

CHATSKIY, P.I.

What fur industries demand from the chemical industry. Kosh.
obuv. prom. 5 no.7:4-6 J1 '63. (MIRA 16:8)

1. Zaveduyushchiy laboratoriyey tekhnologii mekha Vsesoyuznogo
nauchno-issledovatel'skogo instituta mekhovoy promyshlennosti.
(Fur industry--Equipment and supplies)
(Chemistry, Technical)

ALATYRTSEVA, I.N., mladshiy nauchnyy sotrudnik; MYAGKOVA, Z.V., starshiy
nauchnyy sotrudnik; CHATSKIY, P.I., kand.tekhn.nauk

Investigating the dyeing of fur in aqueous solutions in the presence
of organic solvents. Kozh.-obuv.prom. 5 no.10:21-24 0 '63.
(MIRA 17:4)

CHATSKIY, Petr Il'ich; BAKHTIAROVA, M.G., red. JD
26

[Dressing of the hair covering; a textbook] Oblagorazhi-
vanie volasianogo pokrova; uchebnoe posobie. Moskva,
Legkaia industriia, 1964. 24 p. (MIRA 18:4)

SHLEYER, M.I.; SOKOLOVA, M.V.; CHATSKIY, P.I., kand. tekhn. nauk

Use of powdered chrome tanning materials in the treatment of
hides and skins. Kozh.-obuv. prom. 7 no.1:31-33 Ja '65.

(MIRA 18:3)

CHATSKIY, P.V.

Iksha shoemakers. Kozh.-obuv.prom. 5 no.4:31 Ap '63. (MIRA 16:5)
(Iksha--Boots and shoes, Feet)

CHATSKIY, P.V. 28

CA

Processes and Properties Index

Nonograms for calculating starch yield of grain.
 Chatziskis, Spiro-Vaderkaya *Proc.* 18, No 2, 36-7
 (1939).—Nonograms are presented for barley and rye.
 for calcg. starch yield within 0.2% on the basis of polari-
 meter readings and the wt. of grain after the first drying.
 Julian F. Smith

ASTM-SLA METALLURGICAL LITERATURE CLASSIFICATION

STANDARD NO. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

CHATSKIY, P.V.

Patrons assist collective farms. Avt.dor. 20 no.7:3 of cover
Jl '57.

(MIRA 10:10)

(Dimitrovsk District (Moscow Province--Road)
(Construction)

CHATSKIY, P.V.

Housing construction by one's own means. Tekst.prom. 18 no.12:68
D '58. (MIRA 11:12)

(Housing)

CHATSKIY, P.V.

Let's fulfill the fifth year assignment of the seven-year
plan ahead of time. Kesh.-obuv. prom. 5 no.6:44 Je '63.
(MIRA 16:6)
(Taldom—Shoe industry)

CHATSKIY, Sh.

Working capital and short-term financing of trade organisations.

Den. i kred. 15 no. 3: 13-18 Mr '57. (MIRA 10:5)

(Retail trade--Finance)

VOITYUK, L.D.; CHATSKIY, Sh.Sh., dotsent

The working capital of enterprises. Tekst. prom. 22 no.11:8-10
N '62. (MIRA 15:11)

1. Glavnyy bukhgalter Upravleniya tekstil'noy promyshlennosti
Leningradskogo soveta narodnogo khozyaystva (for Voytyuk).
2. Leningradskiy tekstil'nyy institut (for Chatskiy).
(Industrial management)

1. CHATSKIY, T. V.

2. USSR (600)

4. Pharmacy - Study and Teaching

7. Political and practical training of pharmaceutical workers. Apt. delo no. 6, 1952

9. Monthly List of Russian Accessions. Library of Congress. March 1953. Unclassified.

GRIGOROVICH, Ye.V.; REZNIK, D.B.; CHATSKIY, Ya.A.

Case of pulmonary hemorrhage connected with the presence of a
foreign body in the bronchi. Probl.tub. 38 no.7:98 '60.

(MIRA 14:1)

(BRONCHI--FOREIGN BODIES) (LUNGS--BLOOD SUPPLY)

CHATSKIY, Ya.A.; PANCHENKO, G.T.

Surgical treatment of lung hemorrhage in pulmonary tuberculosis.
Probl.tub. no.4:106-107 '61. (MIRA 14:12)

1. Iz legochnogo otdeleniya (zaveduyushchiy Ya.A. Chatskiy)
Vimitskogo oblastnogo tuberkuleznogo dispansera (glavnyy vrach
O.Z. Toretskaya).
(TUBERCULOSIS) (HEMORRHAGE) (LUNGS---SURGERY)

CHATSKIY, Yu. M.

PA 29/49T24

USSR/Engineering
Trucks
Automobiles

Aug 48

"Converting Ten-Ton Capacity Automobiles Into Dump
Trucks, Yu. M. Chatskiy, Engr, 1 p

"Mekh Trud i Tyazh Rabot" No 8

Describes experience of Dzheshkagan Copper Combine
which converted several Mack trucks into dump trucks.
It is claimed that each of these converted trucks
saves the state 100,000 rubles annually. Two photo-
graphs show trucks in action.

29/49T24

CHATTERJEA, S.K.

On complete elliptic integrals. Publ Inst math SANU 2(16):81-86
'62 [publ. '63].

1. Department of Mathematics (Bangabasi College, Calcutta).

CHATTERJEA, S.K.

On complete elliptic integrals. Publ Inst math SANU
2(16):81-86 '62 [publ. '63].

1. Department of Mathematics (Bangabasi College, Calcutta).

CHATUBINSKI, A.		PRECISES AND PROPERTIES INDEX		180 AND 2TH ORDER	
AMS/A+B				JUN 1951	
24-69 "Chatubinski, Anita, Schmale rosenz temperature w Polze. [Anomalous lines of annual temperature in Poland.] Annals Universitat Mariae Curie-Skłodowska, Lublin, 68(2):87-92, 1968. 2 figs, 3 tables, 7 refs. English summary p. 23-26. DLE--Average annual temperatures for 151 stations in Poland for the period 1881-1940 are used to draw an isothermal chart of Poland. Values used are included in a 5-page tabulation which is more marked by 20 districts. Northwest Poland appears much warmer and southeast Poland much colder than normal for the latitude. Anomalous effect of the maritime, forest hill, mountain Poland. — M.K.					
ASB-56.4 METALLURGICAL LITERATURE CLASSIFICATION					
FROM SYNDICATE		FROM SYNDICATE		FROM SYNDICATE	
LONDON 1951		LONDON 1951		LONDON 1951	

L 47504-66

ACC NR:

AP6032493

(A)

SOURCE CODE: UR/0413/66/000/017/0053/0053

INVENTOR: Utyamyshev, R. I.; Chastukhin, B. S.; Yevteyev, K. M.; Antonov, A. A.;
Mel'nikov, Ye. N.

ORG: none

TITLE: Device for recording electroplethysmograms. Class 30, No. 185435

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 17, 1966, 53

TOPIC TAGS: electroplethysmograph, diagnostic medicine, plethysmography, human physiology, cardiovascular system, cardiology

ABSTRACT: An Author Certificate was issued for an electroplethysmogram recorder incorporating transistorized amplifiers, demodulators, filters, and a stabilized power source. For more reliable performance and to permit the separate and simultaneous recording of pulse waves and complex tissue resistance over long periods without readjustment, the recorder includes a stabilized carrier-frequency generator and a measuring circuit. The latter consists of the secondary coil of the emitter amplifier

Card 1/2

UDC: 615.47:616. 072 172

L 47504-66
ACC NR: AP6032498

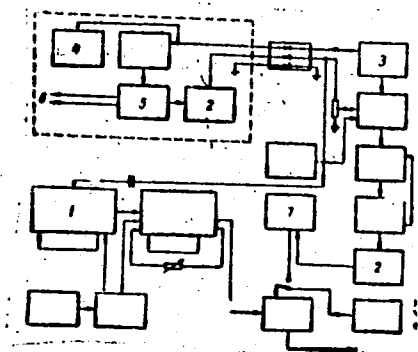


Fig. 1. Device for recording electroplethysmograms

1 - Electronic amplifiers; 2 - demodulators with filters; 3 - stabilized rectifier; 4 - stabilized generator; 5 - measuring circuit; 6 - leads; 7 - silicon stabilitron.

and the primary coil of the output amplifier, to which the leads are attached. A silicon voltage stabilizer eliminates artifacts caused by tissue changes in the vicinity of the leads. Orig. art. has: 1 figure.

