

NAGORSKIY, M.P.; MIRONOVA, N.V.; KRAYEVSKAYA, L.N.

Stratigraphy of middle Paleozoic sediments in the Salair
Ridge. Mat.po geol.Zap.Sib. no.61:59-73 '58. (MIRA 12:8)
(Salair Ridge--Geology, Stratigraphic)

NAGORSKIY, M.P.

Regularities in the distribution of Devonian bauxites in the Salair
Ridge. Zakon.razm.polezn.iskop. 3:147-166 '60.

(MIRA 14:11)

1. Novosibirskoye geologicheskoye upravleniye.
(Salair ridge--Bauxite)

NAGORSKIY, M.P.

Using the sluicing method in prospecting for minerals in
Partially closed and closed low mountain areas. Razved. i
okh. nedr 26 no.2:27-29 Feb. '60. (MIRA 14:6)

1. Tomskaya ekspeditsiya.
(Geological surveys) (Mines and mineral resources)

NAGORSKIY, M.P.

Map making in geological surveys of low-mountain and plain
reliefs. Razved. i okh. ~~nedr~~ 27 no.5:44-45 My '61. (MIRA 14:9)

1. Tomskaya ekspeditsiya.
(Geology--Maps)

NAGORSKIY, M. P.

Pseudomorphs of glacial wedges in Quaternary sediments of the
extraglacial area in the West Siberian Plain. Geol. i geofiz. no.9:
116-117 '62. (MIRA 15:10)

1. Tomskaya ekspeditsiya Novosibirskogo territorial'nogo
geologicheskogo upravleniya.

(West Siberian Plain—Glaciology)

NAGORSKIY, M.P.; SANDANOV, I.B.; STOLYANOV, A.S.

Eocene sediments in the margins of the Tom'-Kolyvanskaya fold zone and minerals associated with them. Trudy SNIIGGIMS no.25:103-108 '62.

(MIRA 16:4)

(Siberia—Geology)

NAGORSKIY, M.P.

Relationship between CaO and MgO in sedimentary rocks and its significance
for studying climates of the past. Trudy SNIIGGIMS no.25:165-170 '62.
(MIRA 16:4)

(Climatology)

(Rocks, Sedimentary--Analysis)

BELCUS, I. Kh., st. nauchn. sotrud.; KAZANSKIY, Yu. P.; YEOVIN, V. V.;
 KLYAROVSKIY, V. M.; KUMENETSOV, V. P.; NIKOLAYEVA, I. N.,
 NOLGOZHILOV, V. I.; SEMENOV, E. M.; ARAYEV, M. D.; BABIN,
 A. A.; BERDNIKOV, A. I.; YEREMKHIN, Ye. Ia.; LAGODSKIY, M. P.,
 PIVETI, N. M.; BARANOV, G. Ye.; SEBLEK, I. V.; SMOLYANINOV,
 N. M.; SMOLYANINOVA, S. I.; YUSHIN, V. I.; BUIYAKOVA, M. I.,
 MEZAIPOV, N. M.; KASHTALOV, I. A.; KOLIBET, A. N.; SIZANOV,
 A. P.; GARASH, A. A.; BIKOV, M. D.; MOLODIN, L. V.; YURECOV,
 L. F.; KUCHIN, I. I.; SPARKIN, F. I.; st. nauchn. sotrud.; SHAROV, KAYA,
 L. I.; red.

[West Siberian ...
 nyi bassein. Nominatsiya ... AN SSSR, 1971, 12, 14. ... (12/12)]

1. Akademiya nauk SSSR. Sibirskiy nauchno-issledovatel'skiy institut geologii i geofiziki.
2. Institut geologii i geofiziki Sibirskiy nauchno-issledovatel'skiy tsentr otdeleniya AN SSSR (Prof. Boris A. Kuznetsov, Y. N. Kiyar, V. Kiyar, V. Kiyar, Kuznetsov, Nikolayeva, I. N., Semenov, E. M.).
3. Institut geologii i geofiziki Sibirskiy nauchno-issledovatel'skiy tsentr otdeleniya AN SSSR (Prof. A. A. Garash, M. D. Bikov, L. V. Molodin, L. V. Yurecov, L. F. Kuchin, I. I. Sparkin, F. I. Sharov, K. Ya. Sharov, Kaya, L. I.).

BELOUS, N. K. --- (continued) (Page 11)

1. Tsukiy, prof. G. I., tsukiy, G. I., tsukiy, G. I., tsukiy, G. I.,
Srelyaninov, Srelyaninov, Srelyaninov, Srelyaninov, Srelyaninov,
Ishiedovate, tsukiy, tsukiy, tsukiy, tsukiy, tsukiy, tsukiy, tsukiy,
nol, syryev, tsukiy, tsukiy, tsukiy, tsukiy, tsukiy, tsukiy, tsukiy,
Gulbert, G. I., Institut, G. I., Institut, G. I., Institut, G. I., Institut,
Garmash, G. I., Srelyaninov, Srelyaninov, Srelyaninov, Srelyaninov,
Bykov, Bykov, Bykov, Bykov, Bykov, Bykov, Bykov, Bykov, Bykov,
Institut, Institut, Institut, Institut, Institut, Institut, Institut, Institut,
Shakhov, Shakhov, Shakhov, Shakhov, Shakhov, Shakhov, Shakhov, Shakhov).

[Faint, illegible text]

NAGORSKIY, N.V., MARYNOV, P.G., inzhener, redaktor; BEGAK, B.A., redaktor;
VOLKOV, V.S., tekhnicheskij redaktor

[Adobe construction] Samannoe stroitel'stvo. Moskva, Gos.izd-v0
lit-ry po stroit. i arkhitekture, 1955. 118 p. (MLRA 8:10)
(Building, Adobe)

NAGORSKIY, P.M. (Tomsk); DESYATOV, V.P. (Tomsk)

A fatal case of primary echinococcus of the heart. Arkh. pat.,
19 no.3:61-63 '57 (MLRA 10:5)

1. Iz kafedry sudebnoy meditsiny (zav.-dotsent P.M. Nagorskiy)
Tomskogo meditsinskogo instituta, imeni V.M. Molotova.
(ECHINOCOCCOSIS, case reports
heart, fatal case)
(HEART DISEASES, case reports
echinococcosis, fatal case)

NAGORSKIĬ, V.D.

Elektrooborudovanie samoletov, elektroprivod. Moskva, Izd. Voenno-vozdushnoi inzhenernoi Akademii im. N.E. Zhukovskogo, 1948.

Title tr.: Aircraft electrical equipment. electric drive.

NCF

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress. 1955

MAKOVNIK, I.D.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

<u>Name</u>	<u>Title of Work</u>	<u>Nominated by</u>
Malozemlin, V.S.	"Description of the	Air Force
Porokovskiy, V.P.	Aircraft"	General V. P. Z.
<u>Maerskiy, I.D.</u>		
Strel'tsov, I.I.		

