Experience of Reconstruction of the Governing of Turbine Type VK-100-2

process as a whole should be considered satisfactory. By comparing again Fig 5 and 8 it is concluded that the differentiator time was too small in this latter case and that it should have been of the order of 1.0 to 1.5 sec. Governor performance curves for a turbine of 100 MW, when full load is dropped, constructed by a semi-graphical method are given in Fig 9. The various assumptions made are explained and it is shown that the shape of the curves is very close to the experimental ones. It is again shown that the best operating time of the differentiator is about 1.5 sec. It is concluded that this system of governing, which is of high sensitivity and has a differentiating link,

SOV/96-59-2-2/18

Experience of Reconstruction of the Governing of Turbine Type VK-100-2

can easily be adjusted to give the required dynamic properties. There are 9 figures and 5 Soviet references.

ASSOCIATION: Moskovskiy Energeticheskiy Institut (Moscow Power Institute)

Card 6/6

SOV/96-59-6-1/22

AUTHOR: Shcheglyayev, A.V. (Corresponding Member of the Ac.Sc. USSR)

TITLE: Some Problems in Raising the Efficiency of Steam Turbines (Nekotoryye zadachi povysheniya ekonomichnosti parovykh turbin)

PERIODICAL: Teploenergetika, 1959, Nr 6, pp 3-8 (USSR)

ABSTRACT: There are two main ways of increasing the efficiency of turbine sets; either by using an improved thermal cycle with higher steam conditions, reheat and so on, or by increasing the efficiency of the actual turbine and auxiliaries. The increased efficiency of condensing steam-turbine sets that has resulted from improvements in the thermodynamic cycle and increases in the output will be seen from Table 1: it gives the specific heat consumption and efficiency for a number of large steam turbines. The actual gain in efficiency will be somewhat lower than the tabulated values because of the higher power consumption of feed pumps at the higher pressures. The efficiency of turbine stages largely depends on the volumetric steam flow, which may be quite small in the high-pressure stages. It is therefore advisable to increase the turbine output when increasing the stop-

Card 1/7

Some Problems in Raising the Efficiency of Steam Turbines

valve steam pressure. As a rough general rule, the output of a condensing turbine expressed in megawatts at 3000 r.p.m. should be equal to or higher than the stop-valve pressure measured in atmospheres. The selection of regulating stages is then discussed. Single-row regulating stages are to be preferred for large condensing turbines and also for condensing turbines operating at temperatures of 600 °C and above with reheat. Variations in the efficiency of regulating stages when the steam supply is partially cut off are discussed: efficiency data for single- and two-row regulating stages operating under different conditions are given in Table 2. The data relate to a stage 600 mm diameter with a nozzle height of 25 mm. In the development of regulating stages most attention has been paid to reducing the losses in the flow path, and efficiencies of 0.75 to 0.8 can be achieved at full steam flow in a two-row regulating stage. Much, however, can still be done to reduce the losses when running with partial steam supply. It has recently been shown that the end losses in turbine blades may be still further reduced. This is important for regulating stages

and for the intermediate stages of high-pressure cylinders with small blade heights. The improvement is expected to result from making the nozzles or guide blades with channels that decrease in width towards the perimeter, which is termed meridional profiling. By these means the end losses are reduced and the stages have practically constant reaction over the radius, which reduces leakage losses. The importance of these effects will be realised from the data given in Table 3. The efficiency of active turbine blades of small height may be increased by special profiling of the inter-blade channels. In blading in which the relative height is small and end losses are very important, secondary flow can be reduced to a minimum by making the inter-blade channels first expand and then contract. In such channels the velocity decreases where the curvature is greatest, and the cross-gradient, the pressure and intensity of secondary flows are all reduced. The available test data in support of these contentions have all been obtained under static conditions and should be confirmed by tests on experimental turbines. Leakage losses are particularly

important in high-pressure stages, not only at the glands but also at lines of contact between different parts. Leakage is often caused by thermal deformation of the turbine casing, especially during heating up and starting. It is particularly important to design the high-pressure casing in such a way that deformation is strictly symmetrical both during heating up and running and so that bending is reduced to a minimum. Only in this way can the necessary clearances be maintained. Difficulties are experienced with the mechanical strength and efficiency of low-pressure stages. The design of low-pressure stages is discussed and it is stated that, if the discharge velocity loss is restricted to 8 kcal/kg, then the flow through a single exhaust is that which corresponds to a turbine output of 100 MW. If the output is greater than 100 MW it is necessary either to increase the number of exhausts or to permit higher discharge velocity loss. It may be possible to increase the output of a single-flow turbine and to reduce the exhaust losses by using light metal such as titanium or synthetic materials having low specific gravity but

Some Problems in Raising the Efficiency of Steam Turbines

satisfactory mechanical and fatigue properties. Soviet turbine works are investigating this subject. It is, of course, difficult to make a low-pressure stage efficient because the degree of reaction and wetness of the steam are very different at the blade tips and roots. However, the main reason why the efficiency is not higher is that hardly any experimental work has been done on these stages. The investigations are difficult because they must be made with steam and not air, and modelling is complicated by the blades and the discs of the model stage being subject to the same stresses as in a full-scale turbine. Not enough is yet known about the thermo-dynamic and aero-dynamic properties of saturated and wet steam. Moreover, procedures for testing the stages operating on wet steam are not fully worked out. Local values of steam wetness cannot yet be measured. Recently, attention has been paid to the exhaust casings of turbines, which may be so designed as partially to restore the pressure beyond this last stage. It was found by tests on models that the use of an axial or diagonal diffuser in the exhaust pipe combined with a

Some Problems in Raising the Efficiency of Steam Turbines

system of ribs could convert 10 - 20% of the exhaust kinetic energy into potential energy. Further improvements in this direction are to be expected. There are indications that live steam governor valves have high losses, which may be reduced by suitable arrangement of the flow in the valve chest and by improving the shape of the valve and diffuser. Improvements are required in the rotating diaphragms used on turbines with controlled pass-outs. Little is known about the properties of these devices. Available knowledge on turbine blading should be presented in a form suitable for use in the factory. Theoretical design methods should be more widely applied in the laboratories and this will be facilitated by the use of computers. One of the first steps in developing stricter methods of calculation should be the generalisation and systematisation of available experimental data. Further study is required on questions of modelling and criteria of similarity. It is most important when making full-scale tests on completed turbines to have the participation of the laboratories interested in the flow paths of turbines and responsible for the improvements in

the machine under test. Special efforts are required to improve the accuracy and reliability of full-scale tests on turbines. The aero-dynamic investigations which have been made on steam turbines should also be applicable to gas turbines, which may be expected to develop considerably in the coming years.
There are 3 tables, no references.

SHNEE, Yakov Isidorovich; SHCHEGLYAYEV, A.V., doktor tekhn.nauk, retsenzent; SHAPIRO, M.S., kand.tekhn.nauk, red.; BYSTRITSKAYA, B.B., red.izd-va; MODEL', B.I., tekhn.red.

[Gas turbines; theory and design] Gazovye turbiny; teoriia i konstruktsiia. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1960. 560 p. (MIRA 14:2)
(Gas turbines)

BERMAN, L.D., doktor tekhn.nauk; RUBINSHTEYN, Ya.M., doktor tekhn.nauk; SHCHEGLYAYEV, A.V.

Selecting the optimum cross section dimensions of the exhaust and the number of shafts for 300 to 600 MW steam turbines. Teploenergetika 7 no.10:14-22 O '60. (MIRA 14:9)

1. Vsesoyuznyy teplotekhnicheskiy institut. 2. Chleh-korrespondent AN SSSR (for Shcheglyayev).
(Steam turbines)

BERMAN, I.D., doktor tekhn.nauk; RUBINSHTEYN, Ya.M., doktor tekhn.nauk; SHCHEGLYAYEV, A.V.

Reply to I.V.Shapiro, A.E.Gel'tman, and D.M.Budniatskii's article. Teploenergetika 8 no.8:73-76 Ag '61. (MIRA 14:10)
(Turbines) (Electric power plants) (Shapiro, I.V.)
(Gel'tman, A.E.) (Budniatskii, D.M.)

SHCHEGLYAYEV, Andrey Vladimirovich; SMEL'NITSKIY, Sergey Georgiyevich, dots.; BULKIN, A.Ye., red.; BORUNOV, N.I., tekhn. red.

[Control of steam turbine operation] Regulirovanie parovykh turbin. Moskva, Gosenergoizdat, 1962. 255 p. (MIRA 15:5)
(Steam turbines)

S/096/62/000/003/001/008
E194/E455

AUTHORS: Shcheglyayev, A.V., Corresponding Member of the AS USSR, Deych, M.Ye., Doctor of Technical Sciences, Professor, Filippov, G.A., Candidate of Technical Sciences

TITLE: The design of steam turbine stages, from the results of static blowing tests on rows of blades

PERIODICAL: Teploenergetika, no.3, 1962, 14-18

TEXT: Two methods are in common use for designing the flow paths of steam turbines. One is based on the use of generalized graphs obtained from the tests on stages. With this method the calculations are simple and reliable for the given type of blading, and various generalized graphs have been produced. The second is based on the use of the energy loss factor and flow factors in guide and runner blades, either derived from static tests or calculated from the velocity triangle. This method is also useful, particularly with new types of blade. A wealth of test results is now being obtained on blades in straight bundles, giving both a qualitative view of the flow structure in various kinds of blading and quantitative characteristics for loss, angles and flow

Card 1/4

The design of steam turbine ...

factors. An atlas of rational blade profiles has been built up from these tests. Over a number of years, the Kafedra parovykh i gazovykh turbin (Department of Steam and Gas Turbines) of MEI has made studies of flow in turbine blades, using both flat bundles and annular stationary models. Moreover, the blades tested were run in experimental turbines to obtain relationships between efficiency and velocity ratio, using both superheated steam and air. The results so obtained can bridge the gap between the losses determined in static tests and the efficiency of actual stages running on steam. A number of loss curves obtained with various kinds of stage with different kinds of test are plotted and compared, and results are also given for a section of a turbine consisting of three stages. The results lead to the following conclusions. When the design of single-row stages is based on the results of static blowing tests on flat bundles of blades with an irregular velocity distribution and in the presence of overlap, there is satisfactory agreement with tests in experimental turbines in the region of low velocity ratio u/c_0. For optimum values of u/c_0 the divergence between

Card 2/3

The design of steam turbine ...

test and calculated values is 1.5 to 3%. Generally, a satisfactorily reliable result can be obtained by multiplying the calculated efficiency by a correction factor of 0.98 to 0.97. When calculating the stage efficiency from the loss factors given in the atlas of blade profiles, the correction factor is 0.97 to 0.95 in the zone of optimum velocity ratio. For wheels with two rows of blades the correction factor is 0.97 to 0.95 when the calculations are made from tests carried out with allowance for irregularity of velocity distribution and for overlaps. When the loss factors given in the atlas are used, the correction factor should be 0.95 to 0.92. The least divergence between test and calculated data is obtained in stages with long blades, which indicates that end losses in the blades are not being sufficiently allowed for. Correction factors for relating the result of tests on stages in experimental turbines to calculated values from static blowing tests are valid for stages manufactured with welded diaphragms. The results given in this article are only a first step in relating the results of static tests to total losses determined in an experimental turbine. Further material must be

The design of steam turbine ... S/096/62/000/003/001/008
E194/E455

accumulated to improve the reliability of turbine stage calculations. There are 7 figures and 1 table.

