

SABININ, A., inzh.

New trends in the design of automobiles. Avt.transp. 41 no.2:
60-62 F '63. (MIRA 16:2)

(Automobiles--Design and construction)

SABININ, A.

Automobile racing. Avt. transp. 42 no.7:58-60 J1 '64.

(MIRA 17:11)

1. Predsedatel' tekhnicheskoy komissii Federatsii avtomobil'nogo sporta SSSR.

SABININ, Andrey Aleksandrovich; PLEKHANOV, Ivan Petrovich;
CHERNYAYKIN, Vladimir Aleksandrovich; YAKOVLEV, G.N.,
red.

[Manual for the driver of the second class] Uchebnik sho-
fera vtorogo klassa. Moskva, Transport, 1965. 393 p.
(MIRA 18:9)

STB/10, A.A.

133-7-17/28

AUTHOR: Babakov, A.A., Candidate of Technical Sciences, Sabinin, A.A. and Sinitzyn, I.P. (deceased), Engineers.

TITLE: Pickling of Stainless Steels (Travleniye nerzhaveyushchikh staley)

PERIODICAL: Stal', 1957, No.7, pp. 631 - 636 (USSR)

ABSTRACT: The problem of removing scale from hot-rolled, and subsequently annealed at high temperatures, stainless chromium steels was investigated. As a first step, the composition of scale on steels containing various percentages of chromium and submitted to various modifications of heat treatment was studied. Chemical, petrographic, X-ray and electronographic methods were used for these studies. This work was carried out by G.A. Kokorin, R.M. Rozenblyum, A.G. Ryl'nikova and K.K. Sekiro. The results obtained are shown in Table 1 and Figs. 1 and 2. As the second stage, laboratory experiments on heat treatment and pickling of steels (chemical compositions are given in Table 2) were carried out. For pickling individual acids and mixtures of sulphuric, hydrochloric, nitric, phosphoric and hydrofluoric acids with and without additions of their sodium salts at 60 - 70 °C were tested. However, the results obtained were not satisfactory. In further investigations, an attempt was made to modify the structure of scale during its formation

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Pickling of Stainless Steels.

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during annealing. Coating with aqueous solutions of NaCl, NaOH, Na_2CO_3 , NaNO_3 , NaF, etc. were tested individually and in mixtures. The best results were obtained by coating with a saturated solution of NaCl at 90°C (Fig.4, Table 3). In another series of experiments individual annealing of steel specimens (plates) without coatings was tested. The scale formed was easily removed from steels 1X13, X17 and X28 but not from steels 3X13 and 4X13 (Fig.5). As the best action of salt coatings was obtained with individual annealing (each plate separately), in order to check on the possibility of applying this method in practice, the influence of various methods of heating and soaking on the mechanical properties of steel were tested. The results are shown in Fig.6. Satisfactory results obtained on individual annealing of plates at 780°C with a soaking time of 2 minutes per 1 mm of the plate thickness. In conclusion, it is stated that the composition of scale on steels 1X13 - 4X13, X17, X25 and X28 is Cr_2O_3 , $\text{FeO}\cdot\text{Cr}_2\text{O}_3$ and iron oxides mainly in the form of Fe_3O_4 . In the upper layers of scale Fe_2O_3 was found. The internal zone directly touching the metal consists of $\text{Cr}_2\text{O}_3(\text{FeO}\cdot\text{Cr}_2\text{O}_3)$,

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8(2)

AUTHORS:

Gerasimov, V. V., Gromova, A. I.,
~~Sabinin, A. A.~~

SOV/32-24-11-31/37

TITLE:

Autoclave for Electro-Chemical Investigations at High
Temperatures and Pressure
(Avtoklav dlya provedeniya elektrokhimicheskikh issledovaniy
pri vysokikh temperaturakh i davleniyakh)

PERIODICAL:

Zavodskaya Laboratoriya, 1958, Vol 24, Nr 11, pp 1420-1421
(USSR)

ABSTRACT:

So far there are no satisfactory methods of determining the electrochemical potential and of plotting polarization curves at temperatures of 300-350° and at a pressure of 100-200 atmospheres. In the literature autoclaves are described (Ref 1) for the polarization of samples, but the problem of measuring the potential was not dealt with. The problem is the determination of the potential of the comparison electrode in the autoclave in comparison to the standard electrode which is under normal pressure and at a normal temperature. V. A. Gavrilin developed an autoclave with an electrolytic key, which allows electrochemical determinations at high temperatures and pressure (Sketch). In order to avoid a contact

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Autoclave for Electro-Chemical Investigations at
High Temperatures and Pressure

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of the electrolyte liquid of the key with the metal of the autoclave, the respective parts were made of "ftorplast" or "mikaleks". The electrolyte key is cooled with water, as these plastic materials can endure temperatures up to 200° only. Bonnemay (Bonme) (Ref 3) shows that the temperature gradient of the potential at the borders of identical solutions of different temperatures is very low, and, therefore, a respective error can be neglected. The autoclave is made of ~~1Kh18N9T~~ steel and has a capacity of 0.5 l. Cathode polarization curves for ~~1Kh18N9T~~ steel in distilled water are given. The apparatus can be used for investigations up to 350° and 200 atmospheres. There are 2 figures and 3 references.

Card 2/2

GERASIMOV, V.V.; GROMOVA, A.I.; SABININ, A.A.; SHAFVALOV, E.T.

[Autoclave for electrochemical research] Avtoklav dlia
elektrokhimicheskikh issledovani. Moskva, Glav. upr.
po ispol'zovaniiu atomnoi energii, 1960. 8 p.
(MIRA 17:2)

SABININ, A. A.

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PHASE I BOOK EXPLOITATION

SOV/5256

Gerasimov, Valentin Vladimirovich, ed., Candidate of Chemical Sciences.

Korroziya reaktornykh materialov; sbornik statey (Corrosion of Nuclear-Reactor Materials; a Collection of Articles) Moscow, Atomizdat, 1960. 284 p. 3,700 copies printed.

Ed.: A.I. Zavodchikova; Tech. Ed.: Ye.I. Mazel'.

PURPOSE: This collection of articles is intended for mechanical and metallurgical engineers as well as for scientific research workers concerned with the construction of nuclear reactors.

COVERAGE: The water corrosion of various types of stainless steel and alloys under high pressures and temperatures is investigated from the point of view of the use of these materials for the construction of nuclear reactors. Attention is given to the following: the use of oxygen for protecting steel against corrosion, the behavior of steel in high-temperature

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Corrosion of Nuclear- (Cont.)

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water with various compositions, factors of metal stress corrosion, intergranular corrosion, the mechanism of corrosion cracking, and the corrosion resistance of aluminum and zirconium alloys. Conclusions based on test results are included. No personalities are mentioned. Most of the articles are accompanied by references. Of 238 references 97 are Soviet.

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PART I. METHODS OF INVESTIGATING WATER
AND ELECTROCHEMICAL CORROSION AT
HIGH TEMPERATURES AND PRESSURES

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Gulyayev, V. N., and P. A. Akol'zin. Methods of Testing the Corrosion-Creep Strength of Metals at High Pressures and Temperatures
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Gerasimov, V. V. , and A. I. Gromova. Effect of the Composition		

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S/081/61/000/020/053/089
B102/B147

AUTHORS: Babakov, A. A., Tufanov, D. G., Sabinin, A. A.

TITLE: Corrosion of steels in sea water

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 20, 1961, 261, abstract
20I164 (Sb. tr. Tsentr. n.-i. in-t chernoy metallurgii, no. 17,
1960, 228 - 246)

TEXT: The corrosion rate of steels under maritime conditions follows
certain rules depending on their composition and structure. Carbon and
low-alloy steels were found to corrode in sea water and sea air at nearly
the same rate. [Abstracter's note: Complete translation.]