SO: W-30604, 7 July 1954

USSR/Physics - Transfer function for magnetic amplifier case

FD-1395

Card 1/1 : Pub 10 - 4/12

Author : Nagorskiy, V D. (Moscow)

Title : Transfer function of an asynchronous motor regulated by magnetic amplifiers as a circuit link of an automatized electrical drive

Periodical : Avtom. i telem , 15, No 6, 501-509, Nov-Dec 1954

Abstract : The author presents expressions for the transfer function of an asynchronous motor regulated by magnetic amplifiers in the circuit of the stator. He shows that the properties of a motor regulated by magnetic amplifiers are determined by four coefficients of linearization, for the finding of which he gives two methods. Values of the coefficients of linearizations are given here for a typical system in the entire region of possible equilibrium states. The structural circuit scheme of an asynchronous motor regulated by magnetic amplifiers can in the linear approximation for small deviations from equilibrium be represented as an inertia link connected in series with a link that can be, depending upon the state of the system, inertial, integrating or negative-static; the circuit contains flexible feedback. No references.

Institution :

Submitted : February 5, 1954

NAGORSKIY, V. D. (Dr. Tech. Sci.)

"Questions of the connection between fast action and power of a motor."

paper read at the Session of the Acad. Sci USSR, on Scientific Problems of Automatic Production, 15-20 October 1956.

Automatika i telemekhanika, No. 2, p. 182-192, 1957

9015229

RABOR, KIV, V.D.

Собрания по теории инвариантов и ее приложениям в автоматическом управлении. Киев, 1948

PLAS I BOOK EMULATION 309/4336

Теория инвариантов и ее приложения в автоматическом управлении. Киев, 1948. 120 стр. (Theory of Invariance and Its Applications to Automatic Control, Transactions of the Conference Oct. 9-20, 1948) Moscow, 1949. 120 p. No. of copies printed not given.

Sponsoring Agency: Akademiya nauk Ukrainy SSR, Otdeleniye tekhnicheskikh nauk. Resp. Na. V.S. Eshchukin, Academician; Editor: G. V. Koshchyn, Doctor of Technical Science, A. G. Iashchenko, Doctor of Technical Science, A. M. Iashchenko, Doctor of Technical Science, A. G. Iashchenko, Doctor of Technical Science, A. M. Iashchenko, Doctor of Technical Science, P. I. Kuznetsov, Doctor of Physics and Mathematics, A. I. Kuznetsov, Doctor of Technical Science, B. M. Petrov, Corresponding Member, Academy of Sciences USSR, I. I. Popov, Doctor of Technical Science, G. M. Shchegolev, Doctor of Technical Science, P. I. Chibrikov, Candidate of Technical Science, and N. M. Chibrikov, Candidate of Technical Science, Tech. Sci. G. V. Koshchyn.

PREFACE: This collection of papers is intended for engineers and other specialists working in various fields of automation engineering. The collection includes reports and papers presented at the Conference on the Theory of Invariance and Its Applications to Automatic Control, which was called by the Otdeleniye tekhnicheskikh nauk Department of Technical Science (Academy of Sciences of the Ukraine and renamed in Kiev October 9-20, 1948). The papers presented are concerned with high-quality automatic control systems designed on the basis of compensating for the effects of disturbance or maintaining the desired state of the system in the presence of the disturbance and mathematical foundations of invariance in automatic control systems. The papers also consider methods for designing and calculating invariant systems and problems connected with specific cases of practical applications of invariance in various automatic systems. On the basis of these reports it was established by the Conference that, by utilization of the conditions of compensation and the principle of invariance, it is possible to produce automatic systems and various instruments which are more perfect from the viewpoint of quality of the regulation and control process, stability, simplicity of construction, and reliability of operation. The following members of the Kiev Seminar on Automatic Control are mentioned as participants in the conference: V. A. Koshchyn, A. G. Iashchenko, P. I. Chibrikov. Reference accordingly is made to the list of participants on page 314.

Section 5. Servomechanisms and Drives

19. Математическая теория систем управления частотой вращения / Mathematical Theory of Combined Control by the Method of Logarithmic Frequency Characteristic 257

Discussion [speeches by:]

В.А. Косыгин

270

20. Исследование методов точного позиционирования / Investigation of Precision Positioning Methods 271

21. Исследование методов точного позиционирования / Investigation of Precision Positioning Methods 272

22. Исследование методов точного позиционирования / Investigation of Precision Positioning Methods 293

Сводный указатель

300

KULEBAKIN, Viktor Sergeyevich; ~~NACORSKIY, Valentin Dmitriyevich~~; POPOV, Yu.A., kand.tekhn.nauk, dotsent, retsenzent; ~~LARIONOV, A.N.~~, prof., retsenzent; ~~SENKEVICH, A.M.~~, dotsent, kand.tekhn.nauk, red.; TUBYANSKAYA, F.G., izdat. red.; ROZHIN, V.P., tekhn.red.

[Electric drives for airplane power units and mechanisms] Elektroprivod samoletnykh agregatov i mekhanizmov. Moskva, Gos. izd-vo obr. promyshl., 1958. 386 p. (MIRA 12:1)

1. Zaveduyushchiy kafedroy aviatsionnogo elektrooborudovaniya Moskovskogo aviatsionnogo instituta imeni Ordzhonikidze (for Popov).
2. Chlen-korrespondent AN SSSR. Zaveduyushchiy kafedroy elektrooborudovaniya samoletov i avtomobiley Moskovskogo energeticheskogo instituta (for Larionov).
(Electric drive) (Airplanes--Electric equipment)

NAGORSKIY, V D
8(2,5)

PHASE I BOOK EXPLOITATION SOV/1706

Kulebakin, Viktor Sergeyevich, and Valentin Dmitriyevich Nagorskiy

Elektroprivod samoletnykh agregatov i mekhanizmov (Electric Actuator of Aircraft Components and Mechanisms) Moscow, Oborongiz, 1958. 388 p. (Series: Elektrifikatsiya samoletov) 10,000 copies printed.

Reviewers: Yu. A. Popov, Candidate of Technical Sciences, Docent, Head, Department of Aviation Electric Equipment, Moscow Aviation Institute, and A. N. Larionov, Corresponding Member, USSR Academy of Sciences, Professor, Head, Department of Aircraft and Automobile Electric Equipment, Moscow Power Institute; Ed.: A.M. Senkevich, Candidate of Technical Sciences, Docent; Chief Ed.: A.I. Sokolov, Engineer; Ed. of Publishing House: F.G. Tubyanskaya; Tech. Ed: V.P. Rozhin.

PURPOSE: This book for practicing engineers and students of aircraft mechanisms is a systematic treatment of the principles of operation and the design features of electric actuators used in aircraft control functions.