Card 4/4

SHCHEGLYAYEV, A.V.

Development of turbine systems in the U.S.S.R. Izv. AN SSSR. Otd. tekh. nauk. Energ. i avtom. no.4:3-9 Jl-Ag '62. (MIRA 15:8)

(Turbines)

SHCHEGLYAYEV, A.V.

Twentieth Anniversary of the Power Machinery Faculty of Moscow Institute of Power Engineering. Teploenergetika 10 no.4:91-92 Ap '63. (MIRA 16:3)

1. Chlen-korrespondent AN SSSR.
(Power engineering)

SHCHEGLYAYEV, A.V.

Some problems of construction of turbines of great output in the U.S.S.R. Inst masz przep PAN no.14/16:125-137 '63.

1. Moskovskiy ordena Lenina energeticheskiy institut, Moskva.

SHCHEGLYAYEV, A.V.; SMEL'NITSKIY, S.G.; KALASHNIKOV, A.A.

Study of the pickup of boiler-turbine blocks. Trudy MEI no.47: 145-157 '63. (MIRA 17:1)

SHCHEGLYAYEV, A.V.

Manufacture of turbines in the U.S.S.R. and its perspective growth. Teploenergetika 10 no.12:20-26 D '63. (MIRA 17:8)

1. Moskovskiy energeticheskiy institut. Chlen-korrespondent AN SSSR.

SHCHEGLYAYEV, A.V.; SMEL'NITSKIY, S.G., kand.tekhn.nauk; SUTORSHINA, T.N., inzh.; KALASHNIKOV, A.A., inzh.

Problems of the use of discharge systems in boiler-turbine units. Teploenergetika 12 no.1:2-9 Ja '65.

(MIRA 18:4)

1 Moskovskiy energeticheskiy institut. 2. Chlen-korrespondent AN SSSR (for Shcheglyayev).

9(4) SOV/112-58-3-4754

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1958, Nr 3, p 198 (USSR)

AUTHOR: Shcheglyayeva, T. A.

TITLE: Universal Grid-Control Electron Circuit for Ionic Frequency Changers (Universal'naya elektronnaya skhema setochnogo upravleniya dlya ionnykh preobrazovateley chastoty)

PERIODICAL: Sb. statey nauchn. stud. o-va Mosk. energ. in-ta, 1957, Nr 10, pp 45-52

ABSTRACT: Of possible circuits for inverter grid-control at 70-170 cps — a magnetic-amplifier circuit, a transistor circuit, a ring scaler with miniature thyratrons — the electron-tube circuit was selected that includes a three-phase scaling ring, a trigger, and six pentodes. The scheme can generate square pulses 60° long at 50 v. The scheme is suitable for controlling an inverter having a three-phase-and-neutral circuit (control pulses are taken directly from the three-phase scaling ring); it is also suitable for inverters having the

Card 1/2

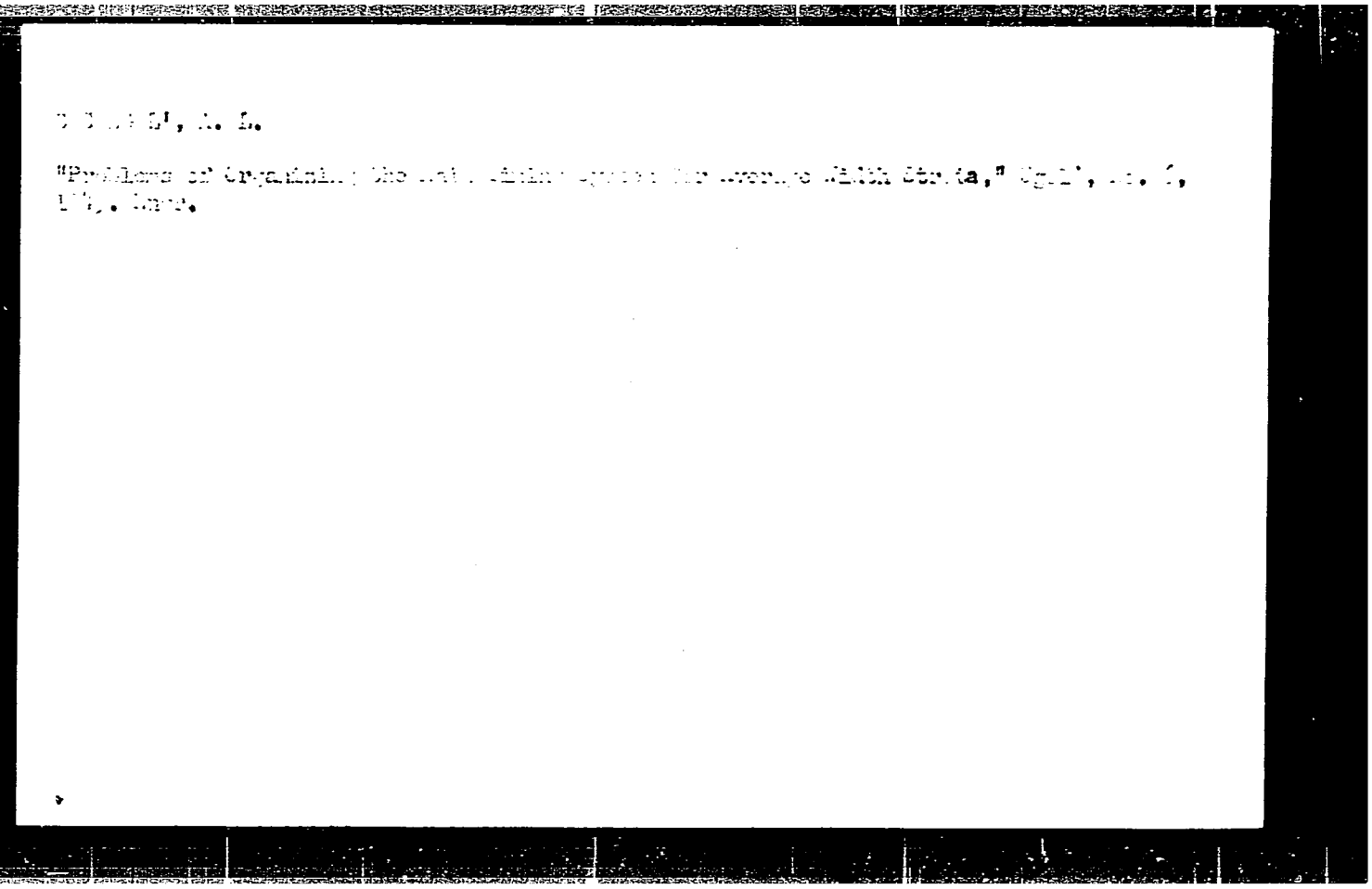
9(4) SOV/112-58-3-4754

Universal Grid-Control Electron Circuit for Ionic Frequency Changers

Larionov's bridge circuit or the equalizing-reactor circuit; in the latter case, there is no need for segregating transformers. Operating reliability and simplicity of alignment are the advantages of the above scheme. Its disadvantage is the large number, 12, of electron tubes needed.

I.L.R.

Card 2/2



L 04742-67

ACC NR: AP6023322 (A) SOURCE CODE: UR/0114/66/000/004/0038/0040

AUTHOR: Shchegol', A. Ya. (Engineer); Pentsov, V. M. (Engineer)

33
B

ORG: none

TITLE: Development of an indicator diagram on a "Ural-2" electronic computer

SOURCE: Energomashinostroyeniye, no. 4, 1966, 38-40

TOPIC TAGS: computer application, internal combustion engine

ABSTRACT: The calculations were made for the operation of a Type D70 heat engine. The work was aimed at determination of the following indices of the working process: 1) the temperature in the cylinder during the compression-combustion-expansion period; 2) the heat evolution, x_1; 3) the heat loss during the combustion- expansion period, W_0; 4) the volume of the cylinder at the end of visible combustion; 5) the coefficient of effective heat evolution, ξ; 6) the temperature and the pressure in the cylinder at the end of compression, T_c and p_c; 7) the pressure and the temperature in the cylinder at the moment when the exhaust valves are opened, p_e and T_e. The article gives a detailed block diagram of a program adapted to the "Ural-2" computer. A large number of indicator diagrams were determined by the block diagram

Card 1/2 UDC: 681.142:(084.21).001.24

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ACC NR: AP6023322

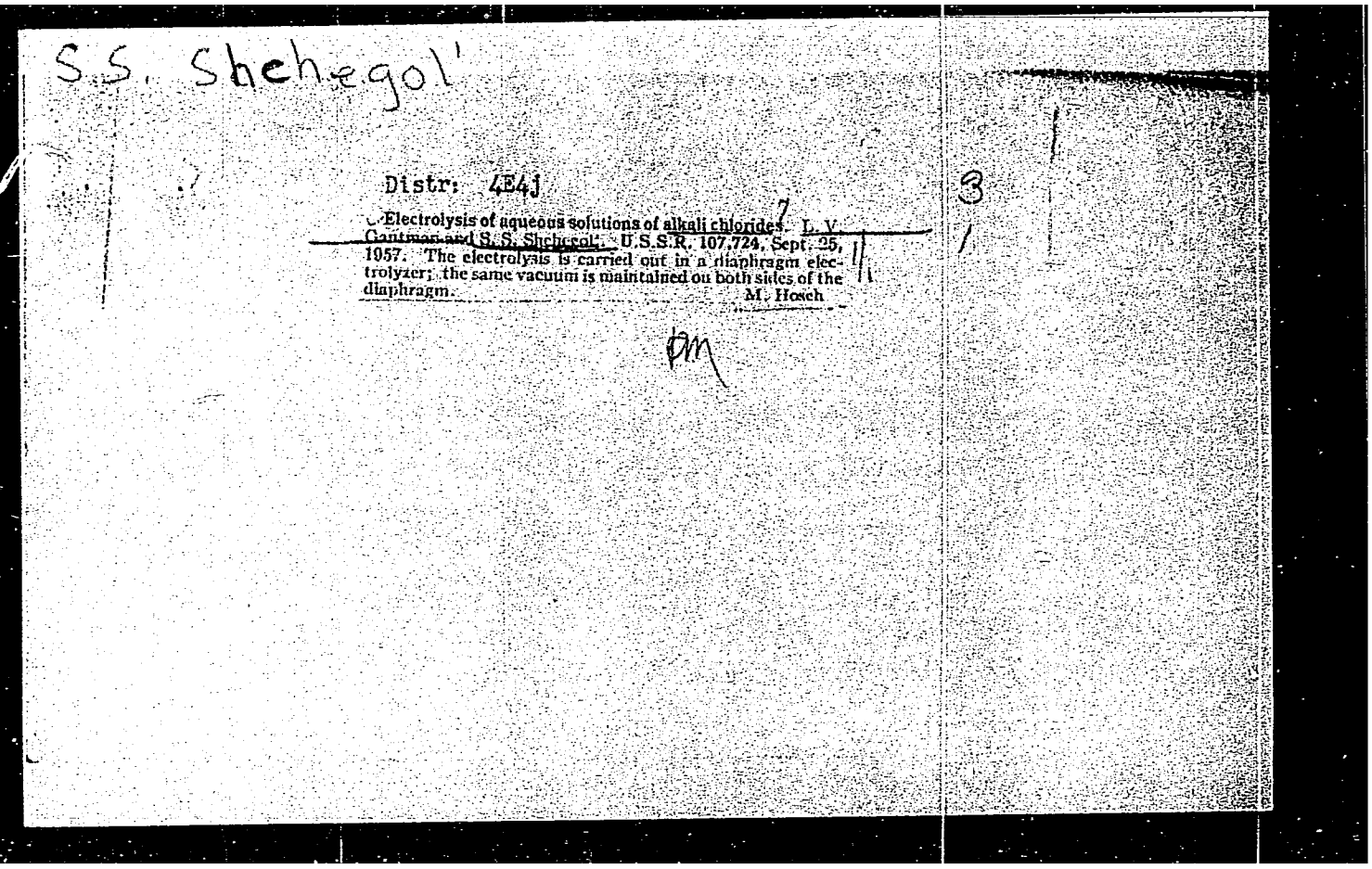
shown. The error in the determination of V_z was not more than 0.5%; V_z can be calculated to practically any desired degree of accuracy. After determination of V_z, the time required for calculation of one variant of ξ was not more than 5 to 8 seconds. The accuracy of the results is stated to be considerably greater than with hand calculations. Orig. art. has: 3 figures.