[DP]

SUB CODE: 06/ SUBM DATE: 23Jan65/ ATD PRESS: 5095

Card 2/2 vlr

ACC NR: AP6035654 (A) SOURCE CODE: UR/0133/66/000/011/1028/1029 4

AUTHOR: Kazarnovskiy, D. S. (Professor, Doctor of technical sciences);
Gulin, I. V. (Candidate of technical sciences); Krivonozov, Yu. I.
(Candidate of technical sciences); Kravtsova I. P. (Candidate of technical sciences); Saprygin, Kh. M. (Candidate of technical sciences);
Arshavskiy, V. Z. (Candidate of technical sciences); Chatverikov, A. V.
(Engineer); Mogilevskiy, I. I. (Engineer); Orinichev, I. (Engineer)

ORG: none

TITLE: Production technology for high-strength rails

SOURCE: Stal', no. 11, 1966, 1028-1029

TOPIC TAGS: high strength steel,
metal cladding, railway track, bimetal, hot rolling/M75X steel,
G13 steel, Rk5 steel, St.5 steel

ABSTRACT: An investigation had been made to develop a process for producing bimetallic rails, i.e. rails with a high-strength steel head. St.5 steel billets clad with M75X, G13, or Rk5 alloy steels were hot-rolled into 100 x 150 mm bars which, after reheating, were rolled into R-18 type rails. Rails with arc-deposited cladding had the highest bond strength and the most satisfactory surface quality. With M75X or Rk5-steel cladding, satisfactory results were obtained with cast composite

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UDC: 621.771.26

ACC NR: AP6035654

or pack-rolled billets. Rails with G13 steel cladding as unsatisfactory properties. Orig. art. has: 3 figures.

SUB CODE: 13/ SUBM DATE: none

Card 2/2

✓ *Study of Wear at Elevated Temperatures under Conditions of Dry Friction. P. E. D'yachonko, O. E. Kestner, and L. A. Chastynyan (*Izvest. Akad. Nauk S.S.S.R.*, 1954, [Tekhn.], (11), 44-52. [In Russian]). The wear and coeff. of friction of metals and alloys (cast Cu, Ni, steel 30 KhGSA, Al-Fe-Ni bronze, Cr bronze, Sb bronze, and a Ni alloy) were studied in relation to load, duration of test, and temp. of the surroundings. The changes in surface structure were also studied and the microhardness of the specimens determined. The tests were carried out in a special apparatus in which 3 specimens from the same material placed at an angle of 120° to each other were pressed against a rotating disc of the steel 30 KhGSA. The disc and the specimens tested were enclosed in a furnace which could be heated to 800° C. Pressure exerted on the specimens varied from 0.5 to 60 kg./cm.², and the peripheral velocity from 0.3 to 60 m./sec. The change of the friction coeff. during the experiment was measured with a damped dynamometer. An alloy based on Ni showed the lowest friction coeff. and losses due to wear at all loads and temp., and the usual antifriction alloys were found to be quite unsuitable for work in dry conditions below 200° C. Wear-resistance and low coeff. of friction in dry conditions at high temp. were found in metals and alloys which were able to form on the working surface a thin and compact film consisting most probably of oxides. The thickness and properties of this film depended on the compn. of the alloy, and hence it should be possible to obtain films of optimum resistance by suitable choice of alloying elements.

—S. K. L.—

(2)

IZVESTIYA AKADEMII NAUK
OTDELENIE TEKHNIЧЕСКИХ НАУК

(Bull. Ac. Sc., Tech. Sciences Section)

128-130
No. 12, December, 1955

F. S. Solid lubricants for components operating under conditions of dry friction.
The lubricating properties of graphite and MoS₂ were tested on a disc type friction machine described in an earlier paper. The tested specimens were cylinders 12 mm. dia., 20 mm long. The obtained results show that it is advisable to use MoS₂ powder and graphite as special lubricants for components working under high loads and high sliding speeds at elevated temperatures under conditions of dry friction.

D By P. E. Dyachenko, O. E. Kestner and L. A. Chatinyan ...

gmm LFH

CHATYNYAN, L.A.

1958, D.A., Candidate of Technical Sciences

at the Third Scientific and Technical Conference in Kiev on the Improvement of the Wear Resistance and Service Life of Machines (Tret'ya Kievskaya nauchno-tekhnicheskaya konferentsiya po povysheniyu iznosostoykosti i sroka sluzhby mashin)

vestnik Mashinostroyeniya, 1958, No.2, pp. 81-82 (USSR)

ABSTRACT. The conference was organized by the Kiev region of the VTO Mashprom (The Scientific and Technical Organisation of the Mechanical Engineering Industry) and by the Institute of Mechanics of Building Structures, Ac.Sc. Ukrainian SSR (Institut stroitel'noy mekhaniki AN USSR). 430 delegates representing the major institutions of the Ac.Sc. USSR and of the Ukrainian SSR, the specialised research agencies and the large Soviet plants heard and discussed 90 papers devoted to the study of the mechanism of disintegration of surface layers in machine components and to new methods of improving the wear life of components.

In a paper by Academician S.V. Serensen, entitled "Resistance Related to Wear and Fatigue", a survey of Russian and foreign studies was given with emphasis on fatigue failures caused by wear, both as a result of the mechanical consequences due to

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Scientific and Technical Conference in the Field of the
 ment of the Wear Resistance and Service Life of Machines

Wear and the formation of clearances is caused
 as a result of a change in the physical and chemical condition
 of contact surfaces.

R.D. Grosin, Corresponding Member of the Ac.Sc. Ukrainian SSR, in
 a paper entitled "The Complex Method of Analysis of Components
 Working Under the Conditions of Rolling Friction" presented
 method which includes the combined use of electron microscope,
 X-ray diffraction and spectroscopic analyses to judge the condi-
 tion of the surface layers in association with wear tests and
 static mechanical tests under tri-axial non-uniform compression
 at different temperatures. It is claimed that with the help of
 this method, the relation between the contact endurance strength
 of steel and the factors defining the condition of the surface
 can be established.

In a paper "On Temperature Measuring Methods in the Friction
 Process between Solid Bodies", by S.A. Sukhov, Candidate of
 Technical Sciences, a method for measuring the temperature
 gradients in the immediate vicinity of the friction surfaces
 with the help of a natural thermocouple was presented. Both
 sliding bodies (pin and ring) are made of the same material, but
 the pin end face is covered with a thin layer of another metal.

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122-2-29/55
 Scientific and Technical Conference in Kiev on the Problems
 of the Wear Resistance and Service Life of Machines

which constitutes the natural thermocouple of which one junction is the sliding surface and the other is the bond between the pin face and the coating metal. Great interest was aroused by the paper "The Variation of Wear Resistance of Certain Anti-friction Alloys under Nuclear Radiation" by B.L. Slin'ko. Precipitation-hardening alloys (beryllium copper 62 and nickel silicon bronze Bp. KH 1-3) have their strength and wear resistance increased by nuclear radiation. Alloys changing their properties mainly as a result of phase transformations and having a higher re-crystallisation temperature change their properties insignificantly.

In a paper "Foundations of the Cavitation-erosion Failure of Ferrous Alloys", I.N. Bogachev, Doctor of Technical Sciences, and R.I. Mints, Candidate of Technical Sciences, generalised the studies of the effect of the chemical and phase composition of iron carbon alloys on their cavitation erosion resistance. Increasing the carbon content from 0.023 to 1.2% improves the erosion resistance. The effect of alloying is due solely to the metallographic structure obtained. A pronounced improvement of erosion resistance is obtained in spheroidal graphite cast iron.

