

ARNOL'DOV, A. I.

Dissertation defended for the degree of Doctor of Philosophical Sciences
at the Institute of Philosophy

"Socialist Cultural Revolution in the European Countries of the People's
Democracies."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

Arnol'dov A.I.

AUTHOR: Arnol'dov, A.I., Candidate of Philosophical Sciences 25-58-4-1/41

TITLE: In the Name of Communism (Vo imya kommunizma)

PERIODICAL: Nauka i Zhizn', 1958, Nr 4, pp 1-3 (USSR)

ABSTRACT: This article states that the development of science, technology and culture in the Soviet Union is due to the Marxist-Leninist theories.

AVAILABLE: Library of Congress

Card 1/1 1. Science-Philosophy

ARNOL'DOV, M. N., NOMOFILOV, Ye. M., SUBBOTIN, V. I., IBRAGIMOV, M. K., and
IVANOVSKIY, M. N.

"Heat Emission and Turbulent Heat Transfer in a Flow of Liquid Metals."

Report submitted for the Conference on Heat and Mass Transfer,
Minsk, BSSR, June 1961.

SUBBOTIN, V.I.; IBRAGIMOV, M.Kh.; IVANOVSKIY, M.N.; ARNOL'DOV, M.N.;
NOMOFILOV, Ye.V.; ATENKOV, S., tekhn. red.

[Heat transfer and turbulent heat transport in a flow of liquid
metals; Conference on Heat and Mass Transfer, Minsk, January
23-27, 1961] Teplootdacha i turbulentnyi perenos tepla v potoke
zhidkikh metallov; soveshchanie po teplo-i massoobmenu, g. Minsk,
23-27 yanvaria 1961 g. Minsk, 1961. 18 p. (MIRA 15:2)
(Heat--Transmission) (Liquid metals)

29919

S/594/61/000/000/008/011
D234/D303

26.5000 (a kro 1498)

AUTHORS: Subbotin, V.I., Ibragimov, M.Kh., Ivanovskiy, M.N.,
Arnol'dov, M.N. and Nomofilov, Ye.V. (Moscow)

TITLE: Heat loss and turbulent heat transfer in streams of
liquid metals

SOURCE: Soveshchaniye po teplo- i massoobmenu. Minsk, 1961.
Tezisy dokladov i soobshcheniy (Dopolneniye), 39-41

TEXT: Coefficients of heat loss and turbulent heat trans-
fer were determined on the basis of measuring temperature fields in
streams of various alkaline and heavy liquid metals. The liquid
metals investigated have a sufficiently wide range of measurement
[Abstracter's note: "izmereniye" - probably a misprint of "izmen-
eniye" - change, variation] of the criterium $Pr = 0.005 \div 0.05$.
Several experiments with measurement of temperature fields were
made on water. Turbulent pulsations of temperatures in the stream
were found, whose magnitude was up to $\pm 20\%$ of the value of tempera-

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Heat loss and turbulent heat...

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ture stress. It was found that the amplitude and frequency of the pulsations depend on the magnitude of heat flow, physical properties, regime of flow of the liquid and dimensionless distance from the wall. Temperature pulsations of the liquid near the wall and of the wall itself indicate that the process of heat transfer through the layer of liquid at the wall and the surface of heat exchange is not rigorously stationary. The values of Nu obtained by processing the measurement data of temperature fields in streams of various liquid metals are in good agreement with one another and with the results of previous investigations. Coincidence of the experimental data with Lyon's formula ✓

$$\text{Nu} = 7 + 0.025 \text{Pe}^{0.8} \quad (1)$$

is observed in a sufficiently wide range of the number $\text{Pe} = 100 : 12,000$. However, this is not an indication of the unconditional correctness of Lyon's assumption that the ratio of the coefficients of turbulent heat transfer and quantity of motion $\epsilon = \epsilon_t / \epsilon_v$ does not vary across the section of the pipe and is equal to 1 for all

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Heat loss and turbulent heat...

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values of the number Pe. Data processing on temperature fields obtained showed that the above ratio varies with the radius of the pipe and depends on the criterium Re. The coefficient of turbulent heat transfer was determined from

$$\varepsilon_a = \frac{q/q_w}{\frac{\partial t}{\partial \xi}} \frac{r_0 q_w}{c_p \gamma} - a \quad (2)$$

The ratio of local heat flow and the flow at the wall was found from a relation obtained from the heat balance of an elementary volume of the liquid. In several experiments the coefficient of heat loss was determined by the same methods, in which the thermal contact resistance on the surface of heat exchange was taken into account. The experiments allowed the authors to make a sufficiently clear distinction between two processes which determine the heat transfer to liquid metals. The first process, connected with molecular and turbulent heat transfer, can be described by semi-empirical theories of heat exchange. Such heat transfer is described in

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Heat loss and turbulent heat...

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the first approximation by the Martinelli-Lyon theory. The second process, caused by thermal contact resistance on the surface of heat exchange, defies theoretical estimation at present. [Abstracter's note: Complete translation] ✓

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11. 3950
11. 9200

S/089/61/010/004/016/027
B102/B205

AUTHORS: Subbotin, V. I., Ibragimov, M. Kh., Ivanovskiy, M. N.,
Arnol'dov, M. N., Nomofilov, Ye. V.

TITLE: Turbulent heat transfer in a flow of liquid metals

PERIODICAL: Atomnaya energiya, v. 10, no. 4, 1961, 384-386

TEXT: The modern theory of turbulence does not permit an analytic determination of a turbulent heat transfer in a flow of liquid matter. As shown by the present study, the semi-empirical theory of heat transfer which makes use of the analogy of heat transfer and momentum transfer, makes it possible to perform such studies. This can be proved by measuring the temperature fields in liquid metals. On account of the high thermal conductivity of liquid metals, the temperature drop is not limited to a thin, laminated layer like in ordinary liquids but extends to the turbulent core. Martinelli was the first to apply the theory of hydrodynamical analogy to liquid metals, taking into account the molecular heat conductivity in the turbulent core of the flow. Calculations were based on the assumption that the ratio of the coefficients of turbulent heat transfer

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Turbulent heat...

