoi lit-ry, 1956. 380 p. (MIRA 10:1)
(Phytogeography)

SYSINA, N. A.

LEBEDEV, D.V. [translator]; MATVEYEVA, T.S. [translator]; LASKEVICH, Yu.I. [translator]; OSTRYAKOVA-VARSHAVER, V.P. [translator]; KHVOSTOVA, V.V. [translator]; BARANOV, P.A., redaktor; ASTAUROV, B.L., professor, redaktor; SYSINA, N.A., redaktor; IOVLEVA, N.A., tekhnicheskii redaktor

[Polyploidy; collection of articles] Poloploidia; sbornik statei. Perevod D.V. Lebedeva i dr. Pod.red. i s predisl. P.A. Baranova i B.L. Astaurova. Moskva, Izd-vo inostr. lit-ry, 1956. 398 p. (MLRA 10:6)

1. Chlen-korrespondent Akademii nauk SSSR (for Baranova)
(Polyploidy)

KHAGEMAN, R. [Hagemann, R.]; SOBOLEV, N.A. [translator]; ASTAUROV, B.L., red.; SYSINA, N.A., red.; KHOMYAKOV, A.D., tekhn. red.

[Plasmatic heredity] Plazmaticheskaja nasledstvennost'. Pod red.i s predisl. B.L.Astaurova. Moskva, Izd-vo inostr. lit-ry, 1962. 110 p. Translated from the German. (MIRA 16:4)

1. Chlen-korrespondent Akademii nauk SSSR (for Astaurov).
(Protoplasm) (Heredity)

SYSKA, Z.

Method of testing glazes for sensitivity to smoke. p. 79 , Vol. 6, no. 4, Apr. 1955,

SZKLO I CERAMIKA

SO:MONTHLY LIST OF EAST EUROPEAN ACCESSIONS, (ESAL), LC, Vol. 4, No. 9,
Sept. 1955, Uncl.

SYSKA, ZBIGNIEW.

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✓ Raw materials and addresses for the manufacture of 4;
in the ceramic industry. Zbigniew Syska Osro
to the fragility and

OSTRA, P.

Heating efficiency of firing kilns using coal. p. 106.
SUD. I. CHEMISTKA, Warszawa, Vol. 6, no. 5, May 1955.

SP: Monthly List of East European Accessions, (EIAL), L., Vol. 4, no. 10, Oct. 1955,
Incl.

SYSKA, Z.

Main failures in the baking of ceramic products.

p. 265
Vol. 6, no. 11, Nov. 1955
SZKLO I CERAMIKA
Warszawa

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 5, no. 3
March 1956

SYSKA, Z.:

On raw materials and additives for the production of capsules in the ceramic industry.

By Z. Syska ...

SO: Szklo i Ceramika, #10, 1955, Poland. p. 240.

POLAND/Chemical Technology. Chemical Products and Their
Application. Part 2. - Ceramics. Glass. Binders.
Concretes. Ceramics. H

Abs Jour: Ref. Zhurnal Khimiya, No 21, 1958, 71487.

Author : Zbigniew Syska.

Inst :

Title : Surface Formation at Ceraming Casting as Result
of Surface Tension Action.

Orig Pub: Szklo i ceram., 1957, 8, No 10, 281-283.

Abstract: The surface tension (ST) of water at 20° is 73 dynes per cm. If about 0.5% of NaOH was added to it, which is done with water for casting thin articles of ceramic mass, then the ST of water rises from 73.05 to 74.35 dynes per cm. The major part of OH

Card : 1/3

POLAND/Chemical Technology. Chemical Products and Their
Application. Part 2. - Ceramics. Glass. Binders.
Concretes. Ceramics. H

Abs Jour: Ref. Zhurnal Khimiya, No 21, 1958, 71487.

ions from alkaline salts concentrates in reality on water envelopes around the clay particles, where the local ST rises to 80 - 90 dynes per cm. This explains the appearance of striae on the surface of ceramic mass castings. The number and dimensions of striae depend on the rate of the casting process; thus, at the usual rate of casting in molds (2 min.), the number of striae was 34 per cm, and at a low rate (8 hours) it was 3.6 per cm. A strong condensation of a thin ceramic body from the surface facing the plaster-of-Paris mold is also the result of ST; thus, if a burned body is dipped into $KMnO_4$ solutions, the latter will penetrate 0 to 1 mm

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POLAND / Chemical Technology. Chemical Products H-13
and Their Application. Ceramics. Glass.
Binding Materials. Concrete.