SUB CODE: 21/ SUBM DATE: none/ ORIG REF: 002

Card 2/2 gd

YASTREZHEMBSKIY, L.; SHCHEGOL, M.

First in Moscow. Znan.-sila 38 no.4:47 Ap '63. (MIRA 16:8)



S.S. Shchegol'

Distr: 4E4j

Electrolysis of aqueous solutions of alkali chlorides. L. V. Gantman and S. S. Shchegol'. U.S.S.R. 107,724, Sept. 25, 1957. The electrolysis is carried out in a diaphragm electrolyzer; the same vacuum is maintained on both sides of the diaphragm.

M. Hosch

PHASE I BOOK EXPLOITATION SOV/3450

SOV/9-2-8(11)

Akademiya nauk SSSR. Institut geokhimii i analiticheskoy khimii imeni V. I. Vernadskogo. [illegible]

Spektrofotometricheskiye i kolorimetricheskiye [illegible] metric and Colorimetric Methods of [illegible] Its: Trudy, tom. 8 (11) [illegible]

Resp. Ed.: I. P. Alimarin, Corresponding [illegible]
Ed. of Publishing House: V. N. [illegible]

PURPOSE: The publication is intended for [illegible] chemists and geochemists.

COVERAGE: This collection of 29 articles [illegible] Transactions of the C[illegible] Geochemistry and Analytical Chemistry [illegible] Sciences USSR. The general subject of [illegible] spectrophotometric and colorimetric [illegible] lowing topics may deserve [illegible] absorption analysis, the [illegible] organic analysis, the [illegible] spectrophotometric investigation of [illegible] colorimetric method of determining small quantities of [illegible] metric method of determining uranium, spectrograph[illegible] the behavior of oxidation-reduction indicators, a [illegible] acoustical method of gas analysis, and a description of [illegible] spectrophotometric gas analyzer. No personalities are [illegible] are given at the end of each article.

AVAILABLE: Library of Congress

Card 6/6

JA/dmm/fal
8-29-60

SOV/81-59-5-17542

Translation from Referativnyy zhurnal, Khimiya, 1959, Nr 5, pp 532 - 533 (USSR)

AUTHORS: Shchegol', Sh.S., Galkina, V.K.

TITLE: Polymetacryt (Polimetakrit) - a Material for Construction Purposes

PERIODICAL: Za. tekhn. progress (Sovnarkhoz Gor'kovsk. ekon. adm. r-na), 1958, Nr 5, pp 8 - 9

ABSTRACT: Polymetacryt (PM) was obtained by impregnating electrographite (EG) with methyl ether of methacrylic acid and 0.5% benzoyl peroxide and subsequent stepwise heating, having a compression resistance twice as high and tensile strength and bending resistance three times as high as EG; the heat- and electric conductivity of both materials are the same. Depolymeric ether obtained from the waste products of organic glass can be used as material. The consumption of methylmethacrylate to 1 ton of impregnated EG is ~90 - 100 kg. PM is suitable for the production of chemical heat-exchange apparatus, as well as

Card 1/2

SOV/81-59-5-17542

Polymetacryt (Polimetakrit) - a Material for Construction Purposes

electrodes (e.g., for chloride baths). The wear of the PM anodes is by 20 - 25% less than those made of graphite, and their application decreases the consumption of electric power per 1 ton of caustic soda by ~ 100 kw hrs. The test results and the physico-mechanical properties of the initial EG and PM are given.

A. Vavilova

Card 2/2

AUTHOR: Shchegol', Sh. S. SOV/32-24-9-7/53

TITLE: The Analysis of Aqueous Solutions of Chlorites and Chlorine Dioxides (Analiz vodnykh rastvorov khloritov i dvuokisi khlora)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 9, pp 1043-1050 (USSR)

ABSTRACT: At the beginning, reference is made to the methods which are applied to the analyses mentioned by the title. The following methods are explained: The determination by titration after Bray (Brey) (Ref 1), those after Oechsly (Eksli) (Ref 2), Lazek (Ref 3), Peno (Ref 8), White (Uayt) (Ref 9), Chernyshov and Semenov (Ref 10), Aznarez and Vinade (Aznarets and Vinade) (Refs 11,12), Haller and Listek (Khaller and Listek) (Ref 13), Caron and Raquet (Karon and Raku) (Ref 15), Flis and others (Refs 16,17), Levi and Garrini (Ref 18), Buser and Hanisch (Buzer and Khenish) (Ref 19), Konopik and others (Ref 20), Friedman (Fridman) (Ref 21), Duval (Dyuval) (Ref 22), Nielsen and Woltz (Nil'sen and Vol'tts) (Ref 23), Rins and Gorriz (Rins, Gorrits) (Ref 24), Yakovlev, Rozental' and Filippov (Ref 26), and that after Loeb (Leb) and others (Ref 27). In the present paper the ammetric method after Haller and Listek, as well as the volumetric method after White, were revised and

Card 1/2

new variants relative to the above-mentioned determinations have been worked out. K. I. Shiganova participated in the correspondent experiments. A recrystallization after Weiner (Veyner) (Ref 29) was carried through in order to obtain anhydrous sodium chlorite. In the explanation of the volumetric method reference is made to a hint given by Hill (Khill) (Ref 31). The statements made by Konopik, Rins, Gorriz, and Loeb, as well as those made at the IV Vsesoyuznoye soveshchaniye po elektrokhimii (IV All Union Conference of Electrochemistry) (Ref 33) have been used in working out the polarographic method. It was stated that, in the presence of La^{3+} the polarograms of the chlorite ion are identical with those obtained by Frumkin and Zhdanov (Ref 34,35).
There are 7 figures, 4 tables, and 35 references, 8 of which are Soviet.

SHCHEGOL', Sh.S.

Stability of the aqueous solutions of sodium chlorite during evaporation. Zhur. prikl. khim. v. 31 no.5:680-684 My '58. (MIRA 11:6)

(Sodium chlorite)

20-119-1-27/52

AUTHORS: Grayevskiy, A. I., Shchegol', Sh. S., Smolyan, Z. S.

TITLE: The Physical and Chemical Investigation of Several Systems Containing Triethyl-Aluminum and Its Derivatives (Fiziko-khimicheskoye issledovaniye nekotorykh sistem, soderzhashchikh trietilalyuminiy i yego proizvodnyye)

PERIODICAL: Doklady Akademii Nauk SSSR,1958,Vol.119,Nr 1,pp.101-103(USSR)

ABSTRACT: Pure triethyl-aluminum, diethyl-aluminum-hydride, diethyl-aluminum-bromide and ethoxy-diethyl-aluminum were dissolved in cyclohexane and potentiometrically titrated by quinoline in a cell with a silver electrode and a platinum electrode or conductometrically in a cell with non-platinized plate-like platinum electrodes. The titration took place in a rare gas atmosphere. The character of the curves of the conductometric titration of the different substances mentioned above becomes evident from a diagram and shows the following: Quinoline with triethyl-aluminum forms the electrically conducting complex $Al(C_2H_5)_3.C_9H_7N$, with diethyl-aluminum-bromide the electrically conducting complex $Al(C_2H_5)_2Br.C_9H_7N$, with diethyl-aluminum-hydride the electrically nonconducting

Card 1/3

20-119-1-27/52

The Physical and Chemical Investigation of Several Systems Containing Triethyl-Aluminum and Its Derivatives

There are 4 figures and 9 references, 0 of which are Soviet.

PRESENTED: August 5, 1957, by A. V. Topchiyev, Member, Academy of Sciences, USSR

SUBMITTED: August 5, 1957

Card 3/3

SHCHAROL', Sh. S., Cand Chem Sci -- (diss) "Study of the amalgamating process for obtaining sodium chlorite." Gor'kiy, 1959, 13 pp (Min of Higher Education USSR. Gor'kiy State Univ im N.I. Lobachevskiy) 150 copies (KL, 25-59, 124)

KUCHINSKIY, YE. M.

5(4) PHASE I BOOK EXPLOITATION SOV/2216

Soveshchaniye po elektrokhimii. 4th, Moscow, 1956.

Trudy...; [sbornik] (Transactions of the Fourth Conference on Electrochemistry; Collection of Articles) Moscow, Izd-vo AN SSSR, 1959. 868 p. Errata slip inserted. 2,500 copies printed.
Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk.

Editorial Board: A.N. Frumkin (Resp. Ed.) Academician, O.A. Yesin; Professor S.I. Zhdanov (Resp. Secretary), B.N. Kabanov, Professor Ya. M. Kolotyrkin, Doctor of Chemical Sciences; V.V. Lobev, Ph.D.; Lukovtsev, Professor; N.A. Solov'yeva; V.V. Stender, Professor; and G.M. Florianovich; Ed. of Publishing House: N.G. Yegorov; Tech. Ed.: T.A. Prusakova.

PURPOSE: This book is intended for chemical and electrical engineers, physicists, metallurgists and researchers interested in various aspects of electrochemistry.

COVERAGE: The book contains 127 of the 138 reports presented at the Fourth Conference on Electrochemistry sponsored by the Department of Chemical Sciences and the Institute of Physical Chemistry, Academy of Sciences, USSR. The collection pertains to different branches of electrochemical kinetics, double layer theories and galvanic processes in metal electrodepositon and industrial electrolysis. Abridged discussions are given at the end of each division. The majority of reports not included here have been published in periodical literature. No personalities are mentioned. References are given at the end of most of the articles.