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and of momentum transfer (ϵ_u/ϵ_v) were independent of the radius and the flow velocity. Lion has derived a general equation for the heat-transfer coefficient in a tube:

$$\frac{1}{Nu} = 2 \int_0^1 \frac{\left[\int_0^1 \frac{u}{w} \xi d\xi \right]^2}{\left(1 + \epsilon \frac{c_p}{\nu} Pr \right) \xi} d\xi \quad (1)$$

where $\xi = r/r_0$ and, using the results of Martinelli with $\epsilon = \epsilon_u/\epsilon_v = 1$, he obtained $Nu = 7 + 0.025 Pe^{0.8}$. Martinelli's and Lion's assumption that $\epsilon = 1$ has not yet been confirmed experimentally. Voskresenskiy, Deissler, Jenkins et al. have found experimentally that ϵ was much smaller than 1. On the basis of measurements of the temperature fields in flowing water and flowing liquid metals, the authors have made an attempt to determine the turbulent heat-transfer coefficient and ϵ for liquid metals, and to study the effect of the thermal conductivity of the metals on these quantities. The former quantity was calculated from the equation

$$\epsilon_a = \frac{q/q_0}{\gamma t/\beta \xi} \frac{r_0 q_0}{c_p \gamma} - a \quad (3).$$

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The ratio of the local heat flow to the heat flow on the wall was found from the equation

$$q/q_0 = \frac{1}{f} \frac{u^*}{w} \left[(4.25 + 2.5 \ln y^+) \xi^2 - 2.5f - 2.5(1 - \xi^2) \ln(r_0/y) \right].$$

The temperature gradients determined by graphical methods make it possible to calculate ϵ_a from Eq. (3). Fig. 1 shows the distribution of ϵ_a across the tube cross section. ϵ_a grows with increasing distance from the wall and with increasing Re number, wherefrom it follows that $\epsilon_a \neq 0$ in the center of the tube. The curves shown in Fig. 1 hold for a heavy metal. The $\epsilon_a(\xi)$ curves taken for alkali metals show a similar course, but the maximum is hardly marked at high Re numbers. Fig. 2 shows the experimental curves $\epsilon_a/\epsilon = f(\xi)$ (continuous lines) as compared with those calculated according to Lion (-----) and those obtained for heavy metal (A) and alkaline metal (B) according to Voskresenskiy (-----). A comparison between measured and theoretically determined temperature fields (Fig. 3) shows that the assumption $\epsilon = 1$ increases the influence of turbulent heat transfer at small Re numbers but reduces it at high Re numbers. According to the Re number, ϵ is thus higher or lower than 1.

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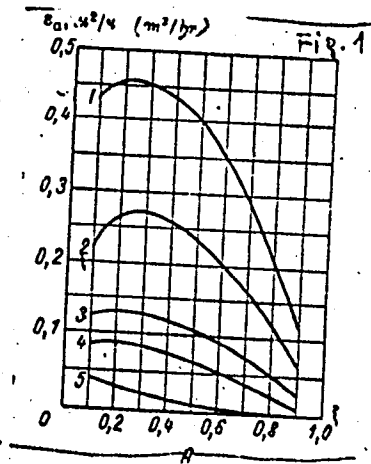
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Fig. 4 shows $\epsilon = f(Re)$ at $f = 0.8$ for water (e), alkaline metal (e), and heavy metal (o). There are 4 figures.

SUBMITTED: July 14, 1960



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215240

AUTHORS: Subbotin, V. I., Ibragimov, M. Kh., Ivanovskiy, M. N.,
Arnol'dov, M. N., Nomofilov, Ye. V.

TITLE: Heat transfer with a turbulent flow of liquid metals in tubes

PERIODICAL: Atomnaya energiya, v. 11, no. 2, 1961, 133-139

TEXT: This is a report on a study of heat transfer occurring with a turbulent flow of liquid alkali and heavy metals in tubes. In the range of $Pe = 10^2 - 10^4$, experimental data on heat transfer to liquid metals differ considerably; they may, on the whole, be grouped into two classes which are characterized by $Nu = 7 + 0.025 Pe^{0.5}$ (1) and $Nu = 3.3 + 0.014 Pe^{0.8}$ (2). The authors determined the heat-transfer coefficients by two methods: by measuring the temperature field in the flow of liquid metal, and by measuring the wall temperature and the mean temperature of the liquid metal. Fig. 1 shows the experimental setup traversed by the metal vertically (from bottom to top). The characteristics of the experimental setup are as follows: X

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Heat transfer with a turbulent ...

	Part 1	Part 2
tube material	steel 1X18H9T (1Kh18N9T)	steel 1Y18H9T (1Kh18N9T)
outer tube diameter	42 mm	34 mm
inner tube diameter	31.1 mm	29.3 mm
distance between tube inlet and thermocouple	1166 mm	985 mm
length of part with heat transfer	1194 mm	980 mm
distance between beginning of heated part and thermocouple	976 mm	945 mm

All thermocouples (chromel-alumel couples) that served to measure the temperature of the liquid metal at the inlet and outlet of the test tubes, were calibrated on a platinum - platinum rhodium thermocouple. The electric power was measured by astatic wattmeters of accuracy index 0.2 and 0.5. The flow rate of the metal was measured by magnetic and throttle flow meters. The alkali metals were continuously purified from oxides (oxygen content 0.02-0.005% by weight), not so the heavy metals (oxygen content Card 2/6

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B:02/B201

Heat transfer with a turbulent ...