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S/076/61/035/006/010/013
B127/B203

AUTHORS: Gerasimov, V. V., Gromova, A. I., Sabinin, A. A., and Shapovalov, E. T.

TITLE: Autoclave for electrochemical investigations at high temperatures and pressures

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 6, 1961, 1359-1361

TEXT: The authors describe an autoclave to which the reference electrode is attached outside and is kept at room temperature. An electrolytic cell establishes the contact with the solution in the autoclave. It must also endure the higher temperatures in the autoclave. A thermodiffusion potential results from the temperature gradient in the cell, which has to be taken into account. Since glass and quartz are dissolved, metal is used for the cell. Fig. 1 shows the measuring arrangement in a simulated representation. Due to earthing of the potentiometer 10, the electrode potential behaves just as in a glass cell. An essential shortcoming of the autoclave of Fig. 2 is that the cathodic and anodic curves of experiments in distilled water are only dependable for those curve sections

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Autoclave for electrochemical...

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B127/B203

where the current density does not exceed $70 \mu\text{a}/\text{cm}^2$. In the autoclave construction of Fig. 3, the anodic and cathodic spaces are divided. This shifts the major part of the potential drop between the electrodes into the electrolytic cell. Therefore, the residual drop in the vacuum (containing the specimen to be tested) is small and negligible. This also applies to the thermodiffusion potential formed due to the temperature increase in the cell. At the boundary of similar solutions of different temperatures, the value was only about 10^{-6} v/deg. There are 3 figures and 1 non-Soviet-bloc reference. The reference to the English-language publication reads as follows: M. Bonnemay, Proc. meeting international committee of electrochemical thermodynamics and kinetics, 1954, London, 1955, 68.

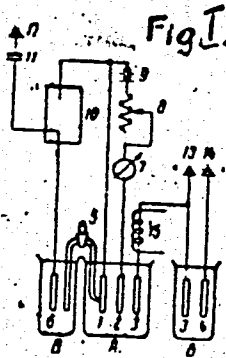
SUBMITTED: October 16, 1958

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Autoclave for electrochemical...

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Fig. 1: Simulating scheme for measurements in the autoclave.
Legend: (1,2) specimens, (3) autoclave body, (4) conduit, (5) electrolytic cell, (6) calomel half-cell, (7) microammeter, (8) rheostat, (9) current source, (10) potentiometer, (11) capacitor (2 μ F), (12) potentiometer earthing, (13, 14) earthing for (3, 4), (15) coil (100 windings) for heating the autoclave.

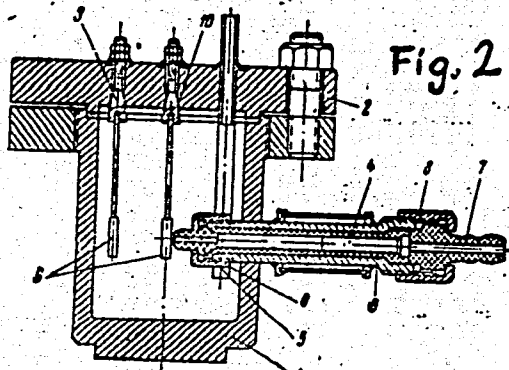


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Autoclave for electrochemical...

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Fig. 2: Autoclave.
Legend: (1) Autoclave body, (2) cover, (3) electric connections, (4) stopper, (5) nipple, (6) tube, (7) nozzle, (8) nut, (9) specimens, (10) insulations. (4) is a birchwood stopper impregnated with water; it safeguards the electrolytic contact and hermetic sealing. (5,6,7) are made of fluoroplast, and are cooled outside with water.



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Autoclave for electrochemical...

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Fig. 3: Autoclave
with separated anodic
and cathodic spaces.
Legend as in Fig. 2.

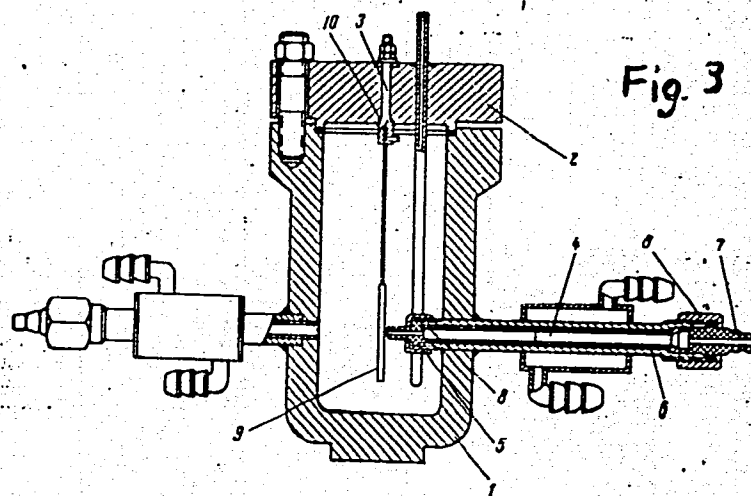


Fig. 3

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GERASIMOV, V. V., doktor tekhn. nauk; GROMOVA, A. I., inzh.;
SABININ, A. A., inzh.

Corrosion resistance of chromium steel in water and steam with
critical parameters. Teploenergetika 10 no.3:22-25 Mr '63.
(MIRA 16:4)

(Steel—Corrosion)

SABININ, Dmitriy Anatol'yevich, prof.; CHAYLAKHYAN, M.Kh., prof., otv. red.; KUPESANOV, A.L., akademik, red.; GENKEL', P.A., red.; BLAGOVESHCHENSKIY, A.V., prof., red.; TRUBETSKOVA, O.M., kand. biol. nauk, red.; SHTERNREIG, M.B., red. izd-va; SUSHKOVA, L.A., tekhn. red.; KASHINA, P.S., tekhn. red.

[Physiology of plant development] Fiziologiya razvitiya rastenii. Moskva, Izd-vo Akad. nauk SSSR, 1963. 194 p. (MIRA 16:2)

1. Chlen-korrespondent Akademii nauk Armyanskoy SSR (for Chaylakhyan).
2. Chlen-korrespondent Akademii pedagogicheskikh nauk RSFSR (for Genkel').

(Plant physiology)

~~SABININ, Grigoriy Kharlamovich; SEKTOROV, Vladimir Rafailovich; SHOLO-~~
~~MOVICH, G.I., redaktor; GALOYAN, M.A., redaktor; SOKOLOVA, R.Ya.,~~
tekhnicheskiy redaktor.

[Wind driven generator assembly VE-2 and its use] Vetroelektricheskiy
agregat VE-2 i ego ekspluatatsiia. Moskva, Gos.izd-vo lit-ry po vop-
rosam sviazi i radio, 1954. 62 p. (MIRA 8:4)
(Wind power) (Electric generators)

124-58-6-6337

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 6, p 8 (USSR)

AUTHOR: ~~Sabinin, G. Kh.~~

TITLE: The Theory of Controlling High-speed Wind Motors By Means of Blade-pitch Control Actuated by a Centrifugal Governor (Teoriya regulirovaniya bystrokhodnykh vetrodvigateley povorotom lopastei tsentrobezhnym regulyatorom)

PERIODICAL: V sb.: Prom. aerodinamika. Nr. 8. Moscow, Oborongiz, 1957, pp 5-77

ABSTRACT: Bibliographic entry

1. Windmills--Control systems

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124-58-9-9778

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 9, p 43 (USSR)

AUTHOR: Sabinin, G. Kh.