6-15/8

ment of the Wear Resistance and Service Life of Machines

Engineer L.A. Chatynyan in his paper "Investigation of the Wear of Nickel Alloys under Dry Friction at Elevated Temperatures" reported the results of his test which showed nickel alloys to have the best wear resistance at high temperatures, whilst the initial hardness is of little consequence. The optimum composition of a new alloy with a high wear resistance at 400 °C was given, whilst high-speed steel and ordinary chromium steels have little wear resistance under dry friction at high temperatures. V.P. Grechin, Candidate of Technical Sciences, concluded in his paper "The Heat Resistance of Cast Iron as the Main Factor in its Wear Resistance under Sliding Friction" that the hardness of cast iron at high temperatures (up to 850 °C) determines its wear resistance. Based on numerous studies of various cast irons, recommendations for alloying and for the application of cast irons under different conditions were given. It was noted by N.I. Kovalenko, Candidate of Technical Sciences, in his paper "The Wear Resistance of Wire Ropes" that the rubbing down of a wire rope is caused by an abrasive medium and its failure occurs before fatigue sets in. The author recommended

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122-2-29/33

The Third Scientific and Technical Conference in Leningrad on the
Subject of the Wear Resistance and Service Life of Machines

tests have confirmed reliable operation of bi-metal components
under different conditions.

In a paper "Electric Spark Hardening of Machine Components",
S.S. Astaf'yev, Candidate of Technical Sciences, reported on a
novel electric spark hardening process. The surface of the
steel is alloyed with the electrode metal, as a result of instan-
taneous heat impulses occurring in rapid succession during spark
discharges. A special treatment head makes high output possible.
The wear resistance of machine components is said to increase
2-6 times at room temperatures and 4-5 times at elevated tempera-
tures.

In a paper "New Anti-Friction Materials and Coatings",
A.I. Shits reported on work designed to evolve novel substitutes
for babbitt and high-tin-content bronze alloys. The following
have given good results: a) Moulded timber materials and
plastics based on phenolic and other resins with different fillers
(cord and cotton fibres and others), in conjunction with water
lubrication. b) Metallised graphite, nylon and others for
elevated temperatures. c) Graphite-loaded materials and compo-
sitions of resin and graphite for working in corrosive media.

Third Scientific and Technical Conference on
the Problem of the Wear Resistance and Service Life of Machines

Improvement in Wear Resistance and Service Life of Machines with Large Transverse Cross-sections by the Method of Surface Quenching and Accelerated Heating in Heat Treatment Furnaces was the subject of G. T. Fomin, Candidate of Technical Sciences, who reported that accelerated heating of steel components to achieve transition into an austenitic state for the surface layer alone makes it possible to intensify the heat treatment of components with a cross-section exceeding 40 mm. The depth of the quenched layer can be controlled without modifying the structure of the core, so achieving the best combination of wear resistance and impact strength.

I. S. Dombrovskaya, Doctor of Chemical Sciences, and V. M. Vinogradov, in a paper "The Improvement of the Anti-friction Properties of Metals by Means of Thermo-Chemical Surface Treatments", pointed out that, alongside nitriding and phosphating, steels can also be improved in their anti-friction properties by enrichment with chloride or sulphide on their surface. The latter methods mainly improve the anti-seizure properties, whilst the former improve wear resistance.

Sulphiding can be achieved in solid, liquid and gaseous media.

CHATYNYAN, L.A.

NOTICE: I HAVE INFORMATION

Abadaniya mak. 2028. Institut mashinovedeniya. Kkasiya po tekhnologii mashinostroyeniya. Seminar po kachestvu poverzhnosti

[illegible]

Sponsoring Agency: Akademiyu nauk SSSR. Institut mashinovedeniya.

Recp.: M.: P.Ye. D'yachenko, Professor; Ed. of Publishing House:
G.B. Gerasimov; Tech. Ed.: T.P. Polonova.

REMARK: This collection of articles is intended for technical personnel concerned with the quality of surface finishes of machine parts.

Summary. This collection of articles deals with problems of surface roughness and the effect of surface roughness on the wear and strength of machine parts. Among the topics discussed are the design of anti-frictional standards for surface roughness, the effect of machining and cutting-tool vibration on the surface roughness of machine tools, the effect of lay direction on the wear of plane friction surfaces, the trends and instruments for measuring surface roughness, and the increasing importance of finished surfaces. No personalities are mentioned. References follow several of the articles.

Stanhope, L.P. Quality and Wear of Friction Surfaces

**Belgicants, P.J. - Effect of Lay Direction on the Wear of Plane
Friction Tires**

Schuyler, I. J. See of the Cutting Process for Increasing the Fatigue Strength of Machine Parts

Chattanooga, Tenn., P. O. D'Yachenko, and O. Ye. Kostar. Solid Labor -
UNION OF REFINERS

Papkov, D.S. Effect of Surface-Layer Quality on Fatigue Strength 8

Das'yan, N.V. Some Problems of the Formation of the Surface Layer 9
(Str.'y., 8.2). Theory of the Working Crank in Gears on the Basis

FOR IMPROVING MACHINING QUALITY
IN TURNING CYLINDERS IN STEEL AND ALUMINUM

Surface Quality of Chrome-Plated Parts

Control Turning of Steel

of Cutting Tools

resinokhaya 2.P. Surface Hardening of Metals by Ball Burnishing 156

Isanovich, A.I., On the Problem of Surface Roughness of Machined
 reactor-engine Parts

Wydev, D.S. Simple Surface-Roughness Indicator

177	Yusupov, Yu. V. "Zalibr-VZ-1" Induction-Type Photoelectric Method of Recording Surface Profiles	177
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Walter A.I. Electric Circuit of the "Galileo-Mini" Oscilloscope -
November 1962, Association-ITP, P.O. Box 100, Florence,
Italy

center **circuits of the Miller-VMI Polygraph-In-**

Abstracts, G. A. "Visual" Device for Measuring the Roughness of Surfaces

STERN, L.A. - Lubricating Properties of Molybdenum Disulfide 273

CHATYNYAN, L.A.

Lubricating property of the disulfide of molybdenum. Trudy Sem.
po kach.poverkh. no.4:278-281 '59. (MIRA 13:6)
(Molybdenum compounds)
(Lubrication and lubricants)

Chatvayan, L. A.

Investigation of the Wear of Metals and Alloys in the Case of Dry Friction and Elevated Temperatures *ф. 288*

Sukhoie i granichnoye treniye. Friksionnyye materialy (Dry and Boundary Friction. Friction Materials) Moscow, Izd-vo AN SSSR 1960. 302 p. Errata slip inserted. 3,500 copies printed. (Series: Its: Trudy, v. 2)

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya. Resp. Ed.: I. V. Kragel'skiy, Doctor of Technical Sciences, Professor; Ed. of Publishing House: K. I. Grigorash; Tech. Ed.: S. G. Tikhomirova.

The collection published by the Institut mashinovedeniya, AN SSSR (Institute of Science of Machines, Academy of Sciences USSR) contains papers presented at the III Vsesoyuznaya konferentsiya po treniyu i iznosu v mashinakh (Third All-Union Conference on Friction and Wear in Machines, April 9-15, 1958).

Chatynyan, L. A.