Card 8/34

S/080/60/033/010/011/029
D216/D306

AUTHORS: Flyerov, V.N., Shchegol', Sh.S., Armenskaya, L.V., and Galkin, L.G.

TITLE: Electrolysis of hydrochloric acid solutions of bivalent copper

PERIODICAL: Zhurnal prikladnoy khimii, v. 33, no. 10, 1960, 2245 - 2252

TEXT: The regeneration of chlorine from hydrochloric acid formed in large quantities during the synthesis of DDT, polyvinylchloride etc. presents a very real problem. In their experimental work, the authors studied the electrode characteristics, of hydrochloric solutions of cupric chloride. The equivalent potential for the reaction $Cu^{\cdot\cdot} + 3Cl' + e \rightleftharpoons CuCl_3''$ was determined with a polished platinum electrode in a series of solutions with constant HCl concentrations ($\sim$20 %) and varying concentrations of $CuCl_2$ and CuCl.

Card 1/4

Electrolysis of hydrochloric ...

The sum of the molar concentrations was determined with a potentiometer type PPTV-1. To avoid oxidation of the monovalent copper the measurements were taken in an atmosphere of CO_2; cupric chloride in solution was analyzed iodometrically, cuprous chloride using permanganate and iron-ammonium alum. Hydrochloric acid was titrated with sodium hydroxide solution using methyl orange as indicator. The equivalent potential for the reaction $CuCl_3'' + e \rightleftharpoons Cu + 3Cl'$ was determined with a copper electrode in a series of solutions with constant HCl and varying CuCl concentrations (from 29 to 138 gm/l). To prevent cupric ions appearing in the solution, copper metal powder was sprinkled in and the experiment was conducted in an atmosphere of CO_2. The article shows the normal potentials of certain oxidation-reduction reactions; the relationship between cathode potential and current density; the relationship between potential and current density in hydrochloric acid solutions of cupric and cuprous chlorides. Cathode-impervious graphite,

Card 2/4

temperature 60°; the relationship between the cathode potential and current density in various electrolytes; the change of potential of a porous graphite cathode with current density at various rates of flow of the electrolyte; anode polarization curves in HCl solutions of $CuCl_2$. The electrolyzer for electrolysis of HCl solutions of $CuCl_2$ at 40 amps loading; relationship between current efficiency and current density. It is concluded that 1) The limiting current density with impervious graphite electrodes is increased with decreasing monovalent Cu ions in solution and rising temperature. For porous electrodes the basic factor is the rate of flow of the electrolyte; the temperature and thickness of these cathodes have comparatively little effect. 2) Polarization when chlorine is evolved from HCl solution of bivalent Cu is comparatively small at higher c.d. 3) The current efficiency depends on the type of cathode graphite, the current density and the rate of flow of the electrolyte. There are 7 figures, 2 tables, and 15 references: 5 Soviet-bloc and 10 non-Soviet-bloc. The references to the

Card 3/4

S/080/60/033/010/011/029
D216/D316

Electrolysis of hydrochloric ...

English-language publications read as follows: I. Gordon, Chem. Eng., 5, 187, 1953; Ch.P. Roberts, Chem. Eng. Progr., 46, 9, 456, 1956.

SUBMITTED: October 5, 1959

Card 4/4

15.8220

S/081/62/000/018/056/059
B168/B186

AUTHORS: Shikhiyev, I. A., Aliyev, ... I., Sadykhzade, S. I., Shcherol', Sh. S., Taliyev, S. B., Akhundova, G. Yu., Krasnokutskiy, V. P., Guseynova, M. A., Mukharamova, Kh. F., Kurbanaliyeva, T. Kh., Nikolayeva, L.

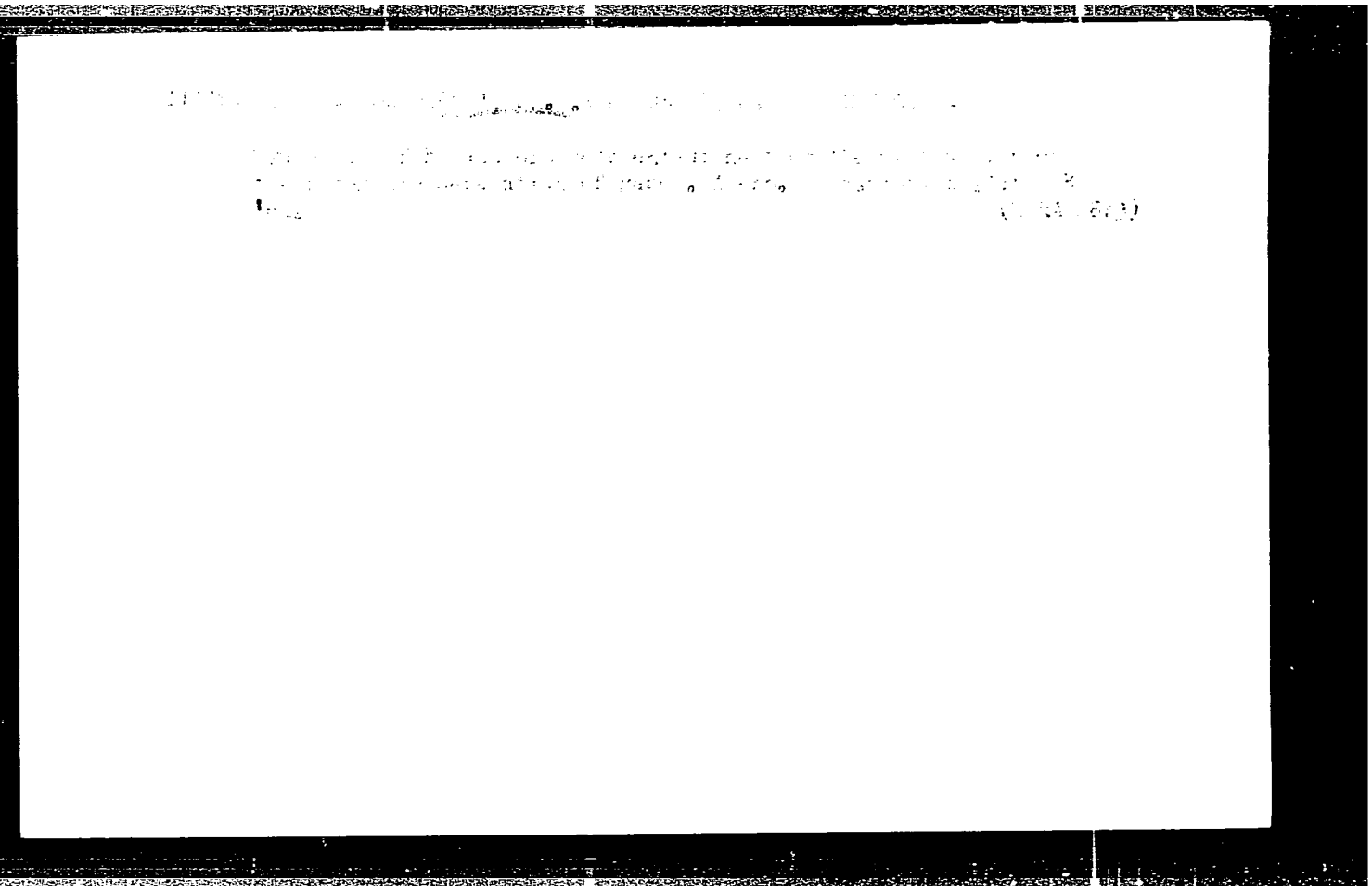
TITLE: Synthesis and use of silico derivatives of naphthenic acids in the production of divinylstyrene rubber

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 18, 1962, 559, abstract 18P405 (Azerb. khim. zh., no. 5, 1961, 65 - 68 [Summary in Azerb.])

TEXT: Dimethyldichlorosilane reacting with naphthenic acids in the presence of triethylamine produces dimethyldicarboxy-bis-cycloalkylsilane $(CH_3)_2Si(OOC_{10}H_{20})_2$. The product was used as filler for butadienestyrene rubber instead of lubricating oil 18. The Defoe number of the raw butadienestyrene rubber was 2000, thermal plastification time 40 min, Defoe number of the plasticized butadienestyrene rubber 1100, tensile strength

Card 1/2

Card 2/2



TRIFEL', M.S.; SHCHEGOL', Sh.S.; MATO, R.E.; PIATKIN, B.S.

Cathodic protection of heat exchangers cooled by sea water.
Zashch. met. 1 no.2:245-246 Mr-Ap '65.
(MIRA 18:6)

1. Sumgaitskiy zavod sinteticheskogo kauchuka.

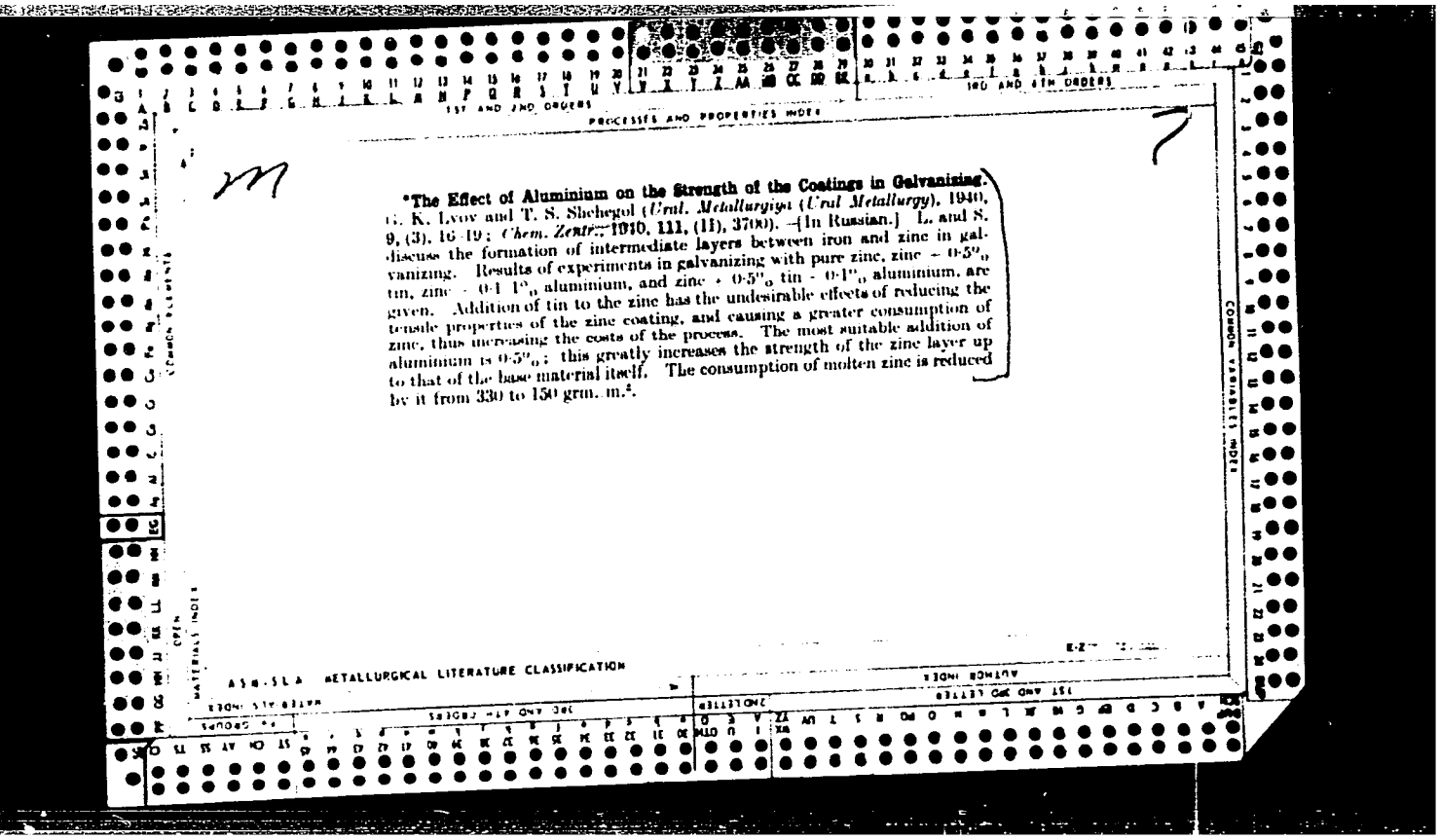
ASHIMOV, M.A.; SHCHEGOL', Sh.S.; SADYKH-ZADE, S.I.; ASKEROV, A.K.; BUKH, Zu.D.