TITLE: On a New Type of Wind-power Station With Pneumatic Power Transmission (Po povodu novoy skhemy vetroelektricheskoy stantsii s pnevmaticheskoy peredachey moshchnosti)

PERIODICAL: V sb.: Prom. aerodinamika. Nr 8. Moscow, Oborongiz, 1957, pp 197-205

ABSTRACT: Concepts and reasonings relative to a clarification of the operating process of a wind-power station with pneumatic power transmission as proposed by the French engineer Andraud (?) ("Andro"). It is shown that the pneumatic transmission from the windmill to an air turbine and a generator shaft exhibits a low efficiency which in no case exceeds 50%. In connection therewith, however, the author indicates that the advantages of the pneumatic type of transmission over the usually employed mechanical transmission are so substantial in high-powered wind-power stations that their low efficiency should not stand in the way of their adoption. In conclusion the author performs a quantitative verification of a British wind-power installation with pneumatic power transmission and a rotor diameter $D=24.4$ m.

A. S. Ginevskiy

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1. Windmills--Operation 2. Windmills--Effectiveness 3. Power plants--Design

SABININ, G. Kh.

8(5) PHASE I BOOK EXPLOITATION SOV/2570
Akademiya nauk SSSR, Energeticheskii Institut
Voprosy vostochnykh stran (Problems in Wind Power Engineering)
Moscow, Izdatel'stvo AN SSSR, 1959. 135 P. Errata slip inserted.
1,700 copies printed.

Ed. of Publishing House: V. N. Golovko; Tech. Ed.: I. N. Guseva; Editorial Board: Y. M. Azev, Corresponding Member, VASOMIL, Professor (Resp. Ed.), D. B. Bystritskiy, K. P. Vashkevich, A. V. Krasishin, V. R. Sakorov, V. Ye. Fedotov, M. O. Frankfort, G. I. Sholemovich.

PURPOSE: The book is intended for power engineers, scientists, and research workers engaged in wind power engineering.

COVERAGE: These articles discuss aspects of wind power utilization. Individual papers treat the aerodynamic properties of windmills, existing windmills, the construction of new types of windmills, wind electric power stations, and efficient wind-electric and pumping units. A theory on the control of high-speed windmills is also discussed. The TANIIV (Central Scientific Research Laboratory for the Study of Windmills) is reported to be working on the development of a 400 kw wind-electric station in parallel operation with several stations with common buses to supply electricity to rural areas. References accompany each article.

Shefter, Ya. I. Studying the Operation of the D-18 Windmill With an Inertia Accumulator	66
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Card 3/A

SABININ, G.Kh.

Air-flow structure in the area of a rapidly rotating wind wheel.
Prom. aerodin. no.13:17-48 '59. (MIRA 13:3)
(Aerodynamics) (Windmills)

SABININ, G.Kh. (Moskva), FATEYEV, Ye.M. (Moskva)

Existing conditions and prospects for the use of wind power in
the U.S.S.R. Izv. AN SSSR. Otd. tekhn. nauk. Energ. i avtom. no.6:
44-55 N-D '60. (MIRA 13:12)

(Wind power)

SABININ, G.Kh.; GAFANOVICH, M.Ya.

Vibration of a windmill tower regulated by turning blades using a centrifugal regulator. Prom.aerodin. no.16:35-52 '60.
(MIRA 13:8)

(Windmills--Vibration)
(Aerodynamics)

GEMBARZHEVSKIY, M.Ya.; FEDYAYEVSKIY, K.K.; SABININ, G.Kh.

The 50th anniversary of the scientific activity of Professor
Konstantin Andreevich Ushakov. Prom.aerodin. no.24:5-8 '62. (MIRA 16:7)

(Ushakov, Konstantin Andreevich, 1892-)

SABITIN, G.Kh.

Investigating the unsteady flow in the area of a rotating windmill in case of harmonic vibrations of blades. Prom.aerodin. no.26:62-78 '64.
(MIRA 18:1)

Role of the nonlubricated friction in the direct-action centrifugal regulator of the VE-2 wind-driven electric power plant. Ibid.:93-112

SABININ, G.S. (g.Mozdok)

Physical experiments of students. Fiz. v shkole 18 no.4:66-69
Jl-Ag '58. (MIRA 11:7)
(Physics--Experiments)

SABININ, D.A. [deceased]; POLOZOVA, L.Ya.

Components of nucleic acids as growth promoting substances
[with summary in English]. Fiziol.rast. 4 no.1:38-43 Ja-F '57.
(MLRA 10:5)

1. Institut lesa Akademii nauk SSSR, Moskva.
(Growth promoting substances)
(Purines) (Pyrimidine)

SABININ, K.D.

Effect of the baric surface [atmospheric pressure] on the level of
the sea. Vest.Mosk.un. 9 no.6:121-133 Je '54. (MIRA 7:8)

1. Kafedra okeanologii.
(Atmospheric pressure) (Ocean)

SABININ, K. D.

AID P - 3190

Subject : USSR/Meteorology
Card 1/1 Pub. 71-a - 17/23
Author : Sabinin, K. D. and Zalogin, B. S.
Title : Testing thermobatigraphs of the TB-52 type at sea
Periodical : Met. i. gidr., 5, 58-60, S/O 1955
Abstract : The testing of a thermobatigraph used to record temperatures and depths of water is described. The article gives a detailed description of the instrument and its usage. Two diagrams show the recording curves.
Institution : None
Submitted : No date

Translation M-1179, 26 Feb 56

SABININ, K.D.; KUKSA, V.I.

Vertical circulation of ocean waters under natural conditions in winter.
Vest. Mosk. un. Ser. biol., pochv., geol., geog. 12 no.3:225-231 '57.
(MIRA 10:12)

1. Kafedra okeanologii Moskovskogo gosudarstvennogo universiteta.
(Ocean)

ZUBOV, N.N.; ~~SABININ, K.D.~~; GORYUSHKIN, M.N., red.; ZEMTSOVA, T.Ye.,
tekhn.red.

[Calculating the density of mixed sea water] Vychislenie
uplotnenia pri smesheni morskikh vod. Moskva, Gidrometeor.
izd-vo, 1958. 36 p. (MIRA 11:12)
(Seawater--Density)

AUTHORS: Sabinin, K. D., Gamutilov, A. Ye. 50-58-5-13/20

TITLE: An Attempt to Use the Laboratory-Interferometer ITR-2 for Determining the Salinity of Sea Water (Opyt primeneniya laboratornogo interferometera ITR-2 dlya opredeleniya solenosti morskoy vody)

PERIODICAL: Meteorologiya i Gidrologiya, 1958, Nr 5, pp 51-54 (USSR)

ABSTRACT: During the 25-th voyage of the ship "Vityaz" the chemical method (titration on chlorine) was thoroughly compared to the optical one (as mentioned in the title). The principle of action of the interferometer is based on the diffraction by a double slit. It is described in detail. The device can be used for the analysis of clear, non-dyed solutions, when the relation among the salts remains constant. The sea water satisfies this condition. Figure 1 shows such a Soviet interferometer for liquids ITR -2. On the vessel "Vityaz" a 4 cm-cuvette was thoroughly calibrated. The method of titration is described. The technique of operating instructions for the device was somewhat more precisely defined for the case of sea water. Of the 155 determinations by the interferometer which were in parallel controlled by titration the authors constructed a diagram (figure

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An Attempt to Use the Laboratory-Interferometer ITR -2 for 50-58-5-13/20
Determining the Salinity of Sea Water

2) The results almost exactly form a straight line. The following conclusions were drawn: 1) Work with the interferometer ITR-2 is very simple and can be performed on rough sea. Subjective errors are almost excluded. 2) The accuracy of results, as compared to titration, is very high. 3) The speed of determinations depends on the different temperatures of the samples. Although the interferometer cannot entirely replace the classical method of Knudsen it is already now clear that the device has a great future. The performed works do not enter a claim for the determination of all possibilities of the application of the interferometer in oceanography. There are 3 figures, 1 table.

1. Sea water--Properties
2. Sodium chloride--Determination
3. Interferometers--Applications

Card 2/2

3(0)

SOV/50-58-12-15/20

AUTHOR:

Sabinin, K. D.