Abs Jour: Ref Zhur-Khimiya, No 1m 1959, 1978,

Author : ~~Syska, Z.~~
Inst : Not given.
Title : The Possibilities of Improvements in Porcelain
Kilning.

Orig Pub: Szklo i ceram., 1958, 9, No 1, 12-16.

Abstract: Methods for improving porcelain firing in multi-stage periodic kilns (MPK) were considered. Manual feeding of coal fire-boxes is very difficult for firemen and produces unsatisfactory results as far as the quality of porcelain is concerned, as well as in respect to increased consumption of solid fuel for the firing. Three types of

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POLAND / Chemical Technology. Chemical Products and H-13
Their Application. Ceramics. Glass. Bind-
ing Materials. Concrete.

Abs Jour: Ref Zhur-Khimiya, No 1, 1959, 1978.

Abstract: type of fire-box resulted in a 24-43% savings in coal (35.2% on an average), a reduced firing time in a 60 ton capacity MSK by 38-57% (47.4% on an average), a decrease in the drop of vertical temperature, a considerable cut in cost of service and an increase in the quality of porcelain. The firing curves for MSK, before and after they have been converted to the third type, are furnished. In MSK having a 60 ton capacity, it is feasible to shorten the time for porcelain firing to 15 hours. The suggested innovation in firing is recommended for use in the Polish factories equipped with MSK. -- S. Glebov.

Card 4/4

POLAND / Chemical Technology. Chemical Products and H
Their Applications. Ceramics.

Abs Jour: Ref Zhur-Khimiya, 1959, No 4, 12511.

Author : Syska, Zbigniew.

Inst : Not given.

Title : On the Technology Used in the Chinese Porcelain
Industry. Part II.

Orig Pub: Szklo i ceram., 1958, 9, No 3, 77-80; No 5, 141-146.

Abstract: Detailed description of the technology of the
casting, hand forming, wheel turning, glazing and
annealing of commercial and artistic porcelain.
For Part I, see RZhKhim, 1958, 74663. -- S. Glebov.

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H-13

POLAND/Chemical Technology. Chemical Products and Their
Application. Ceramics. Glass. Binding Materials.
Concrete.

Abs Jour: Ref Zhur-Khin., No 2, 1959, 5403.

Author : Syska, Zbigniew.

Inst :
Title : Ceramic Casting Masses - Their Thinning and Properties
in Light of Latest Investigations. Parts I and II.

Orig Pub: Szklo i ceram., 1958, 9, No 6, 171-175.

Abstract: I. Electrostatic and colloid-electrochemical theories
explaining the thinning effect of electrolytes (Es) on
ceramic casting masses are presented. The thinning
bases are arranged in the series LiOH, NaOH, KOH, RbOH,
CsOH, Ca(OH)₂, Sr(OH)₂, Ba(OH)₂ and NH₄OH in respect to
kaolins. They produce no thinning effect on suspensions

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POLAND/Chemical Technology. Chemical Products and Their
Application. Ceramics. Glass. Binding Materials.
Concrete.

H-13

Abs Jour: Ref Zhur-Khin., No 2, 1959, 5403.

the average referred to the weight of dry ceramic mass.
Simple practical methods of finding the optimum amount
of Es for decreasing the H₂O content in ceramic masses
from 60 to 35 - 40% are described. Many practical hints
how to prepare masses of sufficient fluidity and rapid
setting of the body are presented; methods of selecting
the mass composition, its grain size, the amount of water
in order to obtain ceramic bodies of good dense structure
and smooth surface are described. - S. Glebov.

Card : 3/3

COUNTRY : POLAND H
CATEGORY : Chemical Technology. Chemical Products and Their
Applications. Ceramics. Binding Materials. *
ABS. JOUR. : RZhKhim., No 17, 1959, No. 61616
AUTHOR : Syska, Z.
INSTITUTE : -
TITLE : Refining of Gypsum and Its Effects on the Quality
of Forms.
ORIG. PUB. : Szklo i ceram., 1958, 9, No 12, 353-356
ABSTRACT : Described are methods of controlling properties of
casting gypsum (G), particularly of the time that
it is capable of retaining its plasticity in the
manufacture of forms. To retard the initial setting
of G the following additives may be employed:
Ca(OH)₂, B₂O₃, NH₃, acetic, citric and formic acids,
sodium salts of the above acids. To accelerate the
initial setting the following substances are added:
H₂SO₄, HNO₃, HCl, vinic acid, Na-salts of these
acids, NaOH, KOH. For the improvements of mecha-
nical properties of G-forms, in 2ℓ of water are
*Concrete.
Card: 1/4