$\sim 10^{-3}\%$ by weight). The temperature in the flow was measured with mobile thermocouples on 9-12 fixed points. Special small-size thermocouples served to measure the temperature fields; the results of these measurements were in good agreement with those calculated by Lyon's theory. The wall temperature was determined by extrapolation of the temperature profile for the wall. The mean temperature of the flowing liquid metal was calculated from the formula

$$\bar{t}_{liq} = \int_0^R U t_{liq} r dr / \int_0^R U r dr, \text{ where } U^+ = 5.5 + 2.5 \ln,$$

y^+ was taken as the velocity-distribution law; ($y = 0.25-0.4$ mm). The Nusselt numbers resulting from the measurement of the temperature fields are in good agreement both with one another and with the results of other authors. They are consistent with Lyon's formula (1) in the range $Pe = 100-12,000$. It is not, however, as assumed by Lyon, $\epsilon_a/\epsilon_v = 1$, constant over the tube cross section, and independent of Pe , but radically variable, and smaller than unity for small Pe , larger than unity for large Pe . The second method takes account of the thermal contact resistance on the heat-transfer surface. The results obtained by the two methods are in Card 3/6

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Heat transfer with a turbulent...

agreement for alkali metals, which is indicative of the fact that there is no thermal contact resistance in them under the given conditions (purification from oxides!). No agreement was found in the case of heavy metals, i.e., there is a thermal contact resistance at the interface between tube wall and liquid metal. As was shown by further studies, this contact resistance drops exponentially with a rise of Re. Yu. N. Pokrovskiy, Engineer, and A. P. Aleksandrov, laboratory assistant, helped to prepare the experimental setup and the small-size thermocouples. There are 6 figures, 1 table, and 12 references: 6 Soviet-bloc and 6 non-Soviet-bloc. The three most important references to English-language publications read as follows: R. Lyon, Chem. Engng. Progr. 47, 2, 75 (1951); H. Brown et al. Trans. ASME, 79, No. 2, 279 (1957); R. Martinelli. Trans. ASME, 69, No. 8, 947 (1947).

SUBMITTED: August 25, 1960

Card 4/6

L 18835-66 EWT(1)/EWT(m)/ECC(k)-2/ETC(f)/EWG(m)/T/EWP(t)/EWA(h) IJP(e)
ACC NR: AT6002505 JD/TT/WW/AT SOURCE CODE: UR/3158/65/000/022/0001/0006

AUTHOR: Subbotin, V. I.; Ivanovskiy, M. N.; Arnol'dov, N. N. 85
B+1

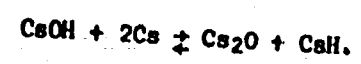
ORG: State Committee for the Utilization of Atomic Energy SSSR, Energy Physics
Institut (Gosudarstvennyy komitet po ispol'zovaniyu atomnoy energii SSSR, Fiziko-energeticheskiy institut)

TITLE: The form of impurities in cesium used in thermionic converters 25,44

SOURCE: Obninsk. Fiziko-energeticheskiy Institut. Doklady, no. 22, 1965. Sostoyaniye primesei v tsezii, ispol'zuyemom v termoionnom preobrazovatele, 1-6

TOPIC TAGS: thermal ionization, thermochemistry, cesium plasma, electrode, free energy

ABSTRACT: The effects of air on cesium impurity formation in thermionic converters were studied. The oxygen and hydrogen form Cs₂O, CsH and CsOH. The hydroxide dissociated according to the reaction



The equilibrium conditions for the above reactions and the dissociation of the

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oxide, hydride and hydroxide were thermochemically analyzed. Comparisons were made between the equilibrium constants, the partial pressures for dissociation and the free energies of the chemical reactions occurring in the thermionic converter which result in impurity formation. At 300°C the partial pressure of H₂ and O₂ for dissociation of hydride and oxide compounds of cesium varied considerably: 400 mm Hg for H₂ as against 10⁻⁶⁰ for O₂. The products of the dissociation of cesium hydroxide and oxide were shown to result in water vapor formation on the surface of the cesium. By combining the equilibrium constant it was shown that the partial pressure of the water vapor was extremely low ($P_{H_2} / P_{H_2O} = 10^{+12}$). The equilibrium con-

ditions for impurity formation in cesium vapor, found between the electrodes of the converter, depend on the temperature and the materials from which the converter is made. In the hottest portions of the converter molybdenum is used; at temperatures of about 1500 to 2000°C, stainless steel is used for the cooler regions at temperatures of 500 to 1000°C. The equilibrium state impurities in the cesium reservoir was considered under these conditions. Data on oxygen partial pressures for various oxides of the construction materials and Cs₂O as a function of temperature (from 300 to 2000°C) are given. In the cesium reservoir (300°C) almost all of the oxide is in the form of Cs₂O, independent of the electrode composition. At higher

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temperatures in the zone of the Mo electrode, MoO_3 forms easily, decomposing to the volatile MoO_3 . The MoO_3 then combines with the material at the "cold electrode" to form the oxide of that material. A graph of change in isobaric-isothermal potential of MoO_3 reacting with Ni, Fe, Cr, Nb and Ti as a function of temperature is given. Orig. art. has: 1 figure, 2 tables, 5 formulas.

SUB CODE: 07,10 /

SUBM DATE: none

OTH REF: 003

Card 3/3

vmb

ACC NR: AF7002170

SOURCE CODE: UR/0089/66/021/006/0511/0512

AUTHOR: Subbotin, V. I.; Ivanovskiy, M. N.; Arnol'dov, M. N.; Shmatko, B. A.; Pleshiv-tsev, A. D.