COVERAGE: The book contains basic theory on aircraft electric actuators and gives analysis of the working processes of individual components and systems of electric
Card 1/11

Electric Actuator of Aircraft (Cont.)

SOV/1706

actuators of aircraft elements and mechanisms. Methods of automatic control by means of these systems are described. Data are presented on the static and dynamic characteristics and design features of the most widely used forms of electric actuators. There are 9 Soviet references. No personalities are mentioned.

TABLE OF CONTENTS:

Preface	3
FIRST PART. PRINCIPLES OF THE ELECTRIC ACTUATOR OF AIRCRAFT MECHANISMS	
Ch. 1. Basic Information	7
1.1. Principles of the actuator of aircraft mechanisms	7
1.2. Development of an aeronautical electric actuator	10
1.3. Classification of aircraft working components and actuating mechanisms	12
1.4. Requirements for actuators of aircraft operating mechanisms	25
1.5. Comparative analysis of various actuators of aircraft mechanisms	26
1.6. Properties of a hand driven actuator	32
Ch. II. Structure of Electric Actuators of Aircraft Mechanisms	34
2.1. Classification of electric actuators	34

Card 2/11

SOV/1706

Electric Actuators of Aircraft (Cont.)

	36
2.2 Electric motors used for driving aircraft mechanisms and components	46
2.3. General information on transfer systems	48
2.4. Reducers	52
2.5. Mechanical transformers of motion	53
2.6. Protective devices against mechanical overloads	55
2.7. Electromagnetic clutches	56
2.8. Braking systems	57
2.9. Energy losses in transfer systems	
2,10. Basic forms of apparatus and equipment controlled by electric aircraft actuators	60
Ch. III. Artificial and Operating Characteristics of Electric Motors.	63
Characteristics of Electromagnets	63
3.1. Basic characteristics of electric motors	
3.2. Artificial and operating characteristics of parallel and independently excited electric motors	63
3.3. Artificial and operating characteristics of series-excited electric motors	70
3.4. Operating characteristics of multiply excited motors	77

Card 3/1

SOV/1706

Electric Actuators of Aircraft (Cont.)

3.5.	Use of a system of relative units for expressing the characteristics of direct-current electric motors	79
3.6.	Comparison of the properties of differently excited d-c motors. Fields of application of differently excited motors	82
3.7.	Artificial and operating characteristics of asynchronous motors	85
3.8.	System of relative units for an asynchronous motor	91
3.9.	Artificial characteristics of a two-phase motor with increased active resistance of the rotor	93
3.10.	Hysteresis-type electric motors	98
3.11.	Static characteristics of electromagnets	99
Ch. IV.	Dynamic Principles of Electric Actuators	105
4.1.	On the dynamics of aircraft electric actuators	105
4.2.	Basic equation of motion of an electric actuator	107
4.3.	Basic equations characterizing transient processes in d-c electric actuators	110
4.4.	Starting an electric actuator with a parallel or independently excited motor under a constant load moment	111
4.5.	Power consumption for no-load starting	114
4.6.	Starting an electric actuator with a series-excited motor	115
4.7.	Power consumption in starting an electric actuator with a series-excited motor	118

Card 4/11

Electric Actuators of Aircraft (Cont.)

SOV/1706

4.8.	Starting an electric actuator having an asynchronous motor	119
4.9.	Graphical method of solving the equation of motion of an electric actuator	121 123
4.10.	Method of series calculations	126
4.11.	Transient processes in an electromagnetic actuator	
Ch. V.	Methods of Regulating the Rotational Speed of Electric Actuators Having D-C Motors	131 131
5.1.	Basic characteristics of the actuator to be regulated	
5.2.	Regulation of the rotational speed of independently or parallel excited motors by varying the resistance of an armature circuit	133
5.3.	Regulation of the rotational speed of independently excited motors by varying the excitation current	135
5.4.	Regulation of the rotational speed of series-excited motors by varying the resistance in the armature circuit	139
5.5.	Regulation of the rotational speed of series-excited motors by shorting the excitation coil	141
5.6.	Basic layouts and characteristics of generator methods of regulating the rotational speed of d-c servo actuators	144

Card 5/11

SOV/1706

Electric Actuators of Aircraft (Cont.)

5.7.	Transient processes in a servo actuator with independently excited generator	152
5.8.	Layouts and characteristics of servo actuators using dynamoelectric amplifiers (EMU) [amplidyne]	157
5.9.	Transient processes in a servo actuator with a longitudinally and transversely excited generator	160
5.10.	Characteristics of the impulse method for regulating speed	163
5.11.	Regulation of separately excited motor by applying pulses to the armature circuit	165
5.12.	Speed and mechanical characteristics of separately excited motor with pulses applied to the armature circuit	169
5.13.	Heat losses in impulse regulation	172
5.14.	Stabilization of the rotational speed of impulse-controlled d-c motors	173
5.15.	Regulation of the rotational speed of d-c motors with the aid of ion instruments	174
5.16.	Use of rectifiers and saturation chokes for regulation of d-c electric actuators	176
Ch. VI.	Methods for Regulating the Rotational Speed of Electric Actuators Having Asynchronous Motors	189
6.1.	Regulation of the rotational speed of an asynchronous motor by variation of the active resistance in the rotor circuit	189

Card 6/11

Electric Actuators of Aircraft (Cont.)		SOV/1706
6.2.	Regulation of the rotational speed of asynchronous motors with the aid of magnetic amplifiers (saturation chokes) in the stator circuit	190
6.3.	Regulation of the rotational speed of asynchronous motors by switching the number of pairs of poles	196
6.4.	Impulse regulation of the rotational speed of asynchronous motors	199
6.5.	Losses in impulse control of asynchronous motors	204
Ch. VII.	Tracking Electric Actuators. Synchronous Shaft Systems	205
7.1.	General information	205
7.2.	Tracking actuator with d-c motor controlled by electronic amplifiers	206
7.3.	Tracking actuator with d-c motor controlled by an amplidyne	210
7.4.	Tracking actuators with asynchronous motors	213
7.5.	Synchronous shaft system with asynchronous motors having electric connection through a rheostat	215
7.6.	Synchronous shaft system with auxiliary asynchronous machines	219
7.7.	Synchronous shaft system with d-c motors	221
		222
Ch. VIII.	Control of Electric Actuators	222
8.1.	Control functions of electric actuators	
Card 7/11		

Electric Actuators of Aircraft (Cont.)