Using azolyat-A as an emulsifier in the emulsion polymerization of rubber. Sbor. nauch.-tekh. inform. Azerb. inst. nauch.-tekh. inform. Ser. Neftepererab. i khim. prom. no.2:3-14 '62. (MIRA 18:9)

SHCHEGOLEV, Sh.G.; SHER, I.I.; GEVORKYAN, A.N.

Formation of acetylenic hydrocarbons in the dehydrogenation of butylenes to divinyl. Azerb. khim. zhur. no. 2:81-91 '65.
(MIRA 18:12)

1. Submitted Dec. 10, 1964.



PROCESSES AND PROPERTIES INDEX

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

7

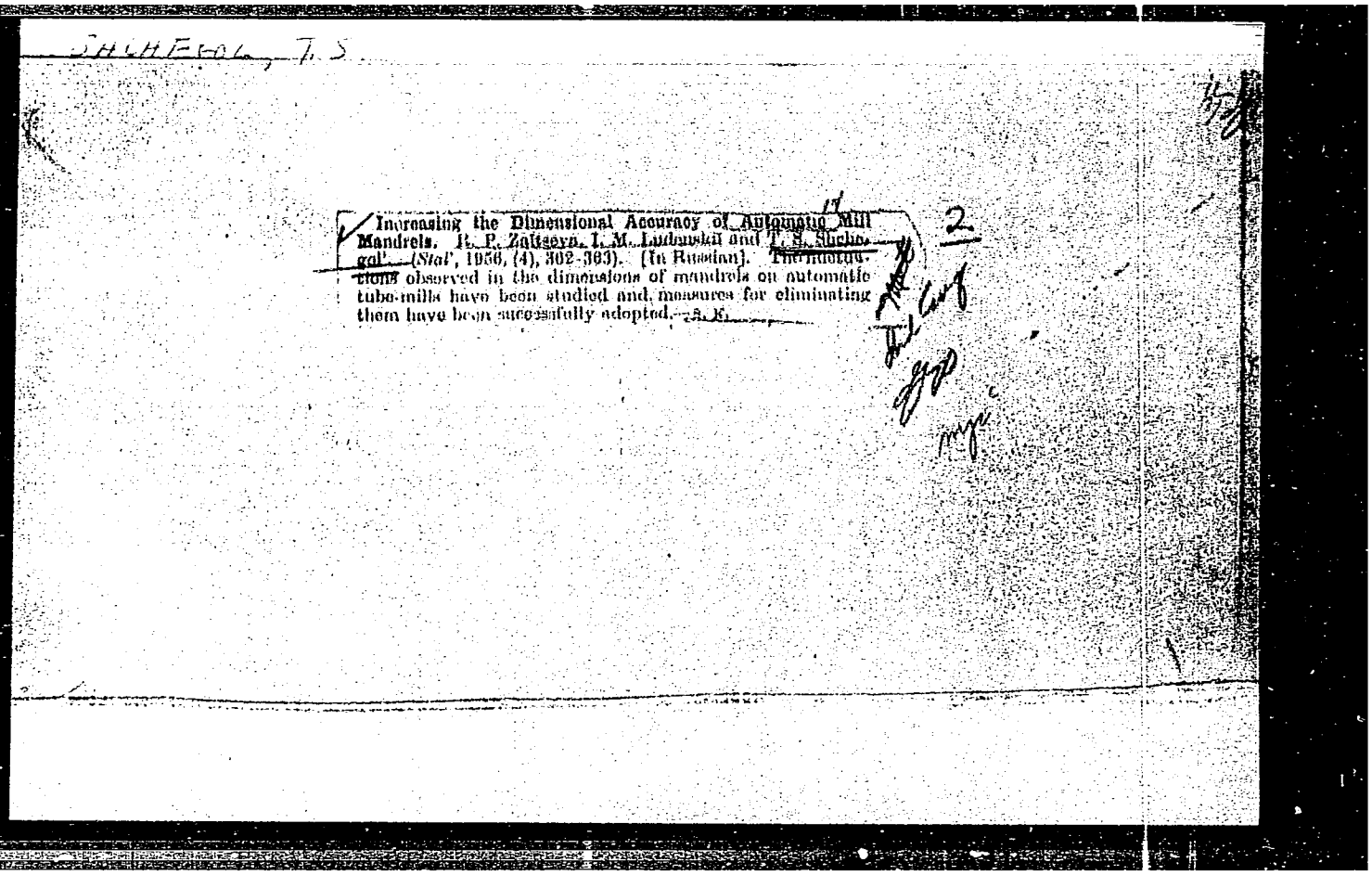
M

The Effect of Aluminium on the Strength of the Coatings in Galvanising. G. K. Lvov and T. S. Shchegol (*Ural. Metallurgist* (*Ural Metallurgy*), 1940, 9, (3), 16–19; *Chem. Zentr.*, 1940, **111**, (II), 3700). —[In Russian.] L. and S. discuss the formation of intermediate layers between iron and zinc in galvanizing. Results of experiments in galvanizing with pure zinc, zinc + 0·5% tin, zinc + 0·1% aluminium, and zinc + 0·5% tin + 0·1% aluminium, are given. Addition of tin to the zinc has the undesirable effects of reducing the tensile properties of the zinc coating, and causing a greater consumption of zinc, thus increasing the costs of the process. The most suitable addition of aluminium is 0·5%; this greatly increases the strength of the zinc layer up to that of the base material itself. The consumption of molten zinc is reduced by it from 330 to 150 grm. m.$^{-2}$.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

AUTHOR INDEX

MATERIALS INDEX



SHCHEGOL, T. S.

Increasing the Dimensional Accuracy of Automatic Mill Mandrels. P. P. Zaitsev, L. M. Ludovskii and T. S. Shchegol' (*Stal'*, 1956, (4), 302-303). [In Russian]. The fluctuations observed in the dimensions of mandrels on automatic tube-mills have been studied and measures for eliminating them have been successfully adopted.—S. K.

Shchegol', T. S.

3

Increasing dimensional accuracy of plugs of piercing mills. R. P. Zaltseva, I. M. Ludenskii, and T. S. Shchegol' (Leningrad Rolling Mill, Dnepropetrovsk). *Stal'* 16, 362-3(1956).—Plugs made of 1.2–1.8% C, 14–12.5% Cr steel usually cast, ground to size, normalized at 1020–40° and tempered at 680–700° could not meet dimensional tolerances. Both shrinkage and expansion occurred indiscriminately and without any explanation, particularly when residual Ni varied up to 3%. By normalizing before grinding the residual austenite was stabilized and subsequent tempering produced acceptable dimensional changes.
J. D. Gat

137-58-2-3003

Translations from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 111 (USSR)

AUTHORS: Akimova, Ye.P., Shchegol', T.S.

TITLE: Introduction of Metallized Mandrels for Use in Stainless-steel Piercing (Vnedreniye metallizirovannykh opravok dlya proshivki zagotovok iz nerzhaveyushchey stali)

PERIODICAL: Byul. nauchno-tekhn. inform Vses. n.-i. trubnyy in-t, 1957, Nr 3, pp 86-91

ABSTRACT: A new method is proposed for increasing the durability of piercing-mill mandrels. It consists in metallizing the mandrel tips. The chemical composition recommended for the metal coating is the following: 3.0 - 3.5 percent Ni, $\leq$ 0.2 percent C, $\leq$ 0.4 percent Si, 0.41 percent Mn The metallizing apparatus is described, also the procedure for preparing the metal wire to be used in the process. The mandrels are annealed for 3 hours at 980° C, then cooled in the furnace down to 500° C at a rate of 100°/hr. Introduction of this method at the Lenin Plant increased mandrel durability 2-3 times, which made it possible: 1) to cut mandrel consumption by 40 percent, 2) to lengthen the billets for piercing from 700 to 1300 mm, 3) to cut the quantity of

Card 1/2

137-58-2-3003

Introduction of Metallized Mandrels for Use in Stainless-steel Piercing

unpierceable billets from 8 - 12.7 to 0 - 1.07 percent, 4) to cut from 3 to 0.27 percent the tubing rejected because of internal scabs. The metal-consumption index dropped from 1.196 to 1.107.

G.K.

1. Hard surfacing--Applications 2. Piercing mills--Equipment

Card 2/2

133-12-10/26

AUTHORS: Finkel'shteyn, Ya.S., Candidate of Technical Sciences, and Shchegol', T.S., Engineer.

TITLE: An Improvement in the Durability of Stationary Mandrels for Piercing Mills (Povysheniye stoykosti nevrashchayushchikhsya opravok proshivnykh stanov)

PERIODICAL: Stal', 1957, No.12, pp. 1099 - 1103 (USSR)

ABSTRACT: Causes of a decrease in the durability of stationary mandrels of piercing mills were investigated. It was found that the main condition for improving their durability is to produce, and then to retain during their work, a wear-resistant austenitic structure of high manganese steel. Highly wear-resistant austenitic structure of mandrel's metal can be obtained by using: a) steel of the type Г18; b) a rapid heating for hardening, and c) by making mandrels of an elongated form with a cylindrical end. To preserve high wear-resistant properties of mandrels, the following conditions should be satisfied: 1) correct positioning of axis of rolls of the piercing mill; 2) optimum positioning of the mandrel in the focus of deformation, and 3) good cooling of the mandrel during intervals. As a result of the above measures, the durability of mandrels increased by a factor of 6 (from 1.33 kg/ton to 0.22 kg/ton of semi-finished product).

Card 1/2

133-12-10/26

An Improvement in the Durability of Stationary Mandrels for Piercing Mills

There are 6 figures and 9 Slavic references.