ORG: none

TITLE: Control of the content of oxygen and hydrogen impurities in molten sodium by measuring the electric resistance

SOURCE: Atomnaya energiya, v. 21, no. 6, 1966, 511-512

TOPIC TAGS: liquid metal, resistivity, hydrogen, oxygen, gas analysis

ABSTRACT: In view of the conflicting data in the literature concerning the dependence of the electric resistance of liquid sodium on its oxygen content, the authors measured with a dc double bridge the resistivity of sodium at 350C as a function of the oxygen and hydrogen concentrations. The hydrogen and the oxygen were introduced into the circulating liquid sodium in gaseous form. The amount of introduced gas was determined by measuring its pressure in a vessel of known volume kept at a given temperature. The chemical compositions of the sodium, oxygen, and hydrogen employed are given. The results show that oxygen does not change the resistance of liquid sodium, accurate to 5×10^{-8} ohm, but the resistivity does change linearly with increasing hydrogen concentration. Consequently, by measuring the electric resistivity of liquid sodium it is possible to monitor the hydrogen content with accuracy $3 \times 10^{-5}\%$ by weight, but the oxygen content cannot be monitored. Orig. art. has: 1 figure and 1 table.

SUB CODE: 20/07/ SUBM DATE: 23Jun66/ ORIG REF: 001/ OTH REF: 003

Card 1/1

UDC: 621.039.534.6

ARNOL'DOV, V.V.

WEISSBERGER, Arnold, redaktor; VASIL'YEV, V.G., redaktor; ARNOL'DOV, V.V.,
redaktor; SHAPOVALOV, V.I., tekhnicheskiy redaktor.

[Physical methods of organic chemistry. Translated from the English]
Fizicheskie metody organicheskoi khimii. Perevod s angliiskogo pod
obshchei red. V.G. Vasil'eva. Moskva, Izd-vo inostrannoi lit-ry.
Vol. 3. 1954. 216 p. (MIRA 8:4)
(Electric moments) (Mass spectrometry) (Radiochemistry)

SERBORG, Glenn T.; KATZ Joseph J.; GAGARINSKIY, Yu.V. [translator]; TSENTER, E.M., [translator]; NIKOLAYEV, A.V., professor, doktor khimicheskikh nauk, redakter; ARNOL'DOV, V.V., redakter; CHAPOVALOV, V.I., tekhnicheskii redakter.

[Actinide elements. Translated from the English] Aktinidy. Perevod s angliiskogo I.U.V.Gagarinskego i E.M.TSentera. Pod red. A.V. Nikolaeva. Moskva, Izd-vo inostrannei lit-ry, 1955. 701 p. (MLRA 9:4)
(Radioactive substances)

VARSHAVSKIY, Ya.M., doktor khim.nauk, red.; GEL'BSHTEYN, A.I., kand.
khim.nauk [translator]; SHUB, D.M., kand.khim.nauk [translator];
SHEGLOV, O.F., kand.khim.nauk [translator]; ARNOL'DOV, V.V., red.;
IOVLEVA, N.A., tekhn.red.

[Catalytic, photochemical, and electrolytic reactions] Katali-
ticheskie, fotokhimicheskie i elektroliticheskie reaktsii. Moskva,
Izd-vo inostr.lit-ry, 1960. 436 p. Translated from the English.

(MIRA 13:11)

(Chemical reactions)

PETRUKHIN, O.M.[translator]; RODIN, S.S.[translator]; ZOLOTOV, Yu.A.,
kand. khim. nauk, red.; AMOL'DOV, V.V., red.; GRIBOVA, M.P.,
tekhn. red.

[Extraction in analytical chemistry and radiochemistry] Ek-
straktsiia v analiticheskoi khimii i radiokhimi. Moskva,
Izd-vo inostr. lit-ry, 1961. 350 p. (MIRA 15:4)

Translated articles.

(Extraction (Chemistry)) (Radiochemistry)

PHASE I BOOK EXPLOITATION

SOV/4870

~~Arnol'dov, Ye. M.,~~ T.T. Honta, V.V. Kalechyts', O.I. Mikhnenko, Ya. M. Meytin,
O.M. Murzin, D.M. Savych, V.D. Tomashchuk, A.M. Shvans'kyy

Khimichna promyslovist' Ukrayiny (Chemical Industry of the Ukraine) [Kyyiv,
Derzh. vyd-vo tekhn. lit-ry URSR] 1960. 128 p. 2,000 copies printed.
(Series: Do dekadny ukrayins'koyi literatury ta mystetstva v Moskvi)

Ed.: A.I. Rukavysnykov; Ed. (Inside Book): L. Raytburd; Tech. Ed.: L. Horkavenko.

PURPOSE: This book is intended for the general reader interested in the development of the chemical industry of the Ukraine.

COVERAGE: The authors discuss the recent development of several important branches of the Ukrainian chemical industry. The text is illustrated with many photographs of equipment and installations. no personalities are mentioned. There are no references.

Card-1/3

Name: ARNOL'DOVA, A. M.

Dissertation: The effect of psychoprophylactic training for childbirth on the course of the act of childbirth in general and the first period in particular

Degree: Cand Med Sci

Defended at
Affiliation: Astrakhan' State Medical Inst

Publication
Defense Date, Place: 1956, Frunze

Source: Knizhnaya Letopis', No 45, 1956

AENOL'DOVA, A.M., assistant

Effect of psychoprophylactic preparation on the entire course of labor and its first stage in particular [with summary in English].
Akush. i gin. 33 no.6:30-33 N-D '57. (MIRA 11:3)

1. Iz kafedry akusherstva i ginekologii (zav.-prof. M.A.Romanov)
Astrakhanskogo meditsinskogo instituta.

(LABOR

painless, psychoprophylactic prep., eff. on first stage)

ARNOL'DOVA, A. M.: Master Med Sci (diss) -- "The effect of psychoprophylactic preparation for birth on the course of childbirth, and the first period in particular". Frunze, 1958. 10 pp (Kirgiz State Med Inst), 200 copies (KL, No 15, 1959, 119)

ARNOL'DOVA, A.M.