SOV/1706

8.2.	Conventional symbols for automatic electric actuator layouts and rules for indicating them	224
8.3.	Methods for controlling the processes of starting, braking, and reversing electric actuators	227
8.4.	Simple control configurations of irreversible d-c electric actuators	235
8.5.	Simple control configurations of reversible d-c electric actuators	238
8.6.	Simple control configurations of a-c electric actuators	242
Ch. IX.	Heat Regime and Power of the Motor	246
9.1.	Heating of motors for continuous constant load	246
9.2.	Heat processes in electric motors for high-altitude conditions	248
9.3.	Heating processes of motors for short-duration and repeated short-duration loads	253
9.4.	General considerations regarding the choice of type and capacity of an electric motor	255
9.5.	Optimum transfer number of a transfer system	257
9.6.	Methods for selecting type and power of an electric motor for non-adjustable mechanisms	260
9.7.	Example of selection of type and capacity of an electric motor	264

Card 8/11

Electric Actuators of Aircraft (Cont.)

SOV/1706

SECOND PART. SYSTEMS OF ELECTRIFIED AIRCRAFT ACTUATOR MECHANISMS

Ch. X. Electric Starters for Aircraft Engines	273
10.1. Starting conditions for gas turbine aircraft engines	273
10.2. Electric starters for starting gas turbine aircraft engines	274
10.3. Comparison of various control methods for electric starters for gas turbine engines	276
10.4. Starters with indirect action	286
10.5. Control system for direct-action starters	292
10.6. Starter-generators for starting turbojet aircraft engines	297
10.7. General considerations regarding the starting of piston aircraft engines	302
10.8. Construction, principle of operation, and circuit diagrams of electric starters for aircraft engines	304
10.9. Process of acceleration of a starter flywheel	309
10.10. Process of decelerating an electrically inert starter and setting the aircraft engine in motion	315
10.11. Considerations regarding the selection of the parameters of an electrically inert starter	320
10.12. Special features of the working processes of combined-action starters	321

Card 9/11

Electric Actuators of Aircraft (Cont.)

SOV/1706

Ch. XI. Electric Actuator for Aircraft Control Surfaces	324
11.1. Electric actuator for rudders and ailerons	324
11.2. Electric actuator for trim tabs	328
11.3. Electric actuator system for Fowler flaps and split flaps	332
11.4. Individual electric actuator for split flaps	337
11.5. Electromagnetic actuator for interceptor aircraft	340
Ch. XII. Electric Actuator for Landing Gears	342
12.1. Mechanisms of retractable landing gears	342
12.2. Classification and special features of electric actuators for retractable-landing gear mechanisms	351
12.3. Electromechanical actuator systems for landing gear retraction mechanisms	352
12.4. Electromechanical individual actuator for landing gear retraction mechanisms	353
12.5. Electrohydraulic actuator for landing gear retraction mechanisms	363
12.6. Electric actuator for prelanding spin-up of the wheels	365
12.7. Electromagnetic actuator for the wheel brakes	369
Ch. XIII. Electric Actuator for Gun Turrets	371

Card 10/11

Electric Actuators of Aircraft (Cont.)

SOV/1706

- | | |
|--|-----|
| 13.1. Special features of electric actuators for gun turrets | 371 |
| 13.2. Electric actuator for turrets with direct control | 372 |
| 13.3. Construction and principle of operation of electric actuators
for turrets with remote control | 375 |
| 13.4. Structural layout of a tracker-type electric actuator with an
amplidyne for a turret | 379 |
| 13.5. Dynamic characteristics of a tracker-type electric actuator for
a turret | 380 |

References

384

AVAILABLE: Library of Congress

IS/gmp
6/29/59

Card 11/11

8(2) 28(1) PHASE I BOOK EXPLOITATION SOV/133
Soveschaniye po avtomatizirovannomu elektroprirodovremennogo
toka, Moscow, 1955

Trudy... (Transactions of the Conference on Automated A-C
Electric Drives) Moscow, Izd-vo AN SSSR, 1958. 398 p.
4,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut avtomatiki i
telemekhaniki.

Resp. Eds: V.S. Kulebakin, Academician, and M.O. Chilikin,
Doctor of Technical Sciences, Professor; Ed. of Publishing
House: D.M. Loffe; Tech. Ed.: I.P. Kuz'min.
GOVERNANCE: The conference was organized on the initiative of
the Institute of Automation and Telemechanics of the Academy
of Sciences, USSR, and the Moscow Power Engineering Insti-
tute and had as its aim the planning of the most progressive
ways of developing automatic control of electric drives. The
first conference on the subject of automated electric drive
took place more than ten years before the present one and
was concerned with d-c electric drives. The results of this
conference were found to be most valuable in the field of
building post-war Soviet industry and in furthering industrial
development. Present technical development of Soviet industry
demands high speeds, simplicity of construction, reliability
of operation, and economy. The squirrel-cage induction motor
with frequency control appears to be the most promising type
in the field of a-c drive. For wide application of this drive
of frequency economy there is a need of developing new types
in this connection at the USSR Academy of Sciences and Tele-
mechanics of the USSR Academy of Sciences and its Leningrad
branch, at the Moscow Power Engineering Institute, the Central
Design Bureau of the Elektroprirodovremennaya, the Central
Institute of the Ministry of Construction of the RSPSR, and
in other design organizations. These studies were discussed
at the present conference. The transactions contain material
concerning the theory and design of reactor, pulse, and
frequency methods of controlling a-c electric drives. A
Candidate of Technical Sciences I.V. Utkin and Engineer Y.A.
Kozlovskaya participated in the preparation of this collection
of papers. The volume was reviewed by Professor Ya. V. Mituov,
Doctor of Technical Sciences. Some of the papers include a
bibliography.

TABLE OF CONTENTS:

Macroskiy, V.D., Doctor of Technical Sciences. Special
Characteristics of Automatic Control of Induction Motors
Using Parametric Amplifiers 229

The author states that the most simple, reliable,
and economical automatic control system for induction
motors are those using parametric amplifiers. He describes
cause changes of using parametric amplifiers both in
secondary circuits of the motors. He describes primary and
metric amplifiers such as magnetic amplifiers or para-
core reactors, series transformer, pulse amplifiers,
and rheostat amplifiers, and discusses in detail electric
drive control systems equipped with them. He also supplies
the parameter relations for these types of parametric am-
plifiers. There are no references.