81820

S/129/60/000/07/004/013
E193/E235

18.1000

AUTHORS: Chatynyan, L. A., Engineer and Kestner, O. Ye.,
Candidate of Technical Sciences

TITLE: Performance of Alloys Under Conditions of Dry Friction
at Elevated Temperatures

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov,
1960, No. 7, pp. 19-24 + 1 plate

TEXT: It had been established by the present authors, in the course of an earlier investigation (Ref. 1), that the wear resistance of metals and alloys under conditions of dry friction, increases with rising temperature due to the formation of non-metallic surface films, and that the usual requirements of anti-friction (bearing) alloys, operating in the presence of lubricants, do not apply to alloys for parts operating without any lubrication. The object of the present investigation was to study the effect of the composition and constitution of several alloys on their wear resistance under the conditions of dry friction at temperatures up to 700°C. The investigated materials included: single-phase, binary 5% SN-Cu and

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5% Al¹-Cu alloys; heterogeneous, binary alloys, containing hard particles of intermetallic compound embedded in a soft matrix, i.e. the 10% SN-Cu and 18% SN-Cu alloys; a heterogeneous, binary 10% Al-Cu alloy in which hard particles of the β -solid solution are embedded in the softer matrix and α -solid solution; a heterogeneous, binary alloy Br.ONTsS4-8-8-17, containing 17% Pb and consisting of a hard matrix (a solid solution of SN, Ni, and Zn in Cu), containing soft inclusions of Pb; heat-resistant nickel alloys of various composition, shown in Table 1, where their hardness (kg/mm^2) at 20°C is also given. The experiments consisted in measuring the degree of wear (thickness, microns, of the abraded material) and the friction coefficient of the investigated alloys, pressed against a rotating disc made of steel 30KhGSA. The results are reproduced graphically in the form of curves, showing the temperature dependence of the properties studied. Several conclusions were reached. (1) The wear resistance of all the investigated alloys increases with rising temperature, due to the formation of

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Performance of Alloys Under Conditions of Dry Friction at
Elevated Temperatures

tenacious surface films, the most stable films being formed on complex, Cr-bearing alloys, containing dispersed precipitates of strengthening phases. Although most of these alloys are hard, there is no definite relationship between hardness and wear-resistance of the alloys. (2) With increasing Fe content, the wear resistance of these alloys decreases. (3) The comparatively low wear resistance of the 80Ni-20-Cr alloy at temperatures below 500°C is attributed to the low rate of oxide formation at these temperatures. Ni-Cr alloys, containing Si, Mn, Ti, and Al additions form protective oxide film at relatively low temperatures and consequently exhibit better wear-resistant properties. (4) The wear resistance does not increase with increasing hardness, but an excessively hard alloy will cause excessive wear of the other moving part. For this reason, the content of the alloying additions should be sufficiently high to promote the formation of the surface oxide films at low temperatures, but not so high as to cause excessive increase in hardness. (5) Homogeneous alloys, or alloys containing only a small proportion

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Performance of Alloys Under Conditions of Dry Friction at
Elevated Temperatures

of a second phase, and capable of forming a protective, surface oxide film, are most suitable materials for parts designed to operate under conditions of dry friction, pure copper, the 5% SN bronze, 10% Cr-Cu alloy, 18Cr-0.5Mn-20Co-2.8Ti-0.2Al-18Fe-3Mo-37Ni alloy, and nickel-base alloys containing 13 to 20% Cr and no more than 10% Fe, being typical examples of such materials. (6) Since the rate of wear, due to dry friction, was most rapid in the initial stages of the experiments, i.e. before the surface oxide layer had been formed, parts intended to work under conditions of dry friction should be subjected to preliminary heat treatment, designed to form the protective, surface oxide layer. There are 4 figures, 2 tables and 1 Soviet reference.

4

Card 4/4

18 8200

AUTHOR:

Chatynyan, L. A.

24590

S/137/61/000/005/044/060
A006/A106

TITLE:

Films on friction surfaces at high temperatures

PERIODICAL:

Referativnyy zhurnal. Metallurgiya, no. 5, 1961, 37, abstract 52h272
(V sb. "Povysheniye iznosostoykosti i stroka sluzhby mashin, T. I.",
Kiyev, AN USSR, 1960, 209-217)

TEXT:

The author presents results of investigating the conditions of formation and some properties of films formed on friction surfaces of Cu, 38XN10A (38KhMYuA), 30X1CA (30 KhGSA), Mg-cast iron, and various Cu and Ni-alloy specimens. The specimens were subjected to wearing tests at a specific load of 1.5-3.5 kg/cm², 6 m/sec slip rate, at 20, 300, 500 and 700°C. Films formed at high temperatures protect the surfaces from heavy breakdown, reduce wear and the friction coefficient. The properties of the film depend on the chemical composition of the alloys and the test conditions. It is assumed on the basis of chemical analyses of some films that they represent metal oxides contained in the alloy composition; oxides forming at high temperatures, possess microhardness H, considerably exceeding H of the material tested. Electronographical investi-

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Films on friction surfaces at high temperatures ²⁴⁵⁹⁰

S/137/61/000/005/044/060
AC06/A106

gations of the surfaces of some specimens showed an amorphous or extremely high-dispersed structure of the film.

[Abstracter's note: Complete translation]

A. N.

✓

Card 2/2

S/123/61/000/010/034
A004/A101

AUTHOR: Chatynyan, L. A.

TITLE: Films on the friction surface at high temperatures

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 11, 1961, 36-37, abstract 11A265 (V sb. "Povysheniye iznosostoykosti i sroka sluzhby mashin. v. I". Kiyev, AN UkrSSR, 1960, 209-217)

TEXT: The author describes the method and test results of studying the formation conditions and some properties of the films, which are formed on the friction surface of various metals tested for wear at different temperatures. The following conclusions have been arrived at as a result of the investigations: 1) films originating at high temperatures protect the surface from intense destruction, lower the wear and coefficient of friction; 2) the antifriction, protective and other properties of the films forming on the friction surface depend on the chemical composition of the alloy and the test conditions; 3) by electron-diffraction studies of the friction surface of copper, nickel, nickel-alloy and 30XГСА (30KhGSA) steel specimens it was found the films have an amorphous structure; 4) oxides forming during friction at high temperatures

Card 1/2

Films on the friction surface ...

S/123/61/000 010/034
A004/A101

possess a hardness considerably exceeding that of the material being tested. Based on the data of chemical analyses of some films and judging by their outer appearance, it is possible to presume that the films are oxides of the metals constituting the base alloy composition.

V. Tatishchev

[Abstracter's note: Complete translation]

Card 2/2

LASHKO, N.F., kand.tekhn.nauk; CHATYNYAN, L.A., inzh.

Effect of structure and phase constitution on the wear-resistance
of nickel alloys. Metalloved. i term. obr. met. no.7:20-23
Jl '62. (MIRA 15:6)

(Nickel alloys--Testing)
Phase rule and equilibrium)

L 39996-65 EPF(c)/EPF(n)-2/EPR/EPA(s)-2/EPA(w)-2/EWP(z)/EWT(m)/EWP(1)/EPA(bb)-2/T/
 WH/WN/MJW/JD/HW/JG/GB/GS Pr-4/PS-4/Pt-10/Pu-4/Pab-10/Pad
 ACCESSION NR: AT4049821 S/0000/64/000/000/0182/0187

AUTHOR: Chatynyan, L. A.

TITLE: Increasing the durability of parts at temperatures up to 800C

SOURCE: Soveshchaniye po uprochneniyu detaley mashin, 1962. Protsessy uprochnen-
iya detaley mashin (Processes of the hardening of machine parts); doklady sovesh-
chaniya. Moscow, Izd-vo Nauka, 1964, 182-187

TOPIC TAGS: steel heat resistance, alloy heat resistance, alloy steel, steel
 durability, steel coating, steel friction, high temperature wear, cermet alloy

ABSTRACT: The following materials were tested for high-temperature wear: refractory
metals such as molybdenum tungsten, niobium and zirconium, as well as iron; heat re-
sistant alloys on a base of molybdenum (VM-2 alloy) and niobium (VN-2 alloy) as
well as hard metalloceramic alloys; Kh27, 1Kh12MV4B and EI-756 steels, as well as
stainless, austenitic, manganese steels; diffusion chrome-plated and chromium
calorized iron and V-56 alloy, as well as VT-10 alloy with subsequent nitriding;
cermet coatings of molybdenum, tungsten, aluminum oxide, zirconium and tungsten
carbide on the VZhL-1 alloy, and electrolytic gold, silver and platinum, nickel