Early diagnosis of fetal asphyxia. Vop. okhr. mat. i det. 6
no. 1:48-51 Ja '61. (MIRA 14:4)

1. Iz kafedry akusherstva i ginekologii (zav. - prof. M.A. Romanov)
Astrakhanskogo meditsinskogo instituta.
(ASPHYXIA NEONATORUM)

ARNOL'DOVA, A.M.; MALYANOVA, N.A.

Work practices at maternal health centers for the prevention
of gynecological diseases. Vop.okh.mat. i det. 7 No.12:
66-68 D'62. (MIRA 16:7)

(GYNECOLOGY)

ARNOLDOVA K.S.

KOLPIKOV, M.V.; NESTEROV, V.G., professor, retsentsent; RUDNITSKIY, I.N.,
retsentsent; TIMOFEYEV, V.P., redaktor; ARNOL'DOVA, K.S., redaktor;
KARASIK, N.P., tekhnicheskii redaktor

[Forestry and dendrology] Lesovodstvo s dendrologiei. Izd. 3.,
dop. i perer. Moskva, Goslesbumizdat, 1954. 495 p. (MLRA 7:10)
(Trees) (Forests and forestry)

АННОУА ДОВА К. С.

VANIN, Stepan Ivanovich, professor, 1890-1951; SOKOLOVA, D.V., redaktor;
DRONZHEVSKIY, V.M., redaktor; ARNOL'DOVA, K.S., redaktor; ANKUDI-
NOV, A.M., retsenzent; VORONTSOV, A.I., retsenzent; KARASIK, H.P.,
tekhnicheskly redaktor.

[Forest phytopathology] Lesnaia fitopatologiya. Izd. 4-e, posmertnoe
(perer. i dop.). Pod obshchey red. D.V. Sokolova. Moskva, Goslesbum-
izdat, 1955. 416 p. (MIRA 8:4)
(Botany--Pathology)

HRNOU DOVA, K.S.

KOLOSOVA, Anna Yevmen'yevna, starshiy nauchnyy sotrudnik; BELYAYEV, Nikolay Iosifovich, inzhener lesnogo khozyaystva; DANICHEV, Mikhail Prokof'yevich, inzhener lesnogo khozyaystva; BARANOV, N.I., redaktor; ARNOL'DOVA, K.S., redaktor izdatel'stva; KARASIK, N.P., tekhnicheskiy redaktor

[Use of enlarged small scale aerial photographs in forest mensuration work] Ispol'zovanie uvelichennykh melkomasshtabnykh aerofotosnykh pri lesouchetnykh rabotakh. Moskva, Goslesbumizdat, 1956. 56 p. (MIRA 9:12)

1. Tsentral'nyy nauchno-issledovatel'skiy institut lesnogo khozyaystva (for Kolosova)
 2. Leningradskiy otryad lesnoy aerofotosnyaki (for Belyayev, Danichev)
- (Photography, Aerial) (Forests and forestry--Mensuration)

YEPIFANOV, Boris Yefimovich, kandidat tekhnicheskoy nauk; SMIRENNIKOV,
Pavel Stepanovich, inzhener; ORMSHKIN, B.S., redaktor; ARNOL'DOVA,
K.S., redaktor izdatel'stva; SHITS, V.P., tekhnicheskoy redaktor;

[Operation and repair of railroads for transportation of lumber]
Ekspluatatsiya i remont lesovoznykh zheleznykh dorog. Moskva,
Goslesbumizdat, 1956. 207 p. (MLRA 10:5)
(Lumber--Transportation) (Railroads)

GULISASHVILI, Vasilii Zakharovich, professor; KAPPER, O.G., doktor sel'skokhozyaystvennykh nauk, retsenzent; GORSHENIN, N.M., doktor sel'skokhozyaystvennykh nauk, professor, retsenzent; YURRE, N.A., redaktor; ARNOL'DOVA, K.S., redaktor izdatel'stva; KARASIK, N.P., tekhnicheskii redaktor

[Mountain forestry in the Caucasus] Gornoe lesovodstvo dlia uslovii Kavkaza. Moskva, Goslesbumizdat, 1956. 353 p. (MLRA 10:4)

1. Deystvitel'nyy chlen Akademii nauk Gruzinskoy SSR (for Gulisashvili)

(Caucasus--Forests and forestry)

BIRGER, G.Ye.[deceased]; IVANOVA, Ye.P.; NOVIKOVA, A.V.; ARNOL'DOVA, Ye.N.;
LITVINOVA, N.I.; ZOLKINA, N.S.

Use economically the raw materials in the production of viscose
fibers. Khim.volok.no.5:65-68 '64. (MIRA 17:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo
volokna.

ARONE, R.G.; KANFOVA, K.G.

Cold brittleness of steel in plain specimens under stress.
Zav. lab. 31 no.1:103-107 '65. (MIRA 18:3)

1. Tsentral'nyy nauchno-issledovatel'skiy institut stroitel'nykh konstruktsiy.

ARONE, R.G.

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Starting gas-fired cupola furnaces. Id. proizv. no.9:12-
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SHKUROPIY, P.L.; ARNOPOLIN, A.G.

Replacing foundry coke with natural gas. Mashinostroitel' no.9:38
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RIBAS, Yuriy Mikhaylovich [deceased]; AKKERMAN, Fridrikh Markovich;
PYATETSKIY, Grigoriy Yuzefovich; ARNOFOLIN, Aleksandr
Grigor'yevich; STESHENKO, N.N., red.