~~6428~~ 69638
S/024/60/000/02/006/031
E194/E155

8.2000
AUTHOR:

Nagorskiy, V.D. (Moscow)

TITLE:

Controlling d.c. Motors by High-Frequency Impulses

PERIODICAL:

Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1960, Nr 2, pp 38-43 (USSR)

ABSTRACT:

The use of transistors to control d.c. motors makes it possible to apply high-frequency impulse control, which offers various advantages over ordinary methods of impulse control. The simplest circuit is that of Fig 1 which is analogous to one described by R.E. Morgan (Ref 2). It comprises a transistor in series with the d.c. motor supply and a control potentiometer with a source of high-frequency voltage. The motor armature is shunted by a rectifier. The motor field, which is not shown, may be independently supplied or derived from permanent magnets. The period of the high-frequency supply does not exceed one tenth of the electrical time constant of the motor armature winding. The method of control is the same as in ordinary impulse control. The duration of voltage impulses is altered. The main difference

~~6638~~ 69638

S/024/60/000/02/006/031

E194/E155

Controlling d.c. Motors by High-frequency Impulses

between the system described here and the usual ones lies in the selection of impulse frequency. With the above mentioned relationship between the impulse frequency and the time constant of the armature circuit, and with the use of a rectifier to shunt the armature, the current in the armature circuit does not have the characteristics of impulses but is practically constant. In Fig 2 curve 'a' shows the diagram of armature current, and curve 'b' a diagram of the current drawn from the supply source. The mean value of current drawn from the supply is less than the mean value of armature current. During the impulse, energy is stored in the inductance of the armature winding and discharges into the armature during the pause. The control frequency may be reduced if a choke is connected in series with the armature. The mechanical regulation characteristics of the drive are then considered, and Eq (6) is derived for the motor speed. This equation indicates that the characteristics are a series of parallel lines, as shown in Fig 3. Electrical losses in the circuit are then examined,

Card
2/4

~~6638~~ 69638

S/024/60/000/02/006/031
E194/E155

Controlling d.c. Motors by High-Frequency Impulses

neglecting the transistor current during current pauses and also neglecting the reverse current in the amplifier. Eq (10) emerges for the total electrical losses. Experimentally-determined mechanical characteristics are plotted in Fig 4 for two values of relative impulse time with an impulse frequency of 5000 c/s. The characteristics relate to a motor with a rated output of 35 W at a voltage of 27 V and a rated speed of 2300 r.p.m. It will be seen that the experimental results confirm the main theoretical conclusions. Fig 5 shows a similar circuit to that already considered but for a series motor. The controlling impulse circuit, which is not shown, may be the one already described. As before, expression (16) is derived for the speed. Mechanical regulation characteristics for a series motor are plotted in Fig 6. If it is necessary to reverse an independently-excited motor the circuit of Fig 7 may be used; Fig 8 gives its mechanical regulation characteristics. The circuits are not readily arranged for electrical braking. and

Card
3/4

~~6658~~ 69638

S/024/60/000/02/006/031

E194/E155

Controlling d.c. Motors by High-Frequency Impulses

regenerative braking is impossible. These disadvantages are avoided by using the circuit of Fig 9, which employs the principle of cross-connection. A series of mechanical characteristics are plotted in Fig 10, and it will be seen that both motor and braking conditions are possible. Fig 11 gives a diagram of the armature current in this case. There are 11 figures and 2 references, of which 1 is Soviet and 1 is English. X

Card
4/4

SUBMITTED: November 30, 1959

PEROV, N.P.; SEMCHUK, G.A.; MAZURIN, V.D. ---

Technological system for drying milled bituminous peat. Trudy In t.
to.f. AN BSSR: 9:49-53 1971. (MIRA 14:2)
(P. 1-4, 5, 6, 7)

23164

S/024/61/000/003/012/012
E140/E463

9.4310

AUTHORS: Davidov, P.D. and Nagorskiy, V.D. (Moscow)

TITLE: The overload capacity of germanium transistors

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1961, No.3, pp.159-165

TEXT: The article considers the efficiency of various types of cooling for germanium triodes and their overload capacities when driven by identical short pulses. The thermal processes in the system are studied under the following assumptions: The collector junction and the transistor body constitute two homogeneous bodies with given heat capacities, coupled by a common surface and a given heat transmission factor; all points of the collector junction and the body of the transistor are at identical temperatures. Then the heat model of the transistor can be represented by a body with internal energy source where the power dissipated by the collector junction has two components, one which heats the collector junction and the second which is transferred to the body of the transistor. The latter, in turn, has two components, one of which heats the body of the transistor while the second is
Card 1/3

23164

S/024/61/000/003/012/012
E140/E463

The overload capacity ...

dissipated in the surrounded medium. Assuming that the thermal time constant of the collector junction is much less than that of the body of the transistor, it is found that when the transistor is driven by pulses of duration of the order of the junction thermal time constant, the maximum power depends on the ambient temperature, the thermal resistance of the collector junction and the pulse duration. Under these conditions, it is further found that the transistor cannot be protected by any technical cooling method from such short-duration overload. The overload capacity for such short driving pulses is very high and breakdown of the transistor is practically impossible except under conditions of exceedingly high base current. The author concludes that transistors can be used directly for the control of dc electric motors since the armature current reaches its maximum value in several milliseconds and, therefore, breakdown of the transistor by the instantaneous value of the starting current is not very probable. The theoretical results have been verified experimentally and the circuits and results of this verification are described. There are 7 figures and 5 references: 2 Soviet-bloc and 3 non-Soviet-bloc. The two references to English language
Card 2/3

The overload capacity ...

S/024/61/000/003/012/012
E140/E463

publications read as follows: Kennet E. Mortenson. *Proced. I.R.E.*,
April 1957, v.45, No.4; Strickland P.R. *JBM Journal of research
and development*, January 1959, No.1.

SUBMITTED: January 24, 1960

Card 3/3

PETROV, B.N.; SOTSKOV, B.S.; LARIONOV, A.N.; CHILIKIN, M.G.;
SYROMYATNIKOV, I.A.; BLAGONRAVOV, A.A.; KRUSHILIN, G.N.;
IVAKHINENKO, A.G.; MAGORSKIY, V.D.; CHELYUSTHIN, A.B.;
DROZDOV, N.G.; PETROV, I.I.

Seventieth birthday of Viktor Sergeevich Kulebakin. Elektrich-
estvo no.10:90-91 0 '61. (MIRA 14:10)
(Kulebakin, Viktor Sergeevich, 1891-)

KULEBAKIN, Viktor Sergeyeovich; NAGORSKIY, Valentin Dmitriyevich;
VCSKRESENSKIY, Yuriy Yevgen'yevich; GESSEN, L.V., red.
izd-va; ASTAF'YEVA, G.A., tekhn. red.

[Semiconductors in automatic control] Poluprovodniki v
avtomatike. Moskva, Izd-vo AN SSSR, 1963. 149 p.
(MIRA 16:7)

(Semiconductors) (Automatic control) (Transistors)

VEDERNIKOV, I.N.; LYANDRES, I.L.; NAGORSKIY, V.K.; PASHKO, S.G.