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L 39996-65

ACCESSION NR: AT4049821

7

with phosphorus, ²⁷indium with chromium and ²⁷indium with nickel on the VZhL-1 alloy. These metals, alloys and coatings were selected because of their high mechanical and anti-corrosion properties. Tests were made in three stages: 1) on the VT-1 machine in air with samples of different groups at 500, 650, 700 and 800C, specific load of 3.5 kg/cm², sliding velocity of 5 m/sec. and 60 minute duration; 2) materials and coatings with the highest wear resistance were tested on the VT-1 machine under the same conditions, only surrounded by argon; 3) after the second test the best materials were tested at 500 and 650C without any oxygen. The tests recorded wear and the coefficient of friction in relation to temperature, as well as the condition of the friction surface. The surface films formed during friction at high temperatures lower wear and the coefficient of friction. Of the tested materials, special attention should be paid to molybdenum, VM-2, VZhL-1 and VZhL-2 alloys and to the hardened cermet alloys VK-6 and T15K6. Silver-plating and chemical nickel-plating also improve the friction surfaces. Steels with lower hardness and strength showed high wear. The VZhL-2 alloy had a lower coefficient of friction than the other alloys (chemical composition 15-16% Mo, 1.5% Si, 0.2% C, 0.13% B, Ti, Al up to 6%), resulting in the formation of hard phase components. The author concludes that in neutral media at high temperatures, oxide

Cord 2/3

L 39996-65

ACCESSION NR: AT4049821

films are formed only to a small extent. The wear of samples increases in argon. Both in air and in argon, it is best to use high-temperature coatings of refractory metals and metal carbides applied by thermal diffusion and other methods. The data obtained show that up to 800C in argon media the following materials have a sufficiently high wear resistance: VZhL-1 alloy, VZhL-1 alloy coated with Mo, W, WC, and Ti5K6 alloy, VZhL-2 alloy, molybdenum, VM-2 alloy after thermal diffusion (Cr, Al, Si), as well as the V-56 alloy after thermal diffusion of chromium and aluminum. Orig. art. has: 5 figures.

ASSOCIATION: None

SUBMITTED: 21May64

ENCL: 00

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

Card 3/3 111B

L 62472-65 EWT(m)/EWP(w)/EPF(n)-2/ENG(m)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b)/EWP(i)/
EPF(c) IJP(c) WW/HW/JG/JD/DJ/OS/MJW(GL)

ACCESSION NR: AT5020439

UR/0000/65/000/000/0154/0157

AUTHOR: Chatynyan, L. A.

TITLE: The friction behavior of refractory metals and heat-resistant alloys at 700-850C in argon or helium

SOURCE: AN SSSR. Nauchnyy sovet po treniyu i smazkam. Teoriya smazochnogo deystviya i novyye materialy (Theory of lubricating action and new materials). Moscow, Izd-vo Nauka, 1965, 154-157

TOPIC TAGS: refractory metal, heat resistant alloy, metal wear resistance, alloy wear resistance, tungsten alloy, molybdenum alloy, niobium alloy, nickel alloy, alloy hardening, electrospark hardening /VZhL-2 alloy

ABSTRACT: The wear resistance of refractory metals and alloys has been investigated at temperatures up to 850C in an inert-gas atmosphere. Under these conditions the wear was found to depend primarily upon the material hardness: the harder the material the higher is its wear resistance. Molybdenum, tungsten, niobium, and their alloys, and the VZhL-2 nickel-base alloy all were found to be adequately wear resistant. The wear of the VZhL-2 alloy in couple with molybdenum alloy at 700C was lower than that of other nickel-base alloys, and at 800C was only slightly greater

Card 1/2

L 62472-65

ACCESSION NR: AT5020439

than that of molybdenum alloy. The wear resistance of tungsten and molybdenum was generally higher than that of niobium and zirconium. The multiphase alloys have a higher resistance than the single phase alloys. At high temperatures brittle materials wear less than do ductile materials. The wear resistance can be further improved by electrospark hardening with refractory metals or carbides, especially molybdenum and chromium carbides. Electrospark hardening lowered the wear of VZhL-2 alloy by almost 50%. Electrospark-deposited layers of WC, Cr₂₃C₆, TiC=WC, and Mo₂C adhere strongly to VZhL-2 alloy. Further development of electrospark hardening would extend the use of wear-resistant carbides and hard alloys in parts operating under friction. Orig. art. has: 3 figures. [ND]

ASSOCIATION: none

SUBMITTED: 22May65

ENCL: 00

SUB CODE: MM, AS

NO REF SOV: 003

OTHER: 000

ATD PRESS: 4074

Card

2/2

CHATYNYAN, R.M., inzh.

Methods for statistical processing of the results of a small
number of fatigue tests. Izv.vys.ucheb.zav.; mashinostr. no.6:95-101
'63. (MIRA 16:10)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni Baumana.

CHATYNYAN, R.M.

Device for programmed loading of fatigue testing machines. Zav.lab.
30 no.3:371-372 '64. (MIRA 17:4)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni Baubana.

RESHETOV, D.N., doktor tekhn.nauk, prof.; CHATYNYAN, R.M., inzh.

Investigation of bending resistance of gear teeth under varying
load conditions. Vest. mashinostr. 44 no. 4:15-19 Ap '64.
(MIRA 17 5)

RESHETOV, D.M., doktor tekhn.nauk, prof.; CHATYKHAN, R.M., kand.
tekhn.nauk

Stress analysis of machine parts under variable loading
conditions. Vest.mashinostr. 45 no.8:11-14 Ag '65.
(MIRA 18:12)

BRATKOWSKA, J; CHATYS-GORSKA, L., HOFFMAN, B, HUCZEK, Z., MARCINOWKA, H .

The role of bacteria of Salmonella and Shigella group and bacterium coli in etiology of infantile diarrhea. *Pediat.polska* 30 no.3:221-229 Mr '55.

1. Z I Kliniki Pediatricznej A.M. we Wroclawiu, Kierownik: prof. dr med. H. Hirszfildowa, Z. Wojewodskiej Stacji Sanitarno-Epidemiologicznej we Wroclawiu, Dyrektor: S. Przylecki. Wroclaw, Hoene Wronskiego 13c, I Klinika Pediatria A.M.

(DIARRHEA, bacteriology

E. coli, Salmonella & Shigella in etiol. in inf.)

(ESCHERICHIA COLI, infections, diarrhea in inf)

(SALMONELLA INFECTIONS, in infant and child, diarrhea)

(SHIGELLA, infections, diarrhea in inf)

EXCERPTA MEDICA Sec 7 Vol. 11/7 Pediatrics July 57

1925. CHATYS-GÓRSKA L. Konsult. Stacji Szczepień BCG i I Klin. Ped. A.M., Wrocław. *Niezwyczajny 'wzmógłony odczyn' po doustnym szczepieniu ECG. Uncommon, severe reaction following peroral BCG vaccination PEDIAT.POL. 1956, 31/6 (671-673) Illus. 1

A male child, vaccinated perorally with BCG soon after birth, developed 3 months later disseminated, subdermal, nodular infiltrations of tuberculoid character on the face, arms and legs. The submaxillary lymph nodes were enlarged; Moro (+), ESR 85, chest X-ray normal. The histological diagnosis of subdermal lesions was tb subcutis, but bacteriological and biological tests gave negative results. After 10 days the changes disappeared; however, chemotherapy was started because active tb was detected in the family of which the child was a member. Ten months later the lymph nodes, which were enlarged throughout, fistulated. After 3 months the fistula healed and the child recovered. The hypothesis is adduced of an uncommon and severe reaction following BCG vaccination, caused by biological changes in the BCG strain employed.

Wegrzynowska - Cracow (XV, 7, 13)

~~1. Konsultacja~~

CHATYS-GORSKA, Leokadia; ZAJAC, Jozef

A case of Stevens-Johnson's syndrome in a 9-year-old boy. *Pediat. polska* 34 no.8:1103-1106 Aug 59.