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gas, and chemical industries] Vzyvozashchishchannoe
elektrooborudovanie dlia neftianoi, gazovoi i khimiche-
skoi promyshlennosti; spravochnik-katalcv. Moskva, Nedra,
1964. 158 p. (MIRA 18:1)

BUDYLIN, M.M.; ARNOPOLIN, Ye.N.

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ARNOŠT, F.

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hutního průmyslu a rudných dolů) Praha. Vol. 4, no. 5, May 1956.

SOURCE: East European Accessions List, Vol. 5, no. 9, September 1956

ARNOST K.
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M-2

Abs Jour : Ref Zhur - Biol., No 3, 1958, 10742

Author : Arnost, R., Volprecht, J.

Inst

Title : Producing Hybrid Corn Seed in the YeSKhK /JZD in Czech/

Orig Pub : Socialist. zemed., 1956, 6, No 10, 584-587.

Abstract : No abstract.

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Survey of Western industrial establishment. p.327.

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Uncl.

CSINADY, Jenó.; ARNOTI, Tibor.; MALOMSOKI, Jenó.

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Kiserletes orvostud 7 no.4:397-403 July 55.

1. Országos Testnevelési és Sportegészségügyi Intézet Kutatólaboratóriuma.

(NERVOUS SYSTEM, physiology,
in ping-pong players)
(ATHLETICS, physiology,
ping-pong players nervous system)

ARNOTT, D.G.

Nuclear energy and cold war. Mir nauki : no.3/4:23-30 '60.
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1. Predsedatel'komissi' atomykh nauk; Assotsiatsiya nauchnykh
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87 items.

So: U-3261, 10 April 53, (Letopis 'Zhurnal 'nykh Statey, No. 12, 1949).

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"APPROVED FOR RELEASE: 06/05/2000

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APPROVED FOR RELEASE: 06/05/2000

CIA-RDP86-00513R000102120010-4"

...mission to ... does not materially change the
distribution but ...

S/081/62/000/014/011/039
B166/B144

AUTHORS: Ionsen, V. A., Arnover, K. R.

TITLE: Modernization of the MKC-12 (IKS-12) spectrograph by the use of a semiconductor pickup

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 14, 1962, 340, abstract 14I153 (Sb. "Goryuchiye slantsy. Khimiya i tekhnol.". no. 4. Tallin, 1961, 257 - 261)

TEXT: In order to reduce the spectrograph's sensitivity to mechanical interference and to make the task of tuning it less laborious the ~~φ200~~ -18 (FE0U-18) photomultiplier has been replaced as the pickup by a semiconductor bolometer, the low thermal inertia of which has made it possible to use modulated radiation with a modulation frequency of 9 cps. The output voltage of the bolometer is amplified by a selective, six-stage, negative-feedback, voltage amplifier tuned to a frequency of 9 cps. The amplified signal is detected and passes through a divider to the input of an ~~ЭПС-150~~ (EPS-158) recording potentiometer with a sensitivity of 10 mv. Two spectro-
Card 1/2 ✓

Modernization of the ...

S/081/62/000/014/011/039
B166/B144

graphs have already been put into operation with positive results. The circuit is given and the electronic amplifier described. [Abstracter's note: Complete translation.]



Card 2/2

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ARNOVLJEVIC, IVAN V.

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studenta tehlike, 1947-49. 6 vols.

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1. Institut za patolosku fiziologiju SAN; primljeno na VII skupu
Odeljenja medicinskih nauka 14.V.1953.

(BODY TEMPERATURE

*hypothermia, exper., eff. on radiophosphorus distribution
in rats)

(PHOSPHORUS, radioactive

*distribution in various organs, eff. of exper. hypothermia
in rats)

ARNOVLJEVIC, V.

MARINKOVIC, V.; ARNOVLJEVIC, V.; SAHOVIC, K.

Changes of radiophosphorus content in rat organs during hyperthermia and hypothermia. Glas Srpske akad. nauka, odelj. med. no.8:57-62 1953.

1. Institut za patolosku fiziologiju SAN; primljeno na VII skupu Odeljenja medicinskih nauka 14.V.1953 g.

(BODY TEMPERATURE

*hyperthermia & hypothermia, exper., eff. on radiophosphorus distribution in rat)

(PHOSPHORUS, radioactive

*distribution in various organs, eff. of exper. hyperthermia & hypothermia in rats)

ARNOVLJEVIC, V.; SAHOVIC, K.; MARINKOVIC, V.; ANAF, M.

Effect of hypophysectomy and adrenalectomy on distribution of radiophosphorus in rat organs. Glas Srpske akad. nauka, odelj. med. no.8: 77-81 1953

1. Institut za patolosku fiziologiju SAN; primljeno na IX skupu Odeljenja medicinskih nauka 25.VI.1953 g.

(PHOSPHORUS, radioactive.

*distribution in various organs, eff. of hypophysectomy & adrenalectomy in rats)

(PITUITARY GLAND, eff. of excis.

*on radiophosphorus distribution in various organs in rats)

(ADRENAL GLANDS, eff. of excis.

*on radiophosphorus distribution in various organs in rats)

ARNOVLJEVIC, V.; SAHOVIC, K.; STANKOVIC, D.; ANAF, M.

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1. Priljeno na XIV skupu Odelj. med. nauka od 30 IX 1952 god.
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distribution in adrenalectomized & hypophysectomized rats)
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on radiophosphorus distribution in rats)
(ADRENAL GLANDS, eff. of excis.
on radiophosphorus distribution in rats)

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Inhibiting effect of adrenalectomy on alloxan hyperglycemia. Bull.
Acad. serbe sc., classe med. 11 no.2:35-36 1954.
(DIABETES MELLITUS, experimental,
eff. of adrenalectomy)
(ADRENAL GLANDS, effect of excision,
on alloxan diabetes)

ARNOVLJEVITCH, V.; CHAHOVITCH, X.; ANAF, M.; MILOSAVLJEVITCH, V.