Manufacture of sulfur in the form of scales. Khim.prom.
no.10:773 0 '62. (MIRA 15:12)

1. Volzhskiy sernyy kombinat.
(Sulfur)

NAGORYANSKAYA

EXCERPTA MEDICA Sec.14 Vol.12/4 Radiology April 50

756. THE INFLUENCE OF PREOPERATIVE RADIATION THERAPY UPON THE HEALING OF OPERATIVE WOUNDS (Russian text) - Nagoryanskaya V.P. - VESTN. RENTGENOL. RADIOL. 1957, 32/2 (15-21) TABLE 4

The kind of local preoperative radiation therapy does not determine in any way the peculiarities of the postoperative healing of the wounds. The character of healing of the wounds under the influence of X-ray therapy, radiotherapy or combined radiation therapy is almost the same. The total dose for each skin field, which did not exceed 1800 r. (in air) exerts no negative influence upon the healing of wounds. In the cases, when the dose exceeded 1800 r., healing by 2nd intention was often observed. The administration of pre-

1. Iz otdeleniya luchevoy terapii (nach. A.N. Gemalaya) Glavnogo voyennogo gosпитalya imeni akademika N.N. Burdenko

756

operative radiation therapy for more than 30 days or the interval between the ending of the irradiation and the operative intervention being more than 60 days, and possibly influences the healing of wounds. A weak total radiation reaction, which also appears at the time of the operative intervention, does not exert any special influence in this sense. The localization of the pathological focus, the irradiated region and the extent of the operative intervention, however, do have a definite effect. (XIV, 9*)

NAGORZANSKI, Jozef

Certain problems of technological development in the metallurgical industry of Krakow Voivodeship. Przegl mech 21 no.9/10:258-260. 10-25 My '62.

SECRET

1. The following information was obtained from a source who has provided reliable information in the past.

2. The source has provided information that is of a nature that is not in the public domain and that is of a nature that is not in the public domain.

3. The source has provided information that is of a nature that is not in the public domain and that is of a nature that is not in the public domain.

4. The source has provided information that is of a nature that is not in the public domain and that is of a nature that is not in the public domain.

5. The source has provided information that is of a nature that is not in the public domain and that is of a nature that is not in the public domain.

CA

9

Batching open hearth furnace melts D. F. Nagovitsyn. *Met* 8, 312-21 (1948). The compn of the tapped metal depends on the run schedule and on the compn of the charge components. The run can be kept to a fixed schedule but in order to obtain a metal of designated compn the compn of the charge should be flexible and the batching fitted to the variability of the components. To this end can be used empirical tables giving the required quantities of ore and lime depending on the Si content of the molten pig iron and the scrap. Such tables can be advantageously compiled from data of satisfactory runs. Several such tables are given. M. Hirsch.

N. Agoritsyn, J.F.

Decrease of open steel in the ladle. E. A. Katsava,
D. G. Gordin, and A. A. Lebedev (Met. Plant, Novo-
kuznetsk, No. 10, 1953-6 (1953)). The practice saves
22-30% FeMn; increases production by about 1% by saving
time in the furnace, and does not lower the quality of the
steel. J. D. Gat

mk nk

1011-111-111 D F

AUTHOR: Nagovitsyn, D.F. and Rabinovich, D.M. 153-7-21/28

TITLE: Research Work of the New Tagil Metallurgical Works.
(Issledovatel'skiye raboty Novo-Tagil'skogo Metallurgicheskogo zavoda)

PERIODICAL: Stal', 1957, no.7, pp. 668 - 670 (USSR).

ABSTRACT: A. Operation of blast furnaces on fluxed sinter. The influence of increasing the basicity of sinter on its properties was investigated. The mechanical strength and the reducibility of sinter increase up to basicity 0.6; on further increase of basicity the above properties deteriorate. The coefficient of utilisation of the working volume of blast furnaces increased by 6.2%, coke rate decreased by 8.2%. In order to increase further the basicity of sinter, improvement in size distribution of materials sintered is required.

B. The production of pig iron with oxygen-enriched blast. Tests with oxygen-enriched blast (22, 23 and 24% O₂) were carried out. Blast volume was decreased so as to obtain the same amount of top gas as with ordinary air. An increase in the output by 4.4, 6.7 and 7.7%, respectively, was obtained.

C. Smelting of ferro-manganese using oxygen-enriched blast. Details given in Stal', 1957, no.7, pp. 580 - 584.

Card1/7

135-7-27/28

Research Work of the New Tagil Metallurgical Works.

D. A study of reducing processes and the distribution of gas flow in blast furnace stacks. The work was carried out on 4 levels of a furnace of 1386 m³ of working volume by vertical probing - lowering and retention of specimens of sinter and ores of a given size grading with simultaneous reduction in a laboratory apparatus. From the experimental results obtained (studies were started in 1952) the following conclusions were made: a) during operation with increased ore loads i.e. with low coke rates a more uniform distribution of materials and gases and widening of the zone of moderate temperatures is obtained; simultaneously, an increase in the CO₂ concentration in the upper third of the stack and slowing down of reduction processes in this part take place. This limits the possibility of improving the utilisation of gases with increasing height of the furnace. b) As with operation on low coke rates, the temperature in the middle levels of the furnace is determined by the thermal state of lower levels, it can be utilised as a sufficiently reliable indicator of the thermal state of the furnace in a scheme of automatic control of the furnace operation. c) Shift of the zone of active indirect reduction towards lower furnace levels indicates the necessity of a corresponding

Card2/7 increase of the bosh diameter. There is no danger of the

Research Work of the New Tagil Metallurgical Works.

1957-21/28

development of peripheral flow of gases. d) An increase in the size of sinter does not cause any substantial decrease in its reducibility, but it considerably improves burden permeability. e) The life of normal lining in the lower part of the stack in NTZM blast furnaces was usually 2 - 2.5 years. In June, 1956, this part of the stack (No.3 furnace) was lined with carbon blocks and filling of seams with carbon paste from foundry coke 0 - 0.5 mm fraction (50%), pitch (22.5%) and anthracene oil (27.5%). Cooling of the carbon lining (7.2 mm) was done by 3 rows of plate coolers. Chromel-alumel thermocouples were embedded in carbon blocks. After 6 months, the carbon lining retained its designed profile. Investigations indicated that on transfer to carbon lining the following should be taken into consideration: 1) the thickness of lining can be reduced to 500 mm, 2) a temperature of 1 200 °C is safe for carbon blocks and an intensive cooling is not required, 3) seams between blocks should be filled with rapidly-hardening paste and blocks should be ground to a curvature not exceeding 1 mm on a length of 500 mm.

F. Smelting practice of metal for wheels. In order to decrease defects the following conditions are recommended: re-oxidation with silico-calcium instead of aluminium, metal temperature before tapping 1 610 - 1 620 °C, ingots 3.6 tons should be cast in 4 - 0

Research Work of the New Tagil Metallurgical Works.

1977-27/28

min, steel should contain not less than 0.25% of Si

G. The control of temperature of liquid steel with immersion thermocouples. Some data on the rate of heating of the bath of open hearth furnaces and temperature changes caused by various additions were collected in tables for guidance as due to a shortage of thermocouples and silica sheaths measurements are carried out only during the production of the more expensive steels.