ASSOCIATION: Dnepropetrovsk Tube-rolling Mill imeni Lenin (Dnepropetrovskiy truboprokatnyy zavod im. Lenina)

AVAILABLE: Library of Congress

Card 2/2

ACC NR: [illegible] SOURCE CODE: UR/0398/66/000/006/0031/0033

AUTHOR: [illegible], A. M.; Ladenskiy, I. M. (Deceased); Shchegol', T. S.; Berensh-teyn, B. [illegible]; [illegible], A. R. (Candidate of technical sciences)

ORG: None

TITLE: Anodic-mechanical grinding of carbide tube-drawing dies /

SOURCE: Metallurgicheskaya i gornorudnaya promyshlennost', no. 6, 1966, 31-33

TOPIC TAGS: metal cutting machine tool, electrospark machining, grinding machine, abrasive, die, metal tube, METAL DRAWING

ABSTRACT: In order to extend the life of tube drawing dies used at the Lenin works for drawing tubes up to 50-70 m/min, the ordinary alloy steels used for making the dies were replaced by the hard alloys VK-8, VK-10, and VK-15. Three anodic-mechanical methods were used to machine and polish the dies: anodic-mechanical, using an erosion process which removed large amounts of material but roughened the surface; electroabrasion, using an electrochemical process for cleaning the surface; and abrasion, using the working fluid without electric current. A schematic drawing (see Figure 1) of the technique showed the work (+) and tool (-) kept in contact with sodium silicate solution having a specific gravity of 1.23. The operation

Card 1/2 UDC: 621.789.1 : 669.27

ACC NR: AT[illegible]7

of the anodic-mechanical grinding machine is described and technical data for all three processes are given. The lapping material, turning angle, electric parameters, surface characteristics, and grinding time are listed for each process. One anodic-mechanical machine was able to handle all of the die machining during normal cold drawing operations at the Lenin works. Industrial trials have shown that the hard alloy dies last for more than 5000 pieces of tube. Orig. art. has: 2 figures, 1 table.

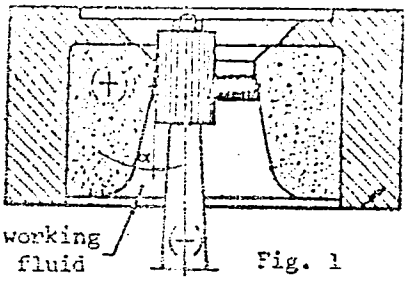


Fig. 1

SUB CODE: 11,13/ SUBM DATE: none/ ORIG REF: 003

Card 2/2

NIKITIN, A.V.; Prinimali uchastiye: SHCHEGOL', V.M.; KUR, I.P.; ANTONIK, I.V.; ZHERBUKH, I.N.; LOZINSKAYA, K.A.; BASHINSKAYA, L.I.

Finishing television cabinets by polyester varnishes. Bum i der. prom. no.2:53 Ap-Je '63. (MIRA 17:2)

S/065/60/000/010/009/010
E030/E412

AUTHORS: Pankov, I.A., Zabryanskiy, Ye.I., Zarubin, A.P., Shchegol', V.V. and Aronov, D.M.

TITLE: Apparatus ИТ 9-6 (IT 9-6) for Determining the Research Octane Number of Motor Gasolines

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1960, No.10, pp.49-54

TEXT: A new single-cylinder apparatus, IT 9-6, has been developed for determining the research octane number of automobile fuels. After 150 hours of trials, the results were verified to conform to the specification ГОСТ 8226-56 (GOST 8226-56). It was put into full-scale production in 1960 and is being used in the domestic production of motor gasoline. The effective cylinder capacity is 652 cc, the cylinder diameter being 85 mm and the stroke 115 mm. The compression ratio can be varied between 4 and 10. The coolant is maintained at 100°C, air is taken in at 52°C and there is no heating of the mixture after the carburettor. The oil pressure is maintained at about 2.0 kg/cm^2 and the engine

S/065/60/000/010/009/010
E030/E412

Apparatus ИТ 9-6 (IT 9-6) for Determining the Research Octane Number of Motor Gasolines

runs at 600 rpm. As usual, the mixture is adjusted for maximum knock and the reference fuels are iso-octane and n-heptane. Complete linearity between pressure and compression ratio as measured has been checked for compression ratios from 4 to 10. The accuracy of the octane ratings have been checked against the standard ASTM fuels. There are 8 figures and 2 tables.

Card 2/2

ZABRYANSKIY, Ye.I.; LOSAYEV, K.N.; SHCHEGOL', V.V.; ARONOV, D.M.; ZARUBIN, A.P.

Electronic detonation meter DP-60. Khim. i tekh. topl. i masel 8 no.6:65-69 Je '63. (MIRA 16:6)

(Gasoline—Testing)

BALASHOV, [deceased]; SHCHEGOLEV, A.

Soviet equipment on the markets of economically underdeveloped countries. Vnesh. torg. 30 no.12:30-34 '60. (MIRA 13:12)
(Russia--Commerce) (Machinery industry)

SHCHEGOLEV, A., inzhener-konstruktor

We have rebuilt a wooden grain elevator. Muk.-elev. prom. 28 no.6:29 Je '62. (MIRA 15:7)

1. Saratovskoye oblastnoye upravleniye khleboproduktov.
(Grain elevators)

KOST, A.N.; TERENT'YEV, P.B.; SHCHEGOLEV, A.A.

Synthesis and some conversions of ethynylcarbonols of the pyridine series. Zhur.ob.khim. 32 no.8:2606-2612 Ag '62. (MIRA 15:9)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.
(Pyridine) (Alcohols)

PETROV, K.A.; NIFANT'YEV, E.Ye.; SHCHEGOLEV, A.A.; KHUDYNTSEV, N.A.

Synthesis and chemical properties of phosphinites of 1,4;3,6-dianhydrohexitol. Zhur.ob.khim. 32 no.9:3074-3080 S '62. (MIRA 15:9)

(Hexitol) (Phosphinic acid)

PETROV, K.A.; NIFANT'YEV, E.Ye.; GOL'TSOVA, R.G.; SHCHEGOLEV, A.A.; BUSHMIN, B.V.

Synthesis and reesterification of diphenyl phosphite. Zhur.ob.khim. 32 no.11:3723-3727 N '62. (MIRA 15:11)
(Esterification) (Phenyl phosphite)

PETROV, K.A.; NIFANT'YEV, E.Ye.; SHCHEGOLEV, A.A.

Synthesis of 1,2-dialkyl phosphinites; 5-6-diisopropylideneglucoses and their conversion to 6-halodeoxyglucose. Zhur.ob.khim. 33 no.3:896-899 Mr '63. (MIRA 16:3)

(Phosphinic acid)
(Glucose)

PETROV, K.A.; NIFANT'YEV, E.Ye.; SHCHEGOLEV, A.A.; BUTILOV, M.M.; REBUS, I.F.

Re-esterification of neutral phosphites and phosphinites.
Zhur.ob.khim. 33 no.3:899-901 Mr '63. (MIRA 16:3)
(Phosphinic acid) (Phosphorous acid)
(Esterification)

[illegible], A.P.; [illegible], L. .; [illegible]OLEV, A.A.; [illegible]T'YEV, A.[illegible].

Synthesis and some reactions of pyridylethinylcarbinols.
Dokl. AN SSSR 141 no.1:110-113 N '61. (MIRA 14:11)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
2. Chleno-korrespondent AN SSSR (for A.P.Terent'yev).
(Methanol)

PETROV, K.A.; NIFANT'YEV, E.Ye.; SHCHEGOLEV, A.A.

Glucose phosphinites. Zhur.ob.khim. 32 no.3:1006 Mr '62. (MIRA 15:3)

(Glucose) (Phosphinic acid)

43312
S/079/62/032/011/010/012
D204/D307

AUTHORS: Petrov, K.A., Nifant'yev, E.Ye., Gol'tsova, R.G., Shchegolev, A.A., and Bushmin, B.V.

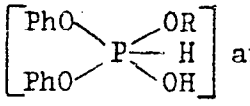
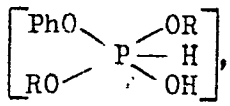
TITLE: Synthesis and peresterification of diphenyl phosphite

PERIODICAL: Zhurnal obshchey khimii, v. 32, no. 11, 1962, 3723 - 3727

TEXT: The interactions of diphenyl phosphite with aliphatic alcohols were studied since the alcoholysis of diethyl and other simple phosphites (to higher phosphites) and phosphinites requires, in some cases, inconveniently high temperatures (this journal, p. 3710 X Dialkyl phosphites $(RO)_2POH$, where R = C_4H_9, iso-C_5H_{11}, C_6H_{13}, C_8H_{17}, C_9H_{19}, $C_{10}H_{21}$, $ClCH_2CH_2$, and $C_2H_5OC(O)CH_2$, were prepared in 91-96 % yields by adding 2 moles ROH to 1 mole $(PhO)_2POH$ and heating for 3-8 hours at 100°C, in the presence or absence of catalyst (Na). The high reactivity of diphenyl phosphite as compared to those of simple dialkyl phosphites is ascribed to (1) the existence

Card 1/2

Synthesis and peresterification ...

of transistory forms  and  , which prefe-

rentially eliminate PhOH rather than ROH, owing to the considerably higher electrophilic character of the PhO group, and (2) the fact that the tautomeric equilibrium favors the trivalent P form far more in diphenyl than, say, in diethyl phosphite. Similar reactions took place readily with substituted alcohols such as e.g. $(CH_3)_2NCH_2CH_2OH$. Diphenyl phosphite was obtained almost quantitatively by the equimolar interaction of diphenyl chlorophosphite with methanol (sealed tube, 100°C, 3 hrs.) and by the interaction of methyl dichlorophosphite with phenol (1:2) at 100°C for 1 hr. The latter method, which is generally convenient for the preparation of diaryl phosphites, was also used to make di-p- and di-m-cresyl phosphites, in ~100 % yields, by reacting CH_3OPCl_2 with para- and meta-cresols

There is 1 table.

SUBMITTED: December 14, 1961
Card 2/2

PETROV, K.A.; NIFANT'YEV, E.Ye.; SHCHEGOLEV, A.A.; TUSEYEV, A.P.

1,2,3,4-Diisopropylidenegalactose 6-methyl phosphinite. Zhur.ob.khim. 34 no.2:690-693 F '64. (MIRA 17:3)

PETROV, K.A.; [illegible]

Synthesis and alkylation of phosphites and phosphinites of 1,2,3,5-diisopropylidene xylofuranose and 1,2,3,5-diisopropylidene glucose. Zhur. obshch. khim. 34 no. 5:1457-1464 My '64. (MIRA 17:7)

SHCHEGOLEV, A. A.