TITLE:

A New Device for Determining the Density and Salt Content of Sea Water (Cox' (Koks) Salinometer) (Novyy pribor dlya opredeleniya plotnosti i solenosti morskoy vody (solemer Koksa))

PERIODICAL:

Meteorologiya i gidrologiya, 1958, Nr 12, pp 47-49 (USSR)

ABSTRACT:

The author describes the device which was suggested in 1954 (Fig 1, Ref 1). He underlines its advantages. A similar device was designed at the Kafedra okeanologii MGU (Moskovskiy gosudarstvennyy universitet) (Chair of Oceanography of the Moscow State University). It was useful to make the following modifications: 1) Valves 6 and 7 (Fig 1) were replaced by taps with dosage devices; 2) these taps were not mounted to a vertical wall (as is the case with Cox) but on a horizontal base; 3) according to the horizontal arrangement of the taps the whole scheme of mounting was somewhat altered: container 4 was placed on the horizontal base; 4) the rubber joints were restricted to a minimum; 5) a laboratory thermometer (scale from 0 to 50°, subdivision 0.1) with a magnifying glass was used; 6) the float was produced from molybdenum glass as a small piston with a diameter of 1.5 cm; 7) a sliding scale of

Card 1/2

A New Device for Determining the Density and Salt
Content of Sea Water (Cox' (Koks) Salinometer)

SOV/50-58-12-15/20

the salt content was not used at all. Figure 2 shows the total view of the modified device. It was tested at the Gosudarstvennyy okeanograficheskiy institut, laboratoriya khimii morya (State Oceanographic Institute, Laboratory for the Chemistry of the Sea). About 200 measurements which were carried out by means of this device, agreed well with titrations carried out simultaneously. From the last 53 (not selected) determinations the tare equation was computed. The accuracy of the determinations of a conditioned specific volume is on the average ± 0.02 with a security of ± 0.04 . Thus, it is not high enough. This, however, is not connected with fundamental deficiencies of the device, and the errors can be considerably reduced. One of the shortcomings is the small range of action of the respective float. Each test took on the average 5 minutes. This period of time can, however, be reduced by the half. L. K. Blinov gave advisory assistance, M. S. Edel'man cooperated in designing this device. There are 2 figures and 1 reference.

Card 2/2

SABININ, K.D.; GAMUTILOV, A.Āe.

Possibility of using the ITR-2 laboratory interferometer to
determine the salinity of sea water. Trudy Inst.ocean. 40:175-
183 '60. (MIRA 14:8)

(Interferometry) (Salinity)

SABININ, K.D.; SHCHERBININ, A.D.

Estimating the accuracy of the work of bathythermograph and
electrobathythermosonde and their possible use in studying the
surface layer of the sea. Trudy Inst.ocean. 40:184-188 '60.

(MIRA 14:8)

(Ocean temperature)

SABININ, K.D.

Special features of winter vertical circulation in zones of a shore runoff influence. Vest. Mosk. un. Ser.5: Geog. 15 no.3:37-41 My - Je '60. (MIRA 13:7)

1. Kafedra okeanologii Moskovskogo universiteta. (Kara Sea--Hydrology) (Laptev Sea--Hydrology)

SABININ, K.D.

Effect of the snow cover and water heat on the accumulation of ice.
Okeanologiya 3 no.1:23-29. '63. (MIRA 17:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

SABININ, K.D.

Purely thermal under-ice convection and the characteristics
of its calculation. Vop. geog. no.62:96-106 '63.
(MIRA 17:3)

SABININ, K.D.

Layers of high salinity in the northern part of the Indian
Ocean. Trudy Inst, okean. 64:51-58 '64. (MIRA 17:7)

IVANENKOV, V.N.; SUZYUMOV, Ye.M.; SABININ, K.D.

Fedor Aleksandrovich Gubin, 1926-1964; an obituary. Okeanologiya
4 no.6:1126 '64. (MIRA 18:2)

SABININ, K.D. (Moskva); SHULEPOV, V.A. (Moskva)

Short-period internal waves of the Norwegian Sea. Okeanologia
5 no.2:264-275 '65. (MIRA 18:6)

5 1 000-67 BMT(1) GW
ACC NR: AR6030086

(N)

SOURCE CODE: UR/0362/66/002/003/0872/0882

AUTHOR: Sabinin, K. D.

ORG: Academy of Sciences SSSR, Acoustics Institute (Akademiya nauk SSSR, Akusticheskiy institut)

TITLE: Connection between short-period interval waves and the vertical density gradient in the sea

SOURCE: AN SSSR. Izvestiya. Fizika atmosfery i okeana, v. 2, no. 8, 1966, 872-882

TOPIC TAGS: sea water, acoustic wave, temperature distribution, pressure distribution, fluid density measurement, ~~Minsk-2 computer~~

ABSTRACT: The author reports the results of an exhaustive experiment aimed at the study of internal waves in the sea and carried out in the tropical region of the Atlantic Ocean. Photothermographs were suspended at different levels, from 100 to 400 meters, in three buoy stations forming an isosceles right triangle with 17-mile side. They measured the temperature with accuracy 0.01 - 0.02° every 5 minutes for 4 - 6 days. The series of observations was subjected to a spectral analysis with the aid of the Minsk-2 electronic computer. The computing scheme is described. From a comparison of the frequency of the prevailing internal waves with the vertical variation of the Väisälä frequency, the author advances the hypothesis that the thermocline has resonant properties, which possess a certain frequency predominance. It is shown that such properties can be possessed also by thermocline layers which incorporate a more

Card 1/2

UDC: 551.466.8

L 10290-67

ACC NR: AF6030086 /

or less thick layer with a constant value of the Vaisala frequency. The author thanks V. A. Polyanskaya for valuable advice and for permission to use some of her results. Orig. art. has: 7 figures, 4 formulas, and 1 table.

SUB CODE: 04/ SUBM DATE: 25Mar66/ ORIG REF: 002/ OTH REF: 006

VERTSMAN, G. Z., kand. tekhn. nauk; TAL', K. K., kand. tekhn. nauk;
SABININ, L. A., inzh.

Problems of using electronic digital computers for planning
stations and junctions. Transp. stroi. 13 no.3:45-47 Mr '63.
(MIRA 16:4)

(Electronic digital computers)
(Railroads--Construction)

6(1)

AUTHOR: Sabinin, I.V.

SOV/155-58-3-9/37

TITLE: On the Geometry of Subsymmetric Spaces (O geometrii subsimmetricheskikh prostranstv)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1958, Nr 3, pp 46-49 (USSR)

ABSTRACT: The author considers the n -dimensional connected Riemannian space V_n with the measuring tensor $g_{IK}(x^1, x^2, \dots, x^n)$; $I, K=1, \dots, n$. An isometric mapping of the V_n onto itself is denoted to be the subsymmetry S_A if the point A is a fixed point and $S_A^2 = I$ (identical mapping). The geodesic lines through A here go over into themselves. In Riemannian coordinates with the initial point in A this mapping has the form $\tilde{x}^I = A_K^I x^K$, $A_K^I A_R^I = \delta_R^K$. By a base transformation in A the affiner A_K^I can be brought to the

$$A_k^i = -\delta_k^i, A_b^a = \delta_b^a, A_a^i = 0, A_k^b = 0$$

$$a, b = 1, 2, \dots, m; i, k = m+1, \dots, n.$$

Card 1/2

On the Geometry of Subsymmetric Spaces

SOV/155-58-3-9/37

The number m is called order of the subsymmetry. The symmetry with the order m is denoted by $S_A^{(m)}$.

Let G - the maximal connected group of the isometric transformations of the V_n - be a Lie group; H be the maximal subgroup which lets A fixed.

Theorem: A homogeneous V_n with $ds^2 > 0$ of the Lie fundamental group G and the non-trivial Lie rotation group H is subsymmetric.