Effect of adrenal grafts in the anterior chamber of the eye on
alloxan hyperglycemia in rats. Bull. Acad. serbe sc., classe med. 11
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eff. on alloxan diabetes of adrenal implants in eye in
rats)

(DIABETES MELLITUS, experimental,
eff. of adrenal implants in eye in rats)

(EYE, physiology,
eff. of adrenal implants on alloxan diabetes in rats)

ARNOVLJEVITCH, V.; CHAHOVITCH, I.; MILOSAVLEJEVITCH, V.

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eff. of hypothermia)

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hypothermia, eff. on alloxan diabetes)

ARNOVLJEVICH, V

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Pathophysiology and clinical aspects of chronic heart insufficiency.
Med.pregl., Novi Sad 8 no.1:1-9 '55.

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clin.aspects & pathophysiol (Ser))

ARNOVLJEVIC, Vojislav, Prof., dr.

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cardio-vasc. dis., pathogen., clin. aspects & ther.
(Ser))

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arteriosclerosis, pathogen., clin. aspects & ther.
(Ser))

(BLOOD VESSELS, dis.
compl. arteriosclerosis, pathogen., clin. aspects
& ther. (Ser))

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353-357 Oct 55.

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clin. aspects & ther. (Ser))

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Blood potassium in hypothyroidism in rats. Glas.Srpske akad.
nauka, odelj.med. 215 no.9:1-4 1955.

(HYPOTHYROIDISM, experimental,
blood potassium in)

(BLOOD,

potassium in exper.hypothyroidism)

(POTASSIUM, in blood,

in exper.hypothyroidism)

SAHOVIC, K; ARNOVLJEVIC, V; MARINKOVIC, V; MIJUTINOVIC, P.

Distribution of radioactive iodine and phosphorus in the organism
in rats in experimental tumors produced with benzopyrene. Glas.
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Sciences.

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metab. in exper.cancer)

(PHOSPHORUS, radioactive,
metab. in exper.cancer)

(NEOPLASMS, experimental,
radioiodine & radiophosphorus metab. in)

SAHOVIC, K; ARNOVLJEVIC, V; MARINKOVIC, V; ANAF, M; MILUTINOVIC, P.

Studies on functional value of grafting of the adrenals into the eye in rats; effect of grafting on distribution of radioactive phosphorus and iodine in the organism of adrenalectomized rats. Glas. Srpske akad. nauka, odelj. med. 215 no. 9: 93-100 1955.

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intra-ocular grafts, eff. on radioiodine & radio-
phosphorus metab. in rats)

(PHOSPHORUS, radioactive,
metab., eff. of intra-ocular adrenal grafts in rats)

(IODINE, radioactive,
metab. eff. of intra-ocular adrenal grafts in rats)

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eff. of adrenal grafts in anterior chamber on radio
iodine & radiophosphorus metab.)

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(PHOSPHORUS, radioactive,
metab., eff. of exper. fever & hypothermia (Fr))

(FEVER, experimental,
eff. on radiophosphorus metab. (Fr))

(BODY TEMPERATURE,
hypothermia, exper., eff. on radiophosphorus metab. (Fr))

ARNOVLJEVIC, V.; SAHOVIC, K.; MILUTINOVIC, P.

Studies on extrahepatic action of alloxan; modifications and distribution of concentration of radioactive iodine in rats in alloxan diabetes. Glas Srpske akad. nauka. odelj. med. 217 no.10:25-28 1956.

1. Institut za medicinska instrazivnja SAN. Odeljenje za kliniku i eksperimentalnu patologiju.

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radioiodine metab. in alloxan diabetes in rats (Ser))

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metab. in alloxan diabetes in rats (Ser))

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18-24, 1960. Glas SANU 12 no.2:262 '60 [publ.'62].

1. Srpska akademija nauka i umetnosti, Beograd.

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Modification of the initial part of the ventricular complex
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temperatures. Glas. Srpske akad. nauka, odelj. med. 248
no.16:19-26 '61.

(HYPOTHERMIA INDUCED)
(ELECTROCARDIOGRAPHY)

YUGOSLAVIA

Prof Dr V. ARNOVLJEVIC [Affiliation not given.]

"Editorial - Nuclear Medicine."

Belgrade, Medicinski Glasnik, Vol 17, No 3-4, Mar-Apr 63; pp 97.

Abstract : Brief discussion of the radioisotopes used in biomedical research and medical practice in Yugoslavia since 1951 with discussion of the specialized meetings including the third one held in Feb 62 in Zagreb; some of the papers presented at that one are in this issue.

1/1

1/1

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Electrocardiographic changes in anaphylactic reactions and under the influence of chemical mediators. Contribution to the study of the pathogenesis of anaphylactic reaction. Glas. Srpska akad. nauk [Med.] 17 no.257:235-244 '64.

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Early diagnosis of myocardial infarct. Med. glas. 19 no.1:
1-3 Ja '65.

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VIDOVIC, V.L., dr.; ARNC VLJEVIC-BRANKOVIC, J., dr.

Influence of the superficial hypothermia on the maternal
behavior of the female of white rats. Glas SANU 12
no.2:224 '60 [publ.'62].

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retsenzent; ARNSHTEYN, G.E., redaktor; YEPISHKIRA, A.V.,
redaktor; KOLESHNIKOVA, A.P., tekhnicheskii redaktor.