AUTHOR: Pavlovchenko, F.Ya., Candidate of Technical Sciences 99-58-7-10/10

TITLE: Chronicle. The 19th Jubilee Scientific Technical Conference of the Novocherkassk Institute of Engineering and Soil Improvement (Khronika. XIX Yubileynaya nauchno-tekhnicheskaya konferentsiya Novocherkasskogo inzhenerno-meliorativnogo institute)

PERIODICAL: Gidrotekhnika i melioratsiya, 1958, Nr 7, pp 60-64 (USSR)

ABSTRACT: In February 1958, the 19th jubilee scientific technical conference of the Novocherkassk Institute of Engineering and Soil Improvement was convened. The conference discussed the problems in two plenary sittings and in eight sections. The first plenary sitting was opened by the Director of the Institute, S.K. Shul'gi, with a report on "The 50th Anniversary of the Novocherkassk Institute of Engineering and Soil Improvement and its activity during 40 years of the existence of the Soviet State". The meeting heard the following reports: Professor B.A. Shumakov, Member-Correspondent of VASKhNIL and Doctor of Technical Sciences, on "The History of the Development of the Science of Soil Improvement in the North Caucasus and the Don River Region"; Dotsent A.A. Shchegolev (NIMI), Candidate of Historical Sciences, on "National Economy of the North Caucasus

Card 1/10

Chronicle. The 19th Jubilee Scientific Technical Conference of the Novo- cherkassk Institute of Engineering and Soil Improvement

in the 6th Five-Year Plan"; F.M. Malinovskiy, deputy chief engineer of Yuzhgiprovodkhoz, on "The Problem of a Complex Utilization of the River Yangtsy for the National Economy of the Chinese People's Republic"; L.A. Chernikevich, deputy chief engineer of the Giprovodkhoz MSKh SSSR, on "Irrigational Work in Ceylon". The soil improvement section, the chairman of which was Professor F.A. Shumakov, Member-Correspondent of VASKhNIL, heard the following reports: Dotsent K.F. Anisimov (Saratov SKhI), scientific co-worker D.M. Kasel'nikov, I.J. Myasnikov (Stalingrad OMS) and V.N. Marchenko (Groznyy OMS) on questions concerning irrigation systems and irrigation methods. [illegible] Akhundov (AzNIIGiM), Candidate of Technical Sciences, on "Ways of Basic Soil Improvement in the Shirvanskaya Steppe"; [illegible] Udotnov on "Regularities in the Mineralization of Drainage Waters"; V.Ya. Klots, Engineer, (Rostov Oblvodkhoz) and A.V. Dolgikh, Scientific co-worker of the AzNIIGiM, on "Checking Filtration from Canals by Means of Sealing Their Beds"; [illegible] Tverskova (Rosgiprovodkhoz), Engineer, on irrigation systems in the Meshcherskaya plain; A.A. Troitskiy, Dotsent (Saratov-

Card 7/10

Chronicle The [illegible] Jubilee Scientific Technical Conference of the Novocherkassk Institute of Engineering and Soil Improvement

Sely institut mekhanizatsii sel skogo khozyaystva - Saratov Institute of Agricultural Mechanization), on "General Principles of A Complex Utilization of the Local Flow of Water in the Don-Volga-Ural Regions", I F Sukharev, Candidate of Technical Sciences, Director of the irrigation department of the Institute imeni Pokuchayev, on "The Local Flow of Water in the South-East Voronezh Oblast , Its Regulation and Utilization for Irrigation"; P A Shepel' and N A Volkonskiy, Engineers (Stalingrad oblast), on "The Development of Economical Methods for Utilizing the Volga-Akhtuba River Valley and the Volga Delta"; K.S. Glubshev, Engineer, on "The Application of Automatic Glubshev Water Meters in the Irrigation Systems of the Rostov Oblast'" The irrigation section, the chairmen of which was Dotsent K.S. Garin, Candidate of Agricultural Sciences, heard the following reports: Dotsent K.S. Garin, on "Variations of Osmotic Indicators for the Water Supply of Corn Plants in Various Phases of Development"; P V. Yermizin, Candidate of Agricultural Sciences (YuzhNIIMiM),on "The Question of Zoning Winter Wheat Areas in the North Caucasus Requiring Irrigation";

Card 5/[illegible]

Chronicle. The 19th Jubilee Scientific Technical Conference of the Novo-Cherkassk Institute of Engineering and Soil Improvement

P.I. Bukarevich, Candidate of Agricultural Sciences, head of the laboratory for irrigation of the Don-Zone Scientific Research Institute of Agriculture, on "Fertilization and Irrigation of Corn in the Cis-Caucasian Black Soil Regions of the Rostov Oblast'"; A F.Kalashnikov, Candidate of Agricultural Sciences, President of the kolkhoz "Leninskoye znamya" (Azov region, Rostov oblast'), on "Peculiarities of the Water System of the Cis-Caucasian Black Soil Regions"; Ya.V. Smol'skiy, Candidate of Agricultural Sciences, on "Mechanization of the Cultivation of Intertilled Crops Under Irrigation in the Foothills of the North Caucasus"; I.P. Kruzhilin, Aspirant NIMI, on "Irrigation Systems for Sunflowers in the Rostov Oblast'"; A.I. Bezmenov, Aspirant of the Saratov SKhI, on "Mechanization of Seeding and Planting Under Various Irrigation Methods"; F.V. Fiver, Teacher of the Kherson SKhI, on "Soaking Irrigation in the South of the USSR"; F.K. Rodionovskiy, Candidate of Agricultural Sciences, on "The Accumulation and Change of Organic Substances in the Soil Under Various Cultivations of Crop Rotations". The joint sitting of the soil improvement

Card 4/10

Chronicle. The 10th Jubilee Scientific Technical Conference of the Novocherkassk Institute of Engineering and Soil Improvement

and irrigation sections (chairman Professor P.A. Zhumakov) heard the following reports: N.I. Nefedov, Engineer and Deputy Minister of water economy of the Kirghiz SSR, A.A. Smolyakov (Stalingrad branch of Yuzhgiprovodkhoz) and V.N. Martensen, Engineer (Ministry of Water Economy of the Azerbaydzhan SSR) on the tasks facing the water economy in the Kirghiz SSR, Stalingrad oblast' and Azerbaydzhan SSR; A.A. Ovchinnikov, Director of Yuzhgiprovodkhoz, on "Several Questions on the Irrigation System and Agricultural Engineering of Winter Wheat and the Development of Rice Seeding in the Rostov Oblast'"; V.B. Koval', Candidate of Agricultural Sciences (NIMI), and P.A. Goncharenko, chief economist of Yuzhgiprovodkhoz, on principles for economical efficiency of irrigation systems; L.V. Skripchinskaya (NIMI), Candidate of Technical Sciences, on actual questions of utilizing river valleys and deltas; V.B. Zaytsev, Candidate of Agricultural Sciences, head of the laboratory of the Kuban' Rice Station on "The Water Supply of Rice Irrigation Systems". The section of agricultural water supply and irrigation, whose chairman was Professor V.S. Ovodov, heard the following reports: Professor V.S. Ovodov (NIMI), on "The Develop-

Chronicle. The 10th Jubilee Scientific Technical Conference of the Novocherkassk Institute of Engineering and Soil Improvement

ment of the Theory of Agricultural Water Supply by the Novocherkassk Institute of Engineering and Soil Improvement"; N.A. Karambirov, Candidate of Technical Sciences (Moscow Institute of Irrigation Engineers imeni Vil'yams) and I.F. Volodko (All-Union State Institute of Geology), on general irrigation problems; B.M. Kozenko, head of the Krasnodar Giprosel'stroy, on "The Classification of the Waters of the Priazovo-Kuban' Artesian Basin"; M.Ya. Yeliseyev, Candidate of Technical Sciences (NIMI), on the development of unreinforced cement-lined gravel filters for well drilling; D.D. Savvin, Candidate of Technical Sciences (NIMI), on "The Experience in Operational Utilization of Inertia Pumps of the A.V. Kanashinskiy and D.D. Savvin System, for Providing Dry Regions with Water"; V.M. Dolinskaya, Candidate of Technical Sciences, representative of Ukrainian NIIGiM, on "Water Consuming Norms for Planning Water Supply Lines on Cattle Farms"; A.A. Romanov, Chief engineer of the Stalingrad office of Meliovodstroy, on "Experience in Using NIVI Construction Filters Made of Porous Concrete with Reinforced Shaft Wells"; M.T. Rastyapin,

Card 6/10

Chronicle: The 19th Jubilee Scientific Technical Conference of the Novocherkassk Institute of Engineering and Soil Improvement

Engineer NIMI, on "Automatic Chlorinators for the Disinfection of Low Water Discharges"; S.N. Linevich, Engineer, Novocherkassk politekhnicheskiy institut (Novocherkassk Polytechnical Institute), on "Experience in Using Radiometric Isotope Methods for Research in Water Processing"; M.G. Kukhlak, Engineer, Sostteploelektroproyekt, on " A Graphic Method for Selecting Economical Pipe Diameters for Steel Water Pipes"; V.S. Il'yin, Candidate of Technical Sciences (NIMI), on "The Influence of the Location of Water Pressure Reservoirs on the Operational System of Pumps, Water Pipes, Water Systems and Water Towers". The hydrotechnical section whose chairman was I.K. Fedichkin, Candidate of Technical Sciences, heard the following reports: L.A. Chernikevich, Deputy chief engineer of the Vsesoyuznyy proyektnyy institut "Giprovodkhoz" (All-Union Planning Institute "Giprovodkhoz"), on "Standard Planning and Questions in Scientific Research"; Dotsent V.M. Apollosov (MIIVKh im. Vil'yams) on "Prefabricated and Reinforced Concrete in Soil Improvement Structures"; A.F. Dikov, Engineer (Azgiprovodkhoz), on "Prefabricated Hydrotechnical Structures in Azerbaydzhan"; V.D. Zherzhnev, Engineer (Pyatigorsk branch

99-58-7-10/10

Chronicle. The 10th Jubilee Scientific Technical Conference of the Novocherkassk Institute of Engineering and Soil Improvement

of Yuzhgiprovodkhoz), on "A Prefabricated Reinforced Concrete Water Spillway for Water Reservoirs of Kolkhozes"; A.D. Soldatov, Engineer, on "The Designing of Prefabricated Reinforced Concrete Bulkheads by Giprorechtrans"; V.M. Polumbo on observations on the filtration through the Tsimlyansk dam; I.K. Fedichkin, Candidate of Technical Sciences and S.K. Kuznetsov, Engineer (NIMI), on "Laboratory Research on the Hydroelectric Power Plant on the River Aley for the Purpose of Supplying Water to the Altay Tractor Plant and the Town of Rubtsovsk"; P.F. Kononenko, Candidate of Technical Sciences, V.P. Ivanov and P.M. Stepanov (NIMI), on "Laboratory Research of Water Spillways of the Hydroelectric Power Plant of the Kuban'-Kalaus Irrigation System"; V.V. Grekov, Engineer, on "Complex Methods to Control the Sliding and Rupture of Shores"; P.V. Pashchenko on "Experience in Using Stationary Continuous Shore-Supporting Construction". The hydraulic, hydroenergetic and hydrological section whose chairman was Dotsent M.M. Skiba, Candidate of Technical Sciences, heard the following reports: A.D. Soldatov, Engineer, on "Some Observed Results of the Transformation of the Tsimlyansk Water Reservoir Shores"; L.M. Konarzhevskiy,

Card 3/10

Chronicle. The 19th Jubilee Scientific Technical Conference of the Novocherkassk Institute of Engineering and Soil Improvement