Theorem: The surface of the fixed points of $S_A^{(m)}$ is completely geodesic.

Theorem: A homogeneous V_n with a Lie fundamental group G and an unsolvable stationary subgroup H - Lie group - is subsymmetric.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova
(Moscow State University imeni M.V.Lomonosov)

SUBMITTED: March 14, 1958

Card 2/2

68020

SOV/155-58-6-21/36

46(1) 16,5600

AUTHOR: Sabinin, L.V.

TITLE: On the Structure of the Groups of Motion of Homogeneous Riemannian Spaces With Axial Symmetry

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1958, Nr 6, pp 127-138 (USSR)

ABSTRACT: Let $V_n = G/H$ be a Riemannian space with the transitive Lie group of motion G , the stationary subgroup of which is the Lie H - group. Let the space V_n be subsymmetric, i.e. it is assumed to possess m -dimensional completely geodesic reflector surfaces and to permit isometric reflections on these surfaces. If m is the smallest possible dimension of the reflector surfaces, then this space is denoted with V_n^m . It is stated that the algebra of the group of motion of a V_n^m always possesses a certain canonical basis with $ds^2 > 0$. This result is used in order to carry out, by considering the Cartan metric

Card 1/2

SABININ, L. V., Candidate of Phys-Math Sci (diss) -- "Mirror symmetry of Riemann spaces". Moscow, 1959. 7 pp (Moscow Order of Lenin and Order of Labor Red Banner State U in M. V. Lomonosov, Mech-Math Faculty), 150 copies (KL, No 20, 1959, 109)

16,5600

68148

~~16(1)~~

AUTHOR: Sabinin, L.V.

SOV/20-129-6-11/69

TITLE: The Geometry of Homogeneous Riemannian Spaces and the Inner Geometry of Symmetric Spaces

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 6, pp 1238-1241 (USSR)

ABSTRACT: The author shows that the determination of all homogeneous spaces with a compact or semisimple group of motions and with a compact or semisimple rotation group is equivalent to the determination of all completely geodesic surfaces of symmetric Riemannian spaces which possess a simple group of motions and are generated by an inner involutive automorphism. Consequently it is a problem of the inner geometry of symmetric Riemannian spaces.

Altogether the author gives 6 theorems (partly with proofs). There are 3 references, 2 of which are Soviet, and 1 French.

ASSOCIATION: Institut matematiki Sibirskogo otdeleniya AN SSSR
(Institute of Mathematics of the Siberian Department AS USSR)

PRESENTED: August 3, 1959, by S.L. Sobolev, Academician

SUBMITTED: August 3, 1959

Card 1/1

81393

5/020/60/132/06/13/068
C111/C222

16.5600

AUTHOR: Sabinin, L.V.

TITLE: Explicit Expression of Connectivity Forms for a Quasisymmetric Space by Values of Curvature and Torsion Tensors at Some Point

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol.132, No.6, pp.1273-1276

TEXT: A space of affine connectivity with covariant constant tensors of curvature and torsion is called a quasisymmetric space of affine connectivity. Let u^1, u^2, \dots, u^n be spatial coordinates, $R^{i,j,pq}$ - tensor of curvature,

$S^{i,pq}$ - tensor of torsion, $\bar{N} = \| \| R^{i,j,pq} u^1 u^2 \| \|$, $\bar{S} = \| \| S^{i,pq} \| \|$, $\bar{I} = \| \| \delta_j^i \| \|$,

$$\bar{E} = \begin{pmatrix} \bar{I} & \bar{O} \\ \bar{O} & \bar{I} \end{pmatrix}, \quad \bar{E} = \begin{pmatrix} \bar{O} & \bar{I} \\ \bar{N} & \bar{S} \end{pmatrix}, \quad \bar{D} = \begin{pmatrix} \bar{O} & \bar{I} \\ \bar{N} & \bar{S} \end{pmatrix}, \quad d\bar{u} = \begin{pmatrix} du^1 \\ \vdots \\ du^n \end{pmatrix},$$

$\bar{\xi} = \begin{pmatrix} \bar{O} \\ d\bar{u} \end{pmatrix}$. It is shown that in the case of a positive definite metric

Card 1/2

SAENIN, L.V.

Isosolvatory resolutions of Lie algebras. Dokl. AN SSSR
165 no.5:1003-1006 D '65. (MIRA 19:1)

1. Institut matematiki Sibirskogo otdeleniya AN SSSR.
Submitted April 13, 1965.

AKHMEDBABAYEV, M.Kh.; ARIFDZHANOV, K.A.; BELOUSOV, N.A.; BELYAKOV, S.P.;
ZOTOV, V.G.; ISAYEVA, Z.D.; MAKHMUDOV, I.A.; ISHCENKO, F.S.;
KRASIL'NIKOV, Ya.A.; NIKOL'SKIY, I.P.; NETSETSKIY, A.M.;
PERGAT, F.F.; PAVLOVSKAYA, M.D.; SAMSONOV, L.S.; POLIZHAYEV,
A.I.; SMIRNOV, F.Ye.; SABININ, M.N.; SHUTYAYEV, N.A.; CHIZHIK,
V.I.; KARPENKO, P.M.; IMEROV, A.I.

Mikhail Aleksandrovich Nenetskii; obituary. Veterinariia 37
no.10:94 0 '60. (MIRA 15:4)
(Nenetskii, Mikhail Aleksandrovich, 1899-1960)

SEBININ, P.G.

AUTHORS Tatochenko, L.K., Lyndin, V.V., 32-8-34/61
Tokmakov, V.S., Moysh, Yu.V.,
Sabinin, P.G., Shchebrov, M.N.

TITLE An Automatic Magnetic Defectoscope for Controlling
Bar Materials.
(Avtomatizirovanny magnitnyy defektoskop dlya
kontrolya prutkovykh materialov.)

PERIODICAL Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 8,
pp. 967-969 (USSR)

ABSTRACT For controlling bar-like and cylindrical objects of
production, where the defects are mostly to be sought
in the direction of the axis, magnetization by a
magnetic circulation field is used which is effected
by the passage of current along the bar to be in-
vestigated. The amperage is chosen according to the
cross section of the bar to be investigated, namely
according to the formula: $I = (10 \div 20) d$, where I
signifies the amperage and d the cross section of
the object. The so-called defectoscope was constructed
on the basis which is described here. This apparatus,
however, only permits to make random tests. An automatic

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32-8-34/61

An Automatic Magnetic Defectoscope for Controlling Bar Materials.

control was experimentally worked out by the Ural branch of the Academy of Sciences of the USSR for the Plant imeni Serov. In this construction the object (bar) was immersed into a tub with magnetic suspension and at the same time current was sent through it. The method proved to be somewhat more practical, but the secondary functions made the control cumbersome. The paper further describes a new device which permits further automatization of the above-mentioned functions. On the slant plane the rolling bars are one by one automatically clamped, then they are in a circular movement immersed to the tub (as above with the passage of current) and finally they are let out of the clamps on the other side of the slant plane where they again begin rolling. This automatic operation takes 7 seconds per bar. Such an apparatus is already used in the Elektrostal' Works.

(3 illustrations, 3 references)
Central Scientific Research Institute for Ferrous Metallurgy.
(Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii)
Library of Congress.