1. Z I Kliniki Pediatricznej A. M. we Wrocławiu Kierownik: prof. dr med. H. Hirszfelkowa.

(ERYTHEMA MULTIFORME, in inf. & child)

POLAND

CZYZEWSKA, Janina, CHATYS-GORSKA, Leokadia, and KOWALSKI, Romuald; First Pediatric Clinic (I Klinika Pediatria), AM [Akademia Medyczna, Medical Academy] in Wroclaw (Director: Prof. Dr. med. Hanna HIRSZFELDOWA)

"Free Fibrous Body in the Pleural Cavity. Case Report."

Warsaw, Polski Tygodnik Lekarski, Vol 18, No 17, 22 Apr 63, pp 599-601.

Abstract: [Authors' English summary] Authors report the case of a 6-year old child with a free fibrinous ball and pleural empyema, complicated by pneumoperitoneum, and describe the mechanism of the changes. Only a few such cases have been reported in tuberculosis of the lungs where artificial pneumothorax had been applied. There are ten references, of which two each are in French and Italian, and the others in German.

1/1

CHATYS-GORSKA, Leokadia; WILLIMOWSKA, Maria

A case of pneumo-cardiac form of mucoviscidosis with the tetany syndrome. *Pediat. pol.* 38 no.4:421-428 '63.

1. Z I Kliniki Pediatricznej AM we Wrocławiu Kierownik: prof.
dr med. H. Hirsfeldowa.

(PANCREATIC CYSTIC FIBROSIS) (TETANY)

CHATYS-GOBSKA, Leokadia; CHILMAN, Anatol; NOWAKOWSKI, Tadeusz;
PRYZYSTAWA, Marian

Right congenital diaphragmatic hernia. Pediat. Pol. 40 no.5:
519-522 My '65.

1. Z I Kliniki Pediatricznej AM we Wroclawiu (Kierownik: prof.
dr. T. Nowakowski).

BURDZINSKA, Jadwiga; CHATYS-GORSKA, Leokadia; PELIAR, Jan

Congenital atresia of the tricuspid valve in an
11-months-old infant. *Pediat. Pol.* 40 no.5:523-525
My '65.

1. Z Wojewodzkiej Przychodni Kardiologicznej we Wroclawiu
(Dyrektor: prof. dr. med. E. Szczeklik) i z I Klinik' Pe-
diatrycznej AM we Wroclawiu (Kierownik: prof. dr. med.
T.K. Nowkowski).

CHATYS-SKIRZYNSKA, Halina

Interstitial cystitis. Urol. polska 9:137-148 1956.

1. Z Oddziału Urologicznego Instytutu Gruslicy (Szpitala
Wolskiego) w Warszawie. Ordynator: prof. dr. med. S. Wesolowski.
(CYSTITIS,
interstitial (Pol))

CHATYS-SKIRZYNSKA, Halina; TETER, Jerzy

Primary amenorrhea of uterine origin. Gin. polska 29 no.4:375-385 July-Aug 58.

1. Z Poradni Endokrynologicznej w Warszawie Kierownik: doc. dr med. J. Teter i z Oddziału Położniczo-Ginekologicznego Instytutu Grzylcy w Warszawie. Kierownik. prof. dr med. M. Bulska. Adres: Warszawa, Krakowskie Przedmieście 8.

(AMENORRHEA, etiol. & pathogen.

uterine maldevelop. & dis., ther. (Pol))

(UTERUS, dis.

causing amenorrhea, ther. (Pol))

CHATYS-SKIRZYNSKA, Halina

Association of genital tuberculosis with cervical cancer.
Gruslica 28 no.10:801-805 0 '60.

1. Z Oddziału Polosniczo-Ginekologicznego Instytutu Gruslicy
Kierownik: prof.dr med. M.Bulska; Dyrektor I.G.: prof.dr med.
W. Jaroszewicz.

(TUBERCULOSIS FEMALE GENITAL compl)
(CERVIX NEOPLASMS compl)

CHATIS-SKIRZYNSKA, Halina

Effect of hormonal factors on the course of experimental tuberculosis
with and without pregnancy. Gruslica 29 no.2:73-75 Ja '61.

1. Instytut Gruslicy na Warszawa.

(TUBERCULOSIS exper) (PREGNANCY)
(HORMONES pharmacol)

CHATYS-SKIRZYNSKA, Halina

A case of Krukenberg's cancer with signs of acanthosis nigricans and virilization. Ginek. Pol. 33 no.2:175-185 '62.

1. Z Oddziału Polosniczo-Ginekologicznego Instytutu Gruzlicy w Warszawie Kierownik: prof. dr med. M. Bulska Dyrektor Instytutu: prof. dr med. W. Jaroszewicz.

(CARCINOMA MUCINOUS compl)
(ACANTHOSIS NIGRICANS etiol)
(VIRILISM etiol)
(OVARIES neopl)

CHATYS-SKIRZYNSKA, Halina

A case of dead fetus in interstitial pregnancy diagnosed as uterine myoma. Ginek. pol. 33 no.5:585-589 '62.

1. Z Oddziału Ginekologiczno-Położniczego Instytutu Gruzlicy Kierownik:
prof. dr med. M. Bułska. Dyrektor: prof. dr med. W. Jaroszewicz.
(PREGNANCY ECTOPIC) (ABORTION MISSED) (UTERUS NEOPLASMS)
(LEIOMYOMA) (FETAL DEATH)

CHATYC-SKIREVNSKA, Halina; KULEJEWSKA, Magdalena; PAKLEWSKA-POBRATYN,
Hanna.

The value of bacteriological examinations in tuberculosis of the
genital organs. Gruzlica 33 no.1:21-30 Ja '65

1. Z Oddziału Położniczo-Ginekologicznego (Kierownik: dr. med.
J. Ruszkowski) i z Zakładu Mikrobiologii Instytutu Gruzlicy
w Warszawie (Kierownik: doc. dr. M. Buraczewska).

CZECHOSLOVAKIA

~~CHAUBAI, K. A.~~; HARTMAN, J.; HOLECKOVA, E.; LODIN, Z.; Institute of Physiology, Czechoslovak Academy of Sciences (Fysiologicky ustav CSAV), Prague.

"Morphologic and Cytochemical Changes During Adaptation of Animal Cells to Cold."

Prague, Ceskoslovenska Fysiologie, Vol 14, No 5, Oct 1965; p 350.

Abstract: Study of cold adaptation in hen fibroblasts and HeLa cells revealed that cold adaptation is accompanied by decrease in total dry weight of both cytoplasm and nucleus. Paper presented at the 15th Physiology Days, Olomouc, 27 May 65.

1/1

- 73 -

A-Z																										0-9																										A-Z																										0-9																									
CHAUDHURY, S. G. BC Process and Properties Index On the basis of the Boltzmann distribution law a theory of membrane equilibrium, of which the Donnan equilibrium is a special case, has been developed. G. N. H. S. ASB-31A METALLURGICAL LITERATURE CLASSIFICATION																																																																																																							
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Longitudinal motion of a circular ... R/008/62/013/003/006/006
D272/D308

by an examination of the solutions corresponding to the case when
the internal cylinder is given an impulsive velocity in the longi-
tudinal direction. ✓

Card 2/2

NASONOVSKAYA, Z.S.; KLIMCHUK, Yu.F.; CHAUKINA, R.P.

Capron screens in the filters of sprayers. Zashch. rast. ot vred.
i bol. 6 no.9;18-19 S '61. (MIRA 16:5)

1. Vsesoyusnyy nauchno-issledovatel'skiy institut sel'skokho-
zyaystvennogo mashinostroyeniya.
(Spraying and dusting equipment) (Nylon)

WOYCIECHOWSKA, Stanisława; CHAUMONT, Ludwik

Attempted adaptation of rhinopneumonitis equorum virus, strain
RAC-H, in mice and other rodents. Med. dosw. mikrobiol. 15
no.4:321-326 '63.