Engineer (Yuzhgiprovodkhoz), on "Surface Water Flow in the Sal'sk Steppe"; Dotsent A.F. Samokhin (Rostov State University), on "Geographical Borders of the Distribution of "Pyatro" (unknown) in the USSR"; S.A. L'vov, Dotsent of the Dnepropetrovsk Sel'skokhozyaystvennyy institut (Dnepropetrovsk Agricultural Institute), on "A New General Method of Monomial Expressions for the Calculation of Turbulent Flow Streams"; K.I. Lysov, Candidate of Technical Sciences (NIMI), on "The Cavitation of Pumps in Soil Improvement Pump Stations of the Rostov Oblast'": G.M. Gavenko, Candidate of Technical Sciences (NIMI), on "Results of Laboratory Research on the Winter System of Water Intakes Without Dams"; V.P. Levon, Stalingrad GES, on "Advanced Operational Methods of Fitting in the Construction of the Stalingrad GES"; S.I. Ignatenko, Candidate of Technical Sciences and A.K. Tilin (NIMI), on "Hydraulic Calculation of the Water Intake at the Intersection Place of Two Flows". The joint meeting of the hydrotechnical, hydraulic, hydroenergetic and hydrological sections heard the following reports: N.M. Okiba, Candidate of Technical Sciences (NIMI), on "The

99-58-7-10/10

Title: The 19th Jubilee Scientific Technical Conference of the Novocherkassk Institute of Engineering and Soil Improvement

Internal Mechanism of the "Water Jump"; A.A. Koshintsev, Engineer and head of the hydrotechnical section of the Belorechenskaya GES, on "Methods to Control the Filling in of the Upper Water Head of the GES"; A.D. Saratovskiy and A.T. Bereza, Engineer, on "The Control of Ice Disturbances in Hydrotechnical Structures and Canals"; V.G.Sukharev on hydraulic problems in the activity zone of the Pyatigorsk branch of Yuzhgiprovodkhoz. The section of forestry whose chairman was S.F. Bessarabov, Candidate of Agricultural Sciences, heard the following reports: S.F. Bessarabov on "The Results of the Scientific and Educational Work of the Forestry Department of NIMI During the Time of Its Existence"; Dotsent K.A. Lashkevich and V.P. Pisarev, Forestry Engineers in the Don and North Caucasian regions; N.R. Kulikh, Candidate of Agricultural Sciences, N.A. Smirnova, Engineer, and Yu.T. Zolotarev on soil improvement and afforestation of sandy regions. The second plenary sitting agreed to convene the 20th scientific technical conference of the Institute in February 1959.

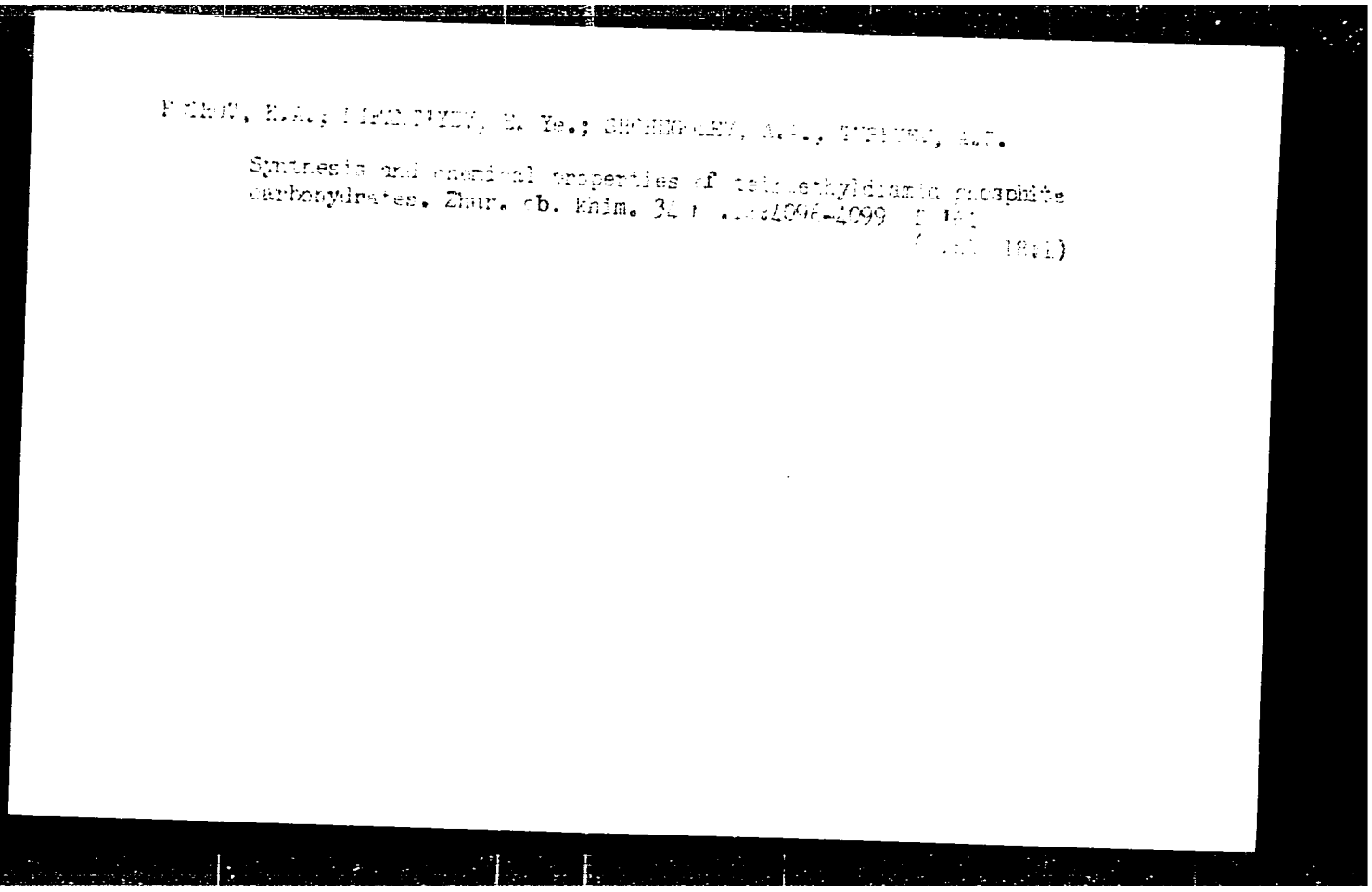
Card 10/10

1. Soil engineering--Development--USSR 2. Soil engineering--Development--China 3. Agriculture 4. Irrigation systems 5. Water--Chlorination

SHCHEGOLEV, A.A.

New achievements in brass die casting. [Izd..] LONITOMASH 45:138-149 '58. (MIRA 11:6)

(Brass founding)



[illegible], K.A.; [illegible], E. Ye.; [illegible], A.I., [illegible], A.T.

Synthesis and chemical properties of tetraalkyldiamin phosphite carbohydrates. Zhur. ob. khim. 34 [illegible]4096-4099 [illegible]
([illegible] 19:1)

SHCHEGOLEV, A.A., inzh.

Mold for making large castings under pressure. Lit. proizv. no.9:36-37 S '65. (MIRA 18:10)

NIFANT'YEV, E.Ye.; SHCHEGOLEV, A.A.

Synthesis and alkylation of dipropyl phosphorites of 1,2-5,6-dicyclohexylideneglucose, 1,2-isopropylidene-3,4-dimethylglucose, and 3,4-isopropylideno-β-methylarabinoside. Vest. Mosk. un. Ser. 2:Khim. 20 no.4:80-82 Jl-Ag '65. (MIRA 18:10)

1. Kafedra khimicheskoy tekhnologii Moskovskogo gosudarstvennogo universiteta.

SHCHEGOLEV, A.F.; IRGER, I.Yu.

New exhibits at the All-Union Industrial Exhibition. Leg.prom. 17 no.8:10-11 Ag '57. (MIRA 10:10)
(Moscow--Exhibitions) (Manufactures--Exhibitions)

SHCHEGOLEV, A.F., IRGER, I.Yu.

Awarding diplomas at the All-Union Industrial Exhibition. Tekst. prom. 17 no.9:54-56 S '57. (MIRA 10:11)
(Textile industry--Exhibitions)

SHCHEGOLEV, A.F.; IRGER, I.Yu.

New sewing equipment. Biul.tekh.-ekon.inform. no.2:44-46 '58.
(MIRA 11:4)

(Sewing machines)

KOPIEV, G.P.; SHCHEGOLEV, A.F.

The KhDV-type cotton fiber-extracting machine. Biul. tekh.-ekon. inform. no.3:49-50 '58. (MIRA 11:6)
(Cotton machinery)

KOPTSOV, G.P.; SHCHEGOLEV, A.F.

The SKE-3 automatic silk-fiber reeling machine. Biul.tekh.-ekon. inform. no.5:40-41 '58. (MIRA 11:7)
(Reels (Textile machinery))

SHCHEGOLEV, A.F.; IRGER, I.Yu.

Awarding diplomas at the All-Union Industrial Exhibition. Tekst. prom. 18 no.11:68-69 N '58. (MIRA 11:12)
(Technology--Exhibition)

SHCHERBOLEV, A.F., inzh.; IROER, T.Yu.

New equipment for light industry at the All-Union Industrial Exhibition. Izv.vys.ucheb.zav.;tekh.leg.prom. no.1:131-141 '59. (MIRA 12:6)

1. Upravleniye promyshlennosti Vsesoyuznoy vystavki dostizheniy narodnogo khozyaystva SSSR.
(Moscow--Industrial exhibitions)

SHCHEGOLEV, A.F., inzh.

Important objectives of the Exhibition of Achievements of the National Economy of the U.S.S.R. Mekh.i avtom.proiz. 14 no.6: 4-6 Je '60. (MIRA 13:7)

(Moscow--Exhibitions)
(Technological innovations)
(Automation)

SOSUNOV, Nikolay Alekseyevich; GRUNENYSHEV, Nikolay Aleksandrovich; KUZ'MIN, Nikolay Ivanovich; POMYKANOV, Nikolay Nikolayevich; SHCHEGOLEV, A.F., red.; GROMOV, N.D., red. izd-va; VAYNSHTEYN, Ye.B., tekhn. red.

[Mechanization of loading and unloading operations in transportation; review based on the materials of a thematic exhibition] Mekhanizatsiia pogruzochno-razgruzochnykh rabot na transporte; obzor po materialam tematicheskoi vystavki. Moskva, Gos.nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1962. 223 p. (MIRA 15:3)

1. Moscow. Vystavka dostizheniy narodnogo khozyaystva SSSR. (Loading and unloading)

SHCHEGOLEV, A.F.

Practices of the Exhibition of the Achievements of the National Economy in promoting the achievements of Soviet science and technology. NTI no.9:18-20 '65.
(MIRA 19:1)

SHCHERBOLEV, A.S., Cand Med Sci -- (diss) "Obtaining [redacted] filtering forms of hemolytic streptococcus in vitro and the biological properties of regenerated cultures." Los, 1959, 16 pp (Second Los/ State Inst im N.I. Pirogov) 250 copies (KL, 36-59, 120)