ASSOCIATION:

AVAILABLE:
CARD 2/2

S/120/60/000/01/030/051
E201/E591

AUTHORS: Puzey, I.M. and Sabinin, P.G.
TITLE: Electromagnets for Physico-chemical Studies

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, Nr 1,
PP 104 - 109 (USSR)

ABSTRACT: In 1950-1955 the authors designed and constructed two laboratory-type electromagnets (Refs 6,7). The first of them is shown schematically in Figure 1. All its parts, except the wrought pole-pieces, were made of cast armco iron. The yoke of this electromagnet was a section of a tube in which two conical (53° cone angle) cores were mounted. The maximum diameter of the poles was 150 mm and the maximum gap between them was 90 mm. To produce a uniform field between the pole-pieces the latter were slightly recessed, as suggested by Rose (Ref 8). The electromagnet weighed about 1 500 kg. Figure 2 shows the magnetic fields obtainable with this electromagnet as a function of the number of ampere-turns. For a 17 mm gap and a pole-piece diameter of 30 mm the field was about 32 000 Oe at the gap centre and for a 30 mm gap and

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wrought the magnetic
second electromagnet.
"legs" highly uniform
from 10 000 Oe for a gap of
pole-piece diameter greater than 200 mm).

S/120/60/000/01/030/051

E201/E391

Electromagnets for Physico-chemical Studies

In a small gap (5-6 mm) and with pole-pieces of 10 mm diameter, fields up to 50 000 Oe could be obtained. All these values were obtained with $180-200 \times 10^3$ ampere-turns. The total power which had to be supplied to the second electromagnet amounted to 10 - 18 kW. Both the first and the second electromagnets were mounted so that they could easily be rotated about a vertical axis passing through the centre of the gap. The second electromagnet was found to be satisfactory in laboratory investigations, such as studies of anisotropy, etc. Acknowledgments are made to P.G. Sabinin and M.M. Suchkova for the design work connected with the electromagnets and to I.P. Bardin (deceased) for his help in construction. There are 7 figures, 1 table and 12 references, 5 of which are Soviet, 4 English, 2 German and 1 French.

ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (Central Scientific-research Institute for Ferrous Metallurgy)

SUBMITTED: December 22, 1958

Card3/3



DYMOV, V.V.; LOBASHEV, B.P.; MARKELOV, V.V.; SABININ, P.G.

Structural characteristics of the hydrostatic extrusion equipment
designed by the Central Scientific Research Institute of Ferrous
Metallurgy. Sbor. trud. TSNIICHM no.43:32-42 '65,
(MIRA 18:10)

SABININ, R.

"The thermogalvanometer," Radio, 1951.

SABININ, S. V.

Community Forests

Forest belts in the Kulunda steppe. Les i step' no.3:44-48 Nr' 52.

Monthly List of Russian Accessions. Library of Congress, July 1952.
Unclassified.

SABININ, V.A.

Servicing of electric locomotives at the Isil'-Kul' turn-around enginehouse. Elek. i tepl. tiaga 4 no.11:6-8 N '60.

(MIRA 13:12)

1. Master oborotnogo depo Isil'-Kul'.

(Isil'-Kul--Electric locomotives--Maintenance and repair)

S/080/60/033/008/006/013
A003/A001

AUTHORS:

Morachevskiy, A.G., Sabinin, V.Ye.

TITLE:

The Solubility Diagrams for the Ternary Systems ¹Caprolactam-Water-
Benzene, Caprolactam-Water-Carbon Tetrachloride and Caprolactam-
Water-Dichlorethane ¹

PERIODICAL:

Zhurnal prikladnoy khimii, 1960, Vol. 33, No. 8, pp. 1775-1779 ✓

TEXT:

Recently the industrial importance of ϵ -caprolactam (lactam of the ϵ -amino-capronic acid) increased considerably. The solubility of three ternary systems including caprolactam, water and an organic solvent was studied. In the experiments commercial caprolactam was used which was purified by an additional distillation under vacuum. Its melting point was 68.1°C. The purity of the other reagents was checked by measuring the refractive index and the density. The experimental results are given in Tables 1 - 6. These data are sufficient for the exact plotting of the lamination curves excepted the region near the critical solubility point. The solubility diagrams plotted on the experimental data are given in Figures 1-3. The system caprolactam-water-dichlorethane was investigated earlier by Kudryavtseva and Krutikova (Ref. 1). Their data differ from those

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S/080/60/033/008/006/013
A003/A001

The Solubility Diagrams for the Ternary Systems Caprolactam-Water-Benzene, Caprolactam-Water-Carbon Tetrachloride and Caprolactam-Water-Dichlorethane

obtained by the authors due to the application of a simplified method. There are 6 tables, 3 figures and 1 Soviet reference. ✓

ASSOCIATION: Leningradskiy gosudarstvennyy universitet imeni A.A. Zhdanova
(Leningrad State University imeni A.A. Zhdanov)

SUBMITTED: March 1, 1960

Card 2/2

BELOUSOV, V.P.; SABININ, V.Ye.; DMITRIYEV, I.V.

Calorimeter for determining the integral heats of vaporization of liquid mixtures. Izv.vys.ucheb.zav.; khim. i khim.tekh. 7 no.2:335-340 '64. (MIRA 18:4)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova, kafedra teorii rastvorov.

SABININ, YU, A.

Mar 1948

USSR/Electricity
Drives, Electric

"Scientific Engineering Session for Electrical Drives," Docent V. A. Rozenberg,
Chm of Session; Yu. A. Sabinin, Candidate Tech Sci, Sci Secy of Session, 3 $\frac{1}{4}$ pp.

"Elektrichestvo" No 3

Held in Leningrad, 8 - 13 Dec 1947. Main object: to place before electrical
engineers the plans for first postwar Five-Year Plan. Lists the more important
attending scientists and technicians. Briefly describes some of articles submitted
for reading and judgment.

PA47T24

SABININ, Yu. A. and ANDREYEV, V. F. Candidates of Tech Sci

"Scientific and Technical Session on Electric Drives for Metal-Cutting Machines,"
Elektrichestvo, No. 3, p. 86-88, 1951.

Translation W-24053, 27 Sep 1952.

RAZYGRAYEV, A.M.; SABININ, Yu.A., kandidat tekhnicheskikh nauk, nauchnyy redaktor; ZUSMAN, V.G., kandidat tekhnicheskikh nauk, retsenzent.

[Electronic control of metal cutting machines] Elektronnoe upravlenie na metallorezhushchikh stankakh. Leningrad, Gos. nauchno-tekhn. izd-vo mashinostroit. i sudostroit. lit-ry [Leningradskoe otd-nie] 1953. 103 p. (MIRA 7:?)
(Metal cutting) (Electronic control)

GABININ, YU. A.

Electricity - Scientists

Feb 59

"Professor A. A. Zolotarev (in connection with his 60th birthday)," N. A. Kuznetsov,
L. V. Noyan, M. P. Kostenko, S. A. Karyov, Ye. G. Chernikov, N. G. Kabanov,
S. S. Kuznetsov, V. A. Polyakov, V. T. Lashin, V. P. Andreyev, L. M. Petrovskiy,
A. M. Malinik, V. A. Ivanov, Yu. A. Gabinin

zh-vz, No 1, 1 A

Accounts chief events in professional life of Prof Alexander Aleksandrovich Zolotarev,
born 27 Nov 1898. Long active in field of high-voltage techniques, he has been
Chairman of Administrative Board of VNIIE since 1965.

PA 015009

ANDREYEV, V.P., kandidat tekhnicheskikh nauk, dotsent; SÁBININ, Yu.A., kandidat tekhnicheskikh nauk, dotsent.

Scientific-technical conference on electric drives for hoisting and transporting machines. Elektrichestvo no.9:88-89 S '53. (MLRA 6:9)
(Electric driving) (Hoisting machinery)

SABININ, Yu. A.

AID P - 443

Subject : USSR/Electricity

Card 1/1 Pub. 27 - 6/34

Author : Sabinin, Yu. A., Kand. of Tech. Sci.

Title : Transient Phenomena occurring in the Circuits Controlling Synchronous Rotation of Electric Drives of Mechanisms used in Hydraulic Developments

Periodical : Elektrichestvo, 7, 32-37, J1 1954

Abstract : The author discusses the problem of synchronization of rotation of induction motors and examines transient disturbances in electric circuits. He describes methods of eliminating or reducing a tendency to develop swinging phenomena. He brings forward methods of computation of transient processes and some considerations about them with a preliminary synchronization on one-phase connections. 9 diagrams, no references.