1. Z Katedry Mikrobiologii Wydz. SGGW w Warszawie i Oddziału
Wirusologii Instytutu Pasteura w Paryżu.

*

SHAYOVICH, Leyzer Leybovich; CHAUN, G.M., inzh., retsenzent;
YEL'YASHEVICH, A.B., prof., red.; LEYKINA, T.L., red. izd-va;
CHFAS, M.A., red. izd-va; PETERSON, M.M., tekhn. red.

[Specialization and cooperation in forging and sheet-metal work]
Spetsializatsiia i kooperirovanie kuznechno-shtampovochnogo pro-
izvodstva. Moskva, Mashgiz, 1962. 142 p. (MIRA 15:9)
(Forging) (Sheet-metal work)

CHAUNIN, V.F.; GORCHILINA, A.V. (Mozhaysk)

Experience in the use of adhesives for parts assembly in
the manufacture of men's suits. Shvein. prom. no.1:35-36
Ja-P '65.

(MIRA 18:4)

Chaunina, O. Ya.
SALIN, A.A.; CHAUNINA, O.Ya.; CHERNOVA, R.A.

Rapid determination of chlorine in electrolytic solutions. Zav.
lab. 21 no.2:163-164 '55. (MIRA 8:6)
(Chlorine) (Electrolytes)

CHAUERSKIY, N. I.

CHAUERSKIY, N. I.--"The Photoconductivity and Photoelectronic Emission of F-Centers in KI and RbI." Rostov na Donu State U imeni V. M. Molotov. Rostov na Donu, 1955. (Dissertation for the Degree of Candidate of Physicomathematical Sciences).

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

21032

S/058/61/000/005/036/050
A001/A101

24-350 (1137, 1138, 1147)

AUTHOR: Chaurskiy, N.I.

TITLE: Energy distribution of photoelectrons in KI and RbI

PERIODICAL: Referativnyy zhurnal. Fizika, no 5, 1961, 308, abstract 5E532 ("Uch. zap. Rostovsk.-n/D. gos. ped. in-t", 1960, no 5(42), 119-128)

TEXT: Using the method of entrapment field in a spherical capacitor, the author measured energy distribution of photoelectrons at external photoeffect in KI and RbI containing F-centers. Energies of quanta varied from 3.4 to 5.7 ev. Two groups of photoelectrons were observed: slow (s-electrons) and fast (f-electrons). The latter originated at the expense of the conventional photoeffect from F-centers. A number of arguments are adduced to prove that s-electrons originate as a result of a complex process: absorption of a light quantum gives rise to appearance of an exciton, and the latter ionizes the F-center.

Sh. Kogan

[Abstracter's note: Complete translation.]

Card 1/1

IL'YASOV, I.I.; CHAURSKIY, N.I.; BERGMAN, A.G.; DIONIS'YEV, S.D.

Melting diagram of the reciprocal system consisting of sodium
and cadmium bromides and iodides. Zhur.neorg.khim. 7 no.3:618-
620 Mr '62. (MIRA 15:3)

(Halides) (Systems (Chemistry))

IL'YASOV, I.I.; BERGMAN, A.G.; CHAURSKIY, N.I.

System Cs, Cd, Pb || Gl. Zhur. neorg. khim. 10 no.5:1256-1258
My '65. (MIRA 18:6)

GEDEONOV, P.P., inzh.; CHAUS, F.A., inzh.

Heater for warming and drying buildings. Mekh. stroi. 20 no.10:
24 0 '63. (MIRA 16:10)

CHAUS, G. K.

1. SIKORSKIY, K. P., CHAUS, G. K.
2. USSR (600)
4. Mathematics - Study and Teaching
7. Mathematical sessions for pioneers. Mat v shkole No. 6 1952.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

5(2),5(4)
AUTHORS:

Nizhnik, A. T., Chaus, I. S.

SOV/75-14-1-6/32

TITLE:

On the Question of a Polarographic Method for the
Determination of Indium (K voprosu o polyarograficheskom ..
metode opredeleniya indiya)

PERIODICAL:

Zhurnal analiticheskoy khimii, 1959, Vol 14, Nr 1, pp 37-40
(USSR)

ABSTRACT:

Among the methods for the quantitative determination of indium, the polarographic method is now the most widely employed. This method calls for the complete separation of copper and cadmium, as the half-wave potentials of these elements are very near to that of indium. For the determination of indium in industrial products containing one-hundredth percentages of indium or more, the authors suggest the amalgam method for the preparation of the solutions. The initial solution, which besides indium contains 20% of free sulfuric acid or an equivalent quantity of other sulfates, is worked up with zinc amalgam at normal temperature. All elements causing disturbance to the polarographic determination of indium are removed from the solution, while indium is maintained in the latter.

Card 1/3

On the Question of a Polarographic Method
for the Determination of Indium

SOV/75-14-1-6/12

Sodium chloride or another soluble chloride (about 10% of weight of solution) is added to the purified solution, and indium is then polarographed. The addition of NaCl effects the normal reduction of indium ions in sulfuric acid solutions, in which the polarographic wave of indium does not take place without the chloride addition (Refs 13-16). The cause for the retarded reduction of indium ions in sulfuric acid solutions lies in the formation of complex anions of indium. This process is independent of the nature of the cation of the sulfates introduced (hydrogen or metal). The half-wave potential of indium in hydrochloric acid solution amounts to -0.597 V (with respect to a saturated calomel electrode), whereas it is -1.06 V in sulfuric acid solution, and that of cadmium in sulfuric acid solution is -0.642 V. The great difference in the potential values permits the complete separation of indium and cadmium in sulfuric acid solutions by the aid of zinc amalgam. As, Sb, Bi, Cu, Tl, Se, Sn, Ti, Fe(III) and some other elements are reduced by zinc amalgam. Higher valency elements are reduced

Card 2/3

On the Question of a Polarographic Method
for the Determination of Indium

SOV/75-14-1-6/32

to lower ones. (Fe(III), V(V), Cr(VI), Ti(IV)). The new method elaborated is **accurately** described. It was tested on several indium-containing raw materials. The results are described. There are 1 figure, 2 tables, and 20 references, 16 of which are Soviet.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN USSR, Kiyev
(Institute of General and Inorganic Chemistry of the **AS UkrSSR**,
Kiyev)

SUBMITTED: July 24, 1957

Card 3/3

S/137/62/000/003/187/191
A154/A101

AUTHORS: Nizhnyak, A. T.; Chaus, I. S.

TITLE: A method of polarographic determination of indium

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1962, 7, abstract 3 K 36
(Sb. "Khim., fiz.-khim. i spektr. metody issled. rud redk. i rasselyan. elementov". Moscow, Gosgeoltekhizdat, 1961, 92 - 95)

TEXT: A simplified amalgam method is proposed for determining hundredths of a percent of In in industrial products and waste. The initial sulfuric acid solution is treated with Zn amalgam, whereby all elements hindering polarographic determination of In are eliminated, the In is remaining in the solution. Cd, Sn, Tl and Cu are dissolved in Hg. As, Sb, Bi, Se and Te are separated in their elementary state in the form of an insoluble black loose precipitate. Elements of higher degrees of oxidation (Fe^{3+} , Ti^{4+} etc.) are reduced by amalgam. The amalgam is prepared by direct solution of metallic Zn in Hg during slight heating in the presence of an H_2SO_4 solution. 1 - 3 g of the material to be analyzed is treated by an $\text{HNO}_3 + \text{H}_2\text{SO}_4$ mixture during heating in a porcelain cup until complete decomposition and liberation of copious SO_3 vapors. After cooling, the

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A method of polarographic determination of indium

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contents of the cup are treated with water, and the solution filtered if there is a noticeable precipitate. As much H_2SO_4 (or sulfate) is added to the obtained solution as is needed to bring the concentration of the former to $\approx 20\%$; the solution is then subjected to cementation by Zn amalgam at room temperature. At a mixer speed of 250 - 300 rpm the duration of cementation is 40 - 50 minutes. The solution is then filtered if necessary, 10 percent by weight of NaCl (or other soluble chloride) is added, and the In is polarographed. There are 14 references.