[Transporting lumber by water] Vodnyi transport lesa. Moskva,
Goslesbunizdat, 1955. 331p. (MLRA 8:11)
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KOLLONTAY, M.V. [translator]; ARMSHTAYN, G.M., redaktor; GORYUNOVA, L.K.,
redaktor izdatel'stva; SHITS, V.P., tekhnicheskiy redaktor

[Timber floating in the Scandinavian countries; a collection of
translations from the Swedish] Lesosplav v Skandinavskikh stranakh;
sbornik perevodnykh statei. Perevod so shvedskogo M.V.Kollontai.
Moskva, Goslesbumizdat, 1956. 63 p. (MIRA 10:3)
(Lumber--Transportation)

BORISOV, Ivan Gavrilovich, dotsent; VIDONOV, Mikhail Georgiyevich, dotsent;
MASLYAKOV, V.H., retsenzent; ARNSHTAYN, G.M., retsenzent; KHAKHIN,
H.A., redaktor; LOBANOV, Ye.M., redaktor izdatel'stva; KUZ'MIN, G.M.,
tekhnicheskii redaktor

[Control of towed rafts] Upravlieniye buksiruemogo plota. Moskva,
Izd-vo "Rechnoi transport," 1957. 144 p. (MLRA 10:9)
(Towing)

SOMOV, N.I.[translator]; NIKOLAYEV, L.N.[translator]; ARNSHTEYN, G.E.,
kand. tekhn. nauk, otv. red.; MERZHANOVA, O.M., red. izd-va;
PARAKHINA, N.L., tekhn. red.

[Lumber floating in foreign countries; collected surveys and
translations] Splav lesa v zarubeshnykh stranakh; sbornik ob-
zorov i peredovykh statei. Obzory i otv. red. G.E.Arnsteina.
Moskva, Goslesbumizdat, 1960. 64 p. (MIRA 14:5)
(Lumber—Transportation)

MASLYAKOV, Vasilij Nikolayevich; ARNSHTKYN, G.E., retsenzent; SHIRINKIN, A.D., retsenzent; SHARAPOV, V.N., red.; YEREMEYEV, P.G., red.; FEDYAYEVA, N.A., red. izd-va; RIDNAYA, I.V., tekhn. red.

[Raft towing] Buksirovka plotov. Moakva, Izd-vo "Rechnoi transport," 1962. 185 p. (MIRA 15:12)
(Towing) (Rafts)

ARNSHTEYN, N. M.

Literatura ob ispol'zovanii otkhodov lesozagotovok, lesopilenia i derevoobrabotki [Liter-
ature on the use of the waste products of lumbering, sawing, and wood working]. Russkaia
literatura za 1933-1951. Moskva, Goslesbumizdat, 1952. 31 p.

SO: Monthly List of Russian Accessions, Vol 6 No 6 September 1953

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New books. Der.prom. 4 no.2:32 F '55.
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HRNSHTEYN Ye A.

AROBELIDZE, A. K., Cand of Tech Sci -- (diss) "Certain peculiarities of deposits and the technology of porous chrome plating." Tbilisi, 1957, 16 pp, (Georgian Polytechnical Institute im S. M. Kirov), 100 copies (KL, 30-57, 110)

A. K. AROBELIDZE

137-58-3-5649

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 166 (USSR)

AUTHOR: Arobelidze, A. K.

TITLE: Some Peculiarities of Electrolytic Precipitates and of Porous Chrome-plating Technology (Nekotoryye osobennosti osadkov i tekhnologii poristogo khromirovaniya)

PERIODICAL: Tr. Gruz. politekhn. in-t, 1957, Nr 3(51), pp 11-20

ABSTRACT: A method of double chrome-plating is examined. The first, basic coating (approximately 100μ) is obtained at a temperature of $70-75^{\circ}\text{C}$ and a current density D_k of $80-150 \text{ a/dm}^2$ from an electrolyte having a composition of 250 g/liter of CrO_3 and 2.5 g/liter of H_2SO_4 . This ensures a relatively rapid growth of a hard Cr layer devoid of a network of fissures. The second layer, 20μ thick, is applied in the same electrolyte at a temperature of 50° and a D_k of $40-50 \text{ a/dm}^2$. A fine network of fissures is obtained in the process. Finally, the anodic treatment of the Cr coating is performed in an identical electrolyte, the intensity of etching, for a coating 0.1 mm thick, varying between 300 a/min and 600 a/min . A method was developed, as a result of a series of experiments along these lines, which made it possible to

Card 1/2

137-58-3-5649

Some Peculiarities of Electrolytic Precipitates . . . (cont.)

obtain Cr coatings with a fine network of fissures penetrating the entire depth of the coating. In the course of anodic treatment of the coating, the products of corrosion of the upper, porous layer penetrated into the lower layer through the channels provided by the fissures. Being greater than the tensile strength of the Cr coating, the internal stresses produced in the process brought about a cracking of the coating and rendered it porous throughout its entire depth. The two-layer method proposed for porous chrome plating ensures the production of Cr coatings which are characterized by wear resistance and porosity. See also RZhMet, 1958, Nr 1, 1479 D.

A. L.

Card 2/2

AROBLIDZE, Aleksandr Konstantinovich; SHOBIK, L.Ye., inzh., ved.
red.; SHREYDER, A.V., kand. tekhn. nauk, red.; SOROKINA,
T.M., tekhn. red.

[Improved technology of porous chromium plating] Usovershen-
stvovanie tekhnologii poristogo khromirovaniia. Moskva, Filial
Vses.in-ta nauchn. i tekhn. informatsii, 1958. 19 p. (Peredovoi
nauchno-tekhnicheskii i i proizvodstvennyi opyt. Tema 13.
No.M-58-244/24) (MIRA 16:2)

(Chromium plating)

AROBELIDZE, A.K.

Preparing a complex sinter from Dashkesan iron ores. Trudy
GPI [Gruz.] no.4:113-120 '62 (MIRA 17:8)