Institution : Leningrad Division of the Institute of Automatization and Telemechanics of the Academy of Sciences, USSR

Submitted : Ap 8, 1954

RIVLIN, Lev Borisovich; SABININ, Yu.A., redaktor; ZABRODINA, A.A., tekhnicheskii redaktor

[The maintenance of electrical equipment in shops] Obsluzhivanie tsekhovogo elektrooborudovaniia. Izd. 4-oe, perer. i dop. Moskva, Gos. energ. izd-vo, 1956. 284 p. (MLRA 9:12)
(Electric machinery--Maintenance and repair)

ANDREYEV, Vladimir Petrovich; ~~SABININ, Yuriy Alekseyevich~~; RUDAKOV, V.V.,
redaktor; ZABRODINA, A.A., ~~tekhnicheskii~~ redaktor; MEDVEDEV, L.Ya.,
tekhnicheskii redaktor

[Principles of electric drive] Osnovy elektroprovoda. Moskva, Gos.
energ. izd-vo, 1956. 448 p. (MIRA 10:1)
(Electric driving)

SABININ, Yu. A.: TIMOFEYEV, A. A. and KULIKOV, D. K.

"Automatics in Observer and Computer Techniques," a report presented at the Conference of Commission on Astronomical Instruments Construction of the Astronomical Council, AS USSR, 10-12 Feb 56.

Sum. No. 1047, 31 Aug 56

LITVAK, I.V., kandidat tekhnicheskikh nauk.; ROZENBERG, B.I., kandidat tekhnicheskikh nauk.; SABININ, Yu. A., kandidat tekhnicheskikh nauk.

Optimum rated power factor for synchronous motors. Proc. energ.
11 no.10:17-23 0 '56. (MLRA 9:11)
(Electric motors, Synchronous)

SAB 11/4

VERKHOLAT, Mikhail Yefimovich; FATEYEV, Aleksandr Vasil'yevich; ZUSMAN, V.G.,
kand.tekhn.nauk, retsenzent; NAYDIS, V.A., inzh., retsenzent;
SABININ, Yu.A., kand.tekhn.nauk, red.; VASIL'YEVA, V.P., red.izd-va;
SOKOLOVA, L.V., tekhn.red.

[Analysis of work and calculation of elements of electric drives]
Analiz raboty i raschet elementov elektricheskogo privoda. Moskva,
Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1957. 105 p.
(Electric driving) (MIRA 11:3)

TRAPITSYN, Valentin Ivanovich; SOTSKOV, B.S., doktor tekhnicheskikh nauk, retsenzzent; SABININ, Yu.A., kandidat tekhnicheskikh nauk, redaktor; CHFAS, M.A., redaktor izdatel'stva; SOKOLOVA, L.V., tekhnicheskiiy redaktor

[Automatization of production processes of industrial equipment]
Avtomatizatsiia proizvodstvennykh protsessov promyshlennykh ustanovok,
Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1957. 317 p.
(Automatic control) (MLRA 10:9)

SABININ, Yu. A.

SABININ, Yu. A., kand. tekhn. nauk; BOCHAROV, Yu. I., inzh.; ZABOROVSKIY,
S. A., inzh.; ZVYAGIN, I. Ye., inzh.; KULIKOV, S. N., inzh.; POPOV,
O. V., inzh.

A motor drive with wide-range smooth speed control. Elektrichestvo
no. 12:20-23 D '57. (MIRA 10:12)

1. Leningradskiy politekhnicheskii institut im. Kalinina.
(Electric driving)

VASIL'YEV, Dmitriy Vasil'yevich; CHUICH, Voislav Georgiyevich;
PATEYEV, A.V., prof., doktor tekhn.nauk, retsenent; SABININ,
Yu.A., dotsent, kand.tekhn.nauk, red.; DUDUSOVA, G.A., red.
izd-va; SIMONOVSKIY, N.Z., red.izd-va; NIKOLAYEVA, I.D.,
tekhn.red.

[Calculation of automatic control systems; problems and examples]
Raschet sistem avtomaticheskogo upravleniia; zadachi i primery.
Moskva, Gos. nauchno-tekhn.izd-vo mashinostr.lit-ry, 1959. 390 p.
(MIRA 12:10)

(Electronic control)

(Servomechanisms)

VASIL'YEV, Dmitriy Vasil'yevich; FILIPPOV, Gleb Sergeyevich; SABININ,
Yu.A., red.; SOBOLEVA, Ye.M., tekhn.red.

[Theory and design fundamentals of servomechanisms] Osnovy
teorii i rascheta slediashchikh sistem. Moskva, Gos.energ.
izd-vo, 1959. 428 p. (MIRA 13:2)
(Servomechanisms)

8(5)

AUTHORS:

Sabinin, Yu. A., Candidate of Technical Sciences,
Kyashnikov, V. A., Engineer

SOV/105-59-2-11/25

TITLE:

Investigating the Magnetic Field Distribution and Determining the Electromagnetic Torque in Electrical Machines by Means of the Hall-Effect EMF Transmitter (Issledovaniye raspredeleniya magnitnogo polya i opredeleniye elektromagnitnykh momentov v elektricheskikh mashinakh pri pomoshchi datchikov o.d.s. Kholla)

PERIODICAL:

Elektrichestvo, 1959, Nr 2, p 44-48 (USSR)

ABSTRACT:

Great possibilities are opened by a method for measuring the magnetic flux that is based on the use of the Hall (Kholl) emf. When the Hall transmitter is fastened to the rotor the complete reproduction of the induction distribution in the air gap of d.c. and a.c. machines is obtained. When fastening the Hall transducer to the stator the induction can be measured at both stabilized processes and transient ones. As the Hall voltage is proportional to the product of current by magnetic flux the electromagnetic moment of d.c. machines can be measured immediately. At first the essential relation-

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SOV/105-59-2-11/25

Investigating the Magnetic Field Distribution and Determining the Electromagnetic Torque in Electrical Machines by Means of the Hall-Effect EMF Transmitter

ships for the Hall effect are investigated. From the formulae derived, (6) and (9), it is to be seen that the main characteristics of the semi-conductor material are the movability μ of the current carrier and the Hall constant R . For investigating electrical machines the film transmitters of the Hall emf of HgSe and HgTe are the most useful. The authors used those of HgSe for their tests. The measurement of magnetic fields in electric machines and of electromagnetic torque in d.c. machines is investigated. On the base of the tests carried out the following can be stated: by means of Hall film transmitters the following measurements can be made: 1) The magnetic field in electric machines of any type can be measured with a maximum error of not more than 5%. 2) The constant and the alternating magnetic fields can be measured, simultaneously, at both, stabilized and transient operations. The measuring error does not increase at this. 3) The electromagnetic torque of the d.c. machines can directly be measured and recorded by an oscillograph. The measuring accuracy depends

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SOV/105-59-2-11/25
Investigating the Magnetic Field Distribution and Determining the Electro-
magnetic Torque in Electrical Machines by Means of the Hall-Effect EMF
Transmitter

on the number of transmitters used. Sometimes it is sufficient
for practical purposes to use 3 Hall transmitters, sometimes
even just one. There are 10 figures and 4 references, 3 of
which are Soviet.

SUBMITTED: July 17, 1958

Card 3/3

SABININ, Yu.A., kand.tekhn.nauk, dotsent

Review by L.B.Geiler's book "Electric drives in the manufacture of heavy machinery." Elektrichestvo no.4:94-96 Ap '60.

(MIRA 14:4)

(Bibliography--Electric driving)
(Bibliography--Machinery industry)
(Geiler, L.B.)

SABININ, Yu.A.; YEGOROV, V.P.