N. Gertseva

[Abstracter's note: Complete translation]

Card 2/2

CHAUS, I.S.; SHEKA, I.A.

Reaction of sodium gallate with sodium sulfide and calcium chloride.
Zhur.neorg.khim. 7 no.9:2162-2166 S '62. (MIRA 15:9)

1. Institut obshchey i neorganicheskoy khimii AN UKrSSR.
(Sodium gallate) (Sodium sulfide) (Calcium chloride)

SHEKA, Ivan Arsen'yevich, doktor khim. nauk; ~~CHAUSS, Ivan~~
Stepanovich, kand. khim. nauk; MITYUREVA, Tamara Trifonovna,
kand. khim. nauk; SAZHIN, V.S., kand. tekhn. nauk,
retsenzent; RAYTEURD, L.L., inzh., red.izd-va; BEREZOVYY,
V.N., tekhn. red.

[Gallium] Gallii. Kiev, Gostekhnizdat USSR, 1963. 296 p.
(MIRA 17:1)

SHEKA, I.A.; CHAUS, I.S.

Coprecipitation of gallium with zinc sulfide in an alkaline medium.
Zhur.neorg.khim. 8 no.2:490-494 F '63. (MIRA 16:5)
(Gallium) (Zinc sulfide)

L 17014-63

EWP(q)/EWT(m)/BDS AFFTC JD

s/078/63/008/005/017/021

54

AUTHOR: Chaus, I. S. and Sheka, I. A.

TITLE: Coprecipitation of gallium iwth SnS₂

PERIODICAL: Zhurnal neorganicheskoy khimii, v. VIII, No. 5, May 1963,
1270-1275

TEXT: The study was conducted to determine the effects of acidity, temperature and gallium concentration upon the coprecipitation of gallium and stannous sulfide, the amount of quadrivalent tin being constant. The authors found that the greatest coprecipitation occurred with slight acidity, falling off sharply with an increase in concentration up to 0.15 - 0.17 N HCl, following which it remained constant. Coprecipitation increased with increase in temperature. There are 6 figures and 1 table.

ASSOCIATION: Institut obshchey i neorganicheskoy Khimii, Akademii nauk SSSR
(Institute for General and Inorganic Chemistry, Academy of
Sciences USSR)

SUBMITTED: May 7, 1962

Card 1/1

SHEKA, I.A.; CHAUS, I.S.

Zinc amalgam contact deposition of antimony from acid solutions.
Zhur.prikl.khim. 36 no.1:209-212 Ja '63. (MIRA 16:5)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.
(Electroplating) (Antimony) (Amalgams)

CHAUS, K.
KUZIN, P.; CHAUS, K.

Improving work organization. Stroi.mat.2 no.12:8 D '56.(MIRA 10:2)

1. Brigadir betonschikov zavoda shelezobetonnykh izdeliy No.4 (for Kuzin). 2. Nachal'nik smeny zavoda shelezobetonnykh izdeliy No.4 (for Chaus).

(Cement industries)

CHAUS, N.N.

Uniqueness of the solution of the Cauchy problem for a
differential equation with constant coefficients. Ukr.mat.
zhur. 16 no. 3:417-421 '64. (MIRA 17:7)

I. 2630-66 EWT(d) LIP(c)

ACC NR: AP5028615

SOURCE CODE: UR/0041/65/017/001/0126/0130

AUTHOR: Chaus, N. N. *16, 65*

ORG: none

TITLE: Uniqueness of solution of the Cauchy problem for systems of partial differential equations *16, 44, 65*

SOURCE: Ukrainskiy matematicheskiy zhurnal, v. 17, no. 1, 1965, 126-130

TOPIC TAGS: Cauchy problem, partial differential equation, differential solution, differential equation system, uniqueness, class theory, function theory

Abstract: The results obtained by the author elsewhere are here extended to the case of several spacial variables. The system of partial differential equations

$$\frac{\partial u_j(x, t)}{\partial t} = \sum_{k=1}^m P_{jk} \left(\frac{\partial}{\partial x} \right) u_k(x, t) \quad (j = 1, \dots, m). \quad (1)$$

is considered, where $u_j(x, t)$ ($x = (x_1, \dots, x_n)$, $-\infty < x_i < \infty$; $t \in [0, T]$)

are unknown functions and $P_{jk} \left(\frac{\partial}{\partial x} \right)$ polynomials of $\frac{\partial}{\partial x_1}, \dots, \frac{\partial}{\partial x_n}$ with constant coefficients.

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L 2630-66

ACC NR: AP5028615

The Cauchy problem consists of determining a vector function $u(x, t)$ satisfying system (1) for $t \geq 0$ and the initial conditions $u(x, 0) = u_0(x)$, where u_0 is a given vector function. The problem is to find a class of functions $\{u(x)\}$ such that the solution $(u_1(x, t), \dots, u_m(x, t))$ is unique if it exists and $u_j(x, t) \in \{u(x)\}$ for $j = 1, \dots, m$ and $t \in [0, T]$. The problem is solved by proving the Theorem: If for system (1) the order is $p > 1$ and $f(r)$ for $r > 0$ is a continuous, non-decreasing positive function for which

$$\int_0^{\infty} \frac{dr}{r f(r)^{p-1}} = \infty,$$

then the class of all functions $f(x_1, \dots, x_n)$ satisfies the inequality

$$|f(x_1, \dots, x_n)| \leq C e^{i x_1 \rho' u(x_1) + \dots + i x_n \rho' u(x_n)} \left(\frac{1}{p} + \frac{1}{p'} = 1 \right),$$

where $C = C_f$ is a positive constant and defines a unique class of solutions of the Cauchy problem for system (1). In conclusion the author thanks his instructor Yu. M. Berezhanskiy for assistance with the work. Orig. art. has 5 formulas. JPRS 44,55

SUB CODE: MA / SUBM DATE: 13Feb64 / ORIG REF: 003 /

Card 2/2 DP

CHAUS, N.N. (Kiyev)

Representation of positively defined nuclei through eigenfunctions
of difference expressions. Ukr. mat. zhur. 17 no.2:129-134 '65.

(MIRA 18:5)

CHAUS, N.N.

Uniqueness classes of solutions to the Cauchy problem and representations of positively definite kernels. Dokl. AN SSSR 163 no.1:36-39 J1 '65.

(MIRA 18:7)

1. Institut matematiki AN UkrSSR. Submitted December 26, 1964.

KOSYAKOV, I.: CHAUS, V.

Knowledge of the inertial characteristics of ships is essential for safe navigation. Mor. flot 25 no.7:21-22 JI '65. (MIRA 18:7)

1. Kapitan teplokhoda "Sal'sk" Dal'nevostochnogo parokhodstva (for Kosyakov). 2. Kapitan morskogo tankera "Agan" Vladivostokskogo upravleniya krabolevnykh flotilii i plavuchikh konservnykh zavodov (for Chaus).

CHAUS, V.M., kand.sel'skokhoz.nauk

In the Committee for the Tractor and Agricultural Machinery Industry
Attached to the State Planning Committee of the U.S.S.R. Trakt.
i sel'khoz mash. no.1:48-3 of cover Ja '64. (MIRA 17:4)

CH
KOCHENENKO, D.V.; USTINOV, A.M.; CHAUS, V.M.

Considerations on the use of the KKR-2 potato combine in 1954.

Sel'khoz mashina no.5:3-5 My '55.

(MIRA 8:6)

(Potatoes- Harvesting) (Combines (Agricultural machinery))

CHAUS, V. M.

ZHIGLEVICH, B.P.; CHAUS, V.M.; SHMANEV, M.N.; TARASOV, D.V.

Potato storage following machine harvest. Sel'khoz mashina no.4:
21-22 Ap '57. (MIRA 10:4)

1. Institut kartofel'nogo khozyaystva (for Zhiglevich). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyaystvennogo mashinostroyeniya (for Chaus, Tarasov). 3. Timiryazevskaya sel'skokhozyaystvennaya akademiya (for Shmanev).
(Potatoes—Storage)