H. Experiments in the application of sinter in open hearth furnaces. Tests indicated that using sinter, its consumption increases by 10 - 13% in comparison with ore, the consumption of lime decreases, de-phosphorisation improves the duration of heat decreases, the quality of metal and the durability of the bottom and banks does not change.

I. The use of oxygen in open hearth furnaces. Oxygen addition to flame (oxygen-enrichment 24.5%) decreased the duration of heats by 14.6%; furnace output increased by 15.1%; consumption of fuel decreased by 15.8%.

J. An investigation of the operation of a 140 ton open hearth furnace with an application of compressed air. Additions of compressed air to flame 1 200 - 1 500 m³/hr increased the output by 9.5 - 11.5%; the durability of roof increased by 6%.

Card4/7 K. A study of the efficiency of washing checkers. Washing of

133-1-1 / 25

Research Work of the New Tagil Metallurgical Works.

checkers (from forsterite) ... water under 10 atk. pressure 1 - 2 times per month and blowing with steam of under-checkers space without stopping the furnaces was tried with satisfactory results.

L. The use of magnesite powder from slurries. Tests of magnesite powder consisting of 50% of 0.1 mm fraction for fettling walls and banks indicated that it can be used for the purpose, provided it does not contain too much dust.

M. An improvement in the technology of production of rails. The use of oxygen caused a sharp increase in the flake sensitivity of rail steel. Drying of oxygen to 0.98 g/n m² considerably improved steel quality; the proportion of flake-sensitive steel decreased to 0 - 2.0%. Studies of calibration of roll passes for rails P-50 and P-43, differing in the height of starting semis led to the following conclusions: a) hair cracks on rails as a rule are related to cracks in ingots and only seldom to rolled gas bubbles; b) the highest proportion of hair cracks is obtained on rails rolled from the top part of ingots; c) calibration of passes characterised by the highest deformation in height in the middle of rail foot and a sharp turn of flanges in trapezoidal passes (i.e. calibration of P-50) considerably helps in decreasing the size of hair cracks. The use of the new

Card 5/7

Research Work of the New Tancil Metallurgical Works.

1957-27/28

calibration for R_{max} and R_{min} of the reduction of rejects due to hair cracks from 2.4% to 0.8%. Complete freedom from flakes was obtained by rolling rails from cold blooms which passed an intermediate cooling in piles in the reduction shop.

n: A decrease in defects on beams of a large cross-section. An investigation of the technology of production of the beam $30\text{T}310$ indicated that defects of ingots cause corresponding defects on beams. The dressing of semis before final rolling decreased the proportion of rejects 2 - 3 times.

O: Some new schemes for rolling ingots on a mill 1150. Rolling of 6.7 ton and 5.58 ton ingots was speeded up by decreasing the number of passes from 15 to 13 (no details given).

P. Hard-facing of rolling rolls by welding. Welding apparatus A-384 designed by the Paton Institute was used. Before welding, rolls are pre-heated to 300 - 350 °C for 4 - 6 hours with a multi-flame gas burner. The results obtained indicated that welding with electrode wire O8A; 30X7CA and 3X2B8 produces an even welded-on layer. The use of O8A wire is possible without the preliminary pre-heating of rolls but the welded layer has a low hardness and is suitable only for non-working parts of roll passes.

Card6/7 Welding with electrode 30X7CA using flux AH-348 and the preliminary

155-7-27/28

Research Work of the New Tajik Metallurgical Works.

pre-heating of the roll produces a layer of considerable hardness. Welding with powder wire requires special welding practice, a considerable pre-heating of rolls and subsequent slow cooling and should be used only for passes undergoing hard wear.

R. An increase in the durability of ingot moulds. By blowing oxygen on the iron in the runner during tapping from the cupola, its temperature increases by 40 - 80 °C. This treatment decreased the size of graphite inclusions and together with the application of cast reinforcing bands increased the stability of ingot moulds by 3 - 15%; using Khalil pig iron best results were obtained with a chromium content of 0.08 - 0.1%. The consumption of moulds decreased by 7%.

AVAILABLE: Library of Congress
Card 7/7

NAGOVITSYN, D.F.

Rapid built-up welding of furnace hearths. Metallurg 5 no.8:
18-19 Ag '60. (MIRA 13:7)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat.
(Metallurgical furnaces--Maintenance and repair)

9/137/61/000/012/076/149
A006/A101

AUTHORS: Privalov, I.I., Nagovitsyn, D.F., Lebedev, A.A., Rakevich, K.A.,
Kondrat'yev, S.N.

TITLE: The effect of the weight and reduction of an ingot on the number
of macro-inclusions

PERIODICAL: Referativnyy zhurnal Metallurgiya, no. 12, 1961, 3-4, abstract
12D21 ("Byul. nauchno-tekhn. inform. Ural'skiy n.-i. in-t chern.
metallov", 1960, no. 8, 22 - 32)

TEXT: Non-metallic inclusions in steel are composed of sulfides and oxy-
silicates (aluminum oxides Al_2O_3 and silicates SiO_2) which occur in the steel as
macro-inclusions and impair its quality. Macro-inclusions are distributed over
the height basically in a gradually decreasing amount from the bottom to the top
section, where the number of macro-inclusions increases again. The depth of
occurrence of the macro-inclusions in a 2.5 ton ingot is on the average 4.75-
95.75 mm from the lateral surface, and 15.5 - 21.3 mm in a 3.5 ton ingot; it is
2 - 5.25 mm in blooms of 440 mm size, obtained from a 6.7 ton ingot. The dis-
placement of inclusions for different cases of rolling is discussed. Thus, when

Card 1/2

The effect of the weight and reduction . . .

S/137/61/000/012/076/149
A006/A101

rolling the ingots on a blooming mill, the macro-inclusions are shifted towards the bloom surface. During the rolling of pipes, sheets and other articles directly from the ingot, macro-inclusions are shifted from the peripheral layers to those adjoining the butt surface. When rolling wheels directly from a 3.5 ton ingot, the macro-inclusions do not reach the peripheral layers during the shift. Tables and diagrams are given showing the occurrence depth of macro-inclusions in ingots of different weight.

I. Getiya

[Abstracter's note: Complete translation]

Card 2/2

S/133/60/000/012/002/015
A054/A027

AUTHORS: Rybakov, L.S., Khudyakov, N.A., Krivonosov, V.S., and
Nagovitsyn, D.F.