System for the automatic coordination of the rotation of the dome
with the movement of an equatorially mounted telescope. Izv.
krym.astrofiz.obser. 22:275-297 '60. (MIRA 13:7)
(Telescope)

SABININ, Yu.A.; KULIKOV, S.N.

Results of the competition of the Central Scientific Technical
Society of the Electric Power Industry. Elektrichestvo no. 12:86-
87 D '60. (MIRA 14:1)

(Electric power—Competitions)

3,120

S/035/61/000/004/050/058
A001/A101

AUTHORS: Sabinin, Yu.A., Yegorov, V.P.

TITLE: A system of automatic matching of dome rotation with telescope motion on an equatorial mounting

PERIODICAL: Referativnyy zhurnal. *Astronomiya i Geodeziya*, no. 4, 1961, 82-83, abstract 4A604 ("Izv. Krymsk.astrofiz.observ.", 1960, v.22, 275-297)

TEXT: The authors describe a system for synchronization of dome rotation with telescope motion. The coordinate converter is designed on the principle of electromechanical model with a set of servomotors and synchronous coupling systems. A distinctive feature of the system is the existence of automatic transposing of the dome in zenith. The synchronization system developed was investigated under laboratory conditions and on the MIM-500 telescope of the Crimean Astrophysical Observatory, AS USSR. The same system with an improved coordinate converter, PK-IV (PK-IV) is applied to the double 400-mm astrograph of the Observatory.

/B

[Abstracter's note: Complete translation]

Authors' summary

Card 1/1

3,1220 (1051, 1114)

30496
S/194/61/000/008/037/092
D201/D304

AUTHORS: Sabinin, Yu.A., Belyayev, Ye.N. and Myasnikov, V.A.

TITLE: A.C. photo-guides with assaying optics for small diameter instruments

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 8, 1961, 40, abstract 8 V311 (Izv. Krymsk. astrofiz. observ., 1960, 23, 174-183)

TEXT: The principle is considered of operation of 1- and 2-coordinate photoelectric follow-up systems (photoguides) for guiding or correcting the movement of astronomical instruments. The purpose of photoguides is to determine the magnitude of the angular error between the optical axis of the instrument and the object being observed and to send a control signal to a drive which reduces this error to the required minimum. The photoguide component which determines the direction and the deviation of the object picture from the optical axis, is either a two (for a single ordin- X

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A.C. photo-guides...

ate system) or four-faced (for a two-coordinate system) glass prism which puts the light beam from the object being observed into 2 or 4 light beams. Each of the beams is transmitted through a mechanical light chopper (modulator) in the shape of a disc with slits or holes and applied next to the cathode of an antimony-caesium photomultiplier. The output voltage from the multiplier is amplified and applied to the control winding of a 2-phase asynchronous motor which shifts the optical axis of the photoguide together with that of the instruments, decreasing thus the tracking error. Analysis is given of operation of 1- and 2-coordinate photoguides. The procedure is suggested of calculating the limit sensitivity of a photoguide and the results of experiments with photoguides with assaying optics are given. 7 figures. [Abstracter's note: Complete translation]

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22397

S/O35/61/000/005/032/042

A001/A101

3,2/00

AUTHORS: Sabinin, Yu.A., Nikolayev, P.V.

TITLE: The system for automatic guiding of telescopes with a semi-disk light flux modulator

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 5, 1961, 77, abstract 5A519 ("Izv. Krymsk. astrofiz. observ.", 1960, v. 24, 203-219, Engl. summary)

TEXT: The authors describe a photoelectric servosystem with a semi-disk modulator of light flux, intended for automatic guiding of telescopes. The design principle of the system is described, the functioning of its most important units is analyzed, data of experimental investigations are presented, and recommendations for the selection of parameters of the guide optical system are given. It is shown, on the basis of the experience data, that the application of such a system makes it possible to eliminate completely visual guiding while conducting a wide range of astrophysical studies, because it assures the accuracy sufficient for taking good direct photographs of sky regions at exposures of several hours. Ex-

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A001/A101

The system for automatic guiding of telescopes ...

perimental testing of the system was carried out at a number of telescopes of the Crimean Astrophysical Observatory AS USSR where, at present, a photoguide with the semi-disk modulator mounted on the 1,220-mm reflector is subjected to experimental operation.

Authors' summary

[Abstracter's note: Complete translation]

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S/081/61/000/021/055/094
B110/B101

AUTHORS: Khokhlov, D. G., Popko, V. N., Sabinin, Yu. A.,
Petukhova, V. V.

TITLE: Production of agloporite from finely disperse power plant
ashes and of agloporite-base light concrete

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1961, 314, abstract
21K328 (Stroit. materialy, no. 2, 1961, 12-16)

TEXT: The surface of pulverulent brine granulated to a size of 10-20 mm,
was covered with a thin layer of coal dust fuel. Subsequently, the
granules were fired on an agglomeration machine. The following was
studied: ash obtained by burning coal from Ekibastuz and Chelyabinsk. In
order to lower the sintering temperature, up to 10% of clay and up to
10-15% of nickel slag were added to the charge prior to the formation of
lumps. The ash readily formed lumps when wetted in pure state and also
when containing additions of slag and clay. The humidity content was
24-30%. The humid granules were sufficiently compact, transportable,
and capable of keeping pulverulent fuel on their surfaces (3-6% of the

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S/081/61/000/021/055/094

Production of agloporite from finely ... B110/B101

weight of the dry granules). Calcining was made at high rates. This guaranteed a high productivity of the plant and good agloporite qualities. The cooled material was pulverized, sieved into various fractions and then used to produce agloporite concrete. [Abstracter's note: Complete translation.] ✓

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ACCESSION NR: AT3008539

S/2984/63/000/000/0028/0036

AUTHORS: Sabinin, Yu. A.; Nikolayev, P. V.

TITLE: A system for automatic sighting and guidance of an azimuthal telescope

SOURCE: Novaya tekhnika v astronomii; materialy* soveshch. Komissii priborostroyen. pri Astronom. sovete AN SSSR, Moskva, 18-20 apr. 1961 g. Moscow, Izd vo AN SSSR, 1963, 28-36

TOPIC TAGS: telescope, altazimuth mounting, equatorial mounting, VT transformer, photoelectric guide, following system, electronic amplifier FEU 17, motor SL 361, tachogenerator Sl 161

ABSTRACT: The authors point out that with the development of large telescopes designers are turning to an azimuthal system for supporting the tube because of several advantages over the equatorial mounting. Some of these advantages are: greater simplicity of construction, possible securing of tube rigidity in only a vertical plane (thus diminishing the weight), convenience of using hydrostatic bearings for both rotating axes, and good working conditions for the mirror (which rotates only about a horizontal axis and may thus have a more reliable system of

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weight distribution). Furthermore, correction for atmosphere refraction and bending needs to be made only for one axis (according to zenith distance), and this considerably facilitates the task of automation. The main problem is that rotation must take place about two axes and at variable rates. To accomplish this a converter has been developed at the Institut elektromekhaniki AN SSSR (Institute of Electromechanics AN SSSR), using VT rotating transformers, to convert the hour and detection angles of equatorial coordinates to the azimuth and zenith distance of the altazimuth coordinates. This converter and the intricate mechanism making it operate are described in considerable detail. Following systems, fed from the converter, control movement along the two desired axes (azimuth and zenith). Comparative tests with a telescope with equatorial mounting were made, and this proved to be favorable to the new design. The total error during automatic operation did not exceed 0.15 diameter of the star image in the focal plane of the optical system supplying the photoelectric guide. Orig. art. has: 5 figures and 16 formulas.

ASSOCIATION: Institut elektromekhaniki GK SM SSSR po avtomatiz. i mashinostr.
 (Institute of Electromechanics GK SM SSSR for Automation and Machine Design)

SUBMITTED: 00

SUB CODE: AA, EC

Card 2/2

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 NO REF SOV: 005

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