TITLE: Producing Killed Steel With Oxygen Blown Into the Bath of the
Open-Hearth Furnace

PERIODICAL: Stal', 1960, No. 12, pp 1078-1080

TEXT: In view of the successful experience with oxygen in intensifying the firing of open-hearth furnaces and in the production of rimming steel (blowing oxygen through the bath) the NTMK investigated the possibilities of applying oxygen in the production of killed steel (rail, tube and other carbon steels) both for intensifying the burning and for blowing through the bath, in 1958. The main purpose of the tests was to establish the effect of blowing oxygen into the bath on the technology of melting and the quality of steel. The tests were carried out in high-capacity open-hearth furnaces, with coke-oven coke as fuel and the scrap-ore process. In one of the furnaces (A) oxygen was introduced in the bath through the top, in the other (B) through an equipment arranged at the front. The charge for both furnaces consisted of 62-65% pig iron 35-38% steel scraps, about 5% lime, 8-10% iron ore and agglomerate, Card 1/4

S/133/60/000/012/002/015
A054/A027

Producing Killed Steel With Oxygen Blown Into the Bath of the Open-Hearth Furnace

0.5% bauxite. In furnace A oxygen was blown into the bath a few minutes after the melting down of the charge, for 10-65 minutes, at 5-6 atm absolute pressures. For rail steel, the oxygen consumption was 1.71 cu m/t, for medium carbon tube steel 2.65 cu m/t and for low carbon tube steel 3.69 cu m/t. In furnace B oxygen was blown into the bath, 60-90 minutes after the pouring of iron, for 10-60 minutes, at 5-10 atm absolute pressures. The oxygen consumption was 2.75 cu m/t for killed steel and 3.98 cu m/t for rimming steel. The tests, generally, proved that blowing oxygen through the bath either during the melting period, or during the period of killing shortened the duration of melting (when blowing oxygen during the killing period, the melting time is shortened by about 20-25 minutes) raises the furnace output and reduces the fuel and oxygen consumption. The velocity of decarbonization increased, when blowing during melting, by 0.6-1.52% and when blowing after melting down of the charge by 0.42-1.17%. Due to the acceleration of slag forming the dephosphorization and the desulfurization of the metal are quicker and more thorough. The phosphor content of steel produced with oxygen blown in was about 0.002-0.008%
Card 2/4

S/133/60/000/012/002/015
A054/A027

Producing Killed Steel With Oxygen Blown Into the Bath of the Open-Hearth Furnace

less than of the conventional types. In most cases the hydrogen content of the metal decreased without the acidity of the metal increasing. Improvement was found in the composition of slag, as a result of oxygen blowing and the quality of steel was also better. The output of railsteel (first class quality) was about 2% higher than with the conventional process, the waste of low-carbon tube steel produced by the new method was lower (0.82, 0.88%) than of the same type of steel produced without oxygen blowing (1.3 and 1.43%). In this respect the best results were obtained when oxygen was blown into the bath during melting. It could also be established that when melting high-carbon steels, blowing oxygen into the bath after melting down is advisable for every kind of steel, irrespective of composition. In the tests G.A. Petrov, N.D. Korneyev, S.N. Golokhmatov, Ye.A. Trunov, B.S. Kanterman took part. There are 2 figures and 2 tables.

ASSOCIATION: Ural'skiy politekhnicheskiy institut, Ural'skiy naucho-issledovatel'skiy institut chernykh metallov, NMTK (The Ural Polytechnical Institute, The Ural Scientific Research Institute of Iron and Steel, NMTK).

Card 3/4

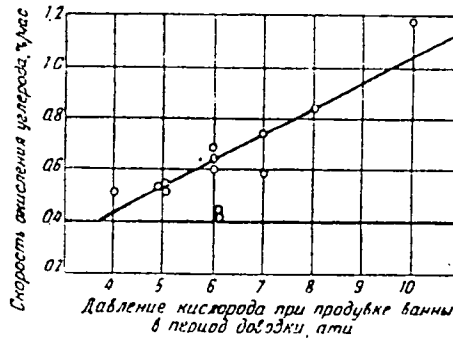
5/133/60/000/012/002/015
A054/A027

Producing Killed Steel With Oxygen Blown Into the Bath of the Open-Hearth Furnace

Legend to Fig. 1: The dependence of oxidizing velocity of carbon on the oxygen pressure at blowing oxygen into the bath in the period of heat finishing.

Vertical legend: Velocity of carbon-oxidation, %/hour

Horizontal legend: Oxygen pressure during the blowing of oxygen into the bath in the period of heat finishing



Card 4/4

NAGOVITSYN, D.F.

Efficient design of bloom ingot molds. Stal' 20 no. 7:602-607
Jl '60. (MIRA 14:5)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat.
(Ingot molds)

REVEBTSOV, V.P.; ABRAMOV, B.A.; NAGOVITSYN, D.F.; LEBEDEV, A.A.;
OSIPOV, G.V.; TANTSUREV, V.V.; ISUPOV, V.F.; ZAYTSEVA, Ye.I.

Quality of manganese ferrous alloys from ores of the Polunchnoye
deposit. Stal' 21 no.9:806-809 S '61. (MIRA 14:9)

1. Institut metallurgii Ural'skogo filiala Akademii nauk;
Nizhne-Tagil'skiy metallurgicheskiy kombinat i Kombinat im.
Serova.

(Ferromanganese) (Polunchnoye region--Manganese ores)

ARNAUTOV, V.T.; BALANOV, V.M.; BINSKIY, S.A.; PASTERNY, A.I.; SMOLIK, I.A.;
TORSHILOV, Yu. I.; TRESNIAKOV, M.A.; UZOVENKO, V.G.; FOMYCHENKO, Ye.Z.;
SHCHEKALEV, Yu.S.; Prinkalni uchastkiye: MAKAYEV, S.V.; ZOMZANIN, G.M.;
NAGOVITSYN, D.F.; NOVOLUDSKIY, I.I.; VARSHAVSKIY, T.I.;
KOROGODSKIY, V.G.; KLIBANOV, Ye.L.; MEDVEDEVSKIKH, Yu.; TALANTSEVA,
T.I.; DUBROV, N.F.; IZOMYAN, S.K.; TOBYCHKANOV, B.I.; CHAMUSHNIKOV,
G.A.; KHARITONOV, Yu.A.

Developing and mastering the technology of converting vanadium
cast iron in oxygen-blown converters with a 100 ton (Mg) capacity.
Stall 25 no. 1: 507-508 Je 165.

1. Nizhne-fragil'nyi metallurzhicheskiy kondit (for the work
niyets, Nagovitsyn, Novoludskiy, Varshavskiy, Korogodskiy, Fomichenko,
Medvedevskikh, Talantseva). 2. Uchastkiy naukoobrazovaniya i
institut chenykh metallov: Izomyan, Izomyan, Topychev,
nikov, Kharitonov.

NAGO/ITSYN, N. A.

NAGO/ITSYN, N. A.--"Study of Efficiency Factors Characterizing the Losses
in the Transmission and Undercarriage of the G-59 Tractor."
*Dissertations For Degrees In Science and Engineering
Defended at USSR Higher Educational Institutions)(29)
Min Higher Education USSR, Leningrad Agricultural Inst,
Leningrad, 1955

SO: Knizhnaya Letopis' No 29, 16 July 1955

* For the Degree of Candidate in Technical Sciences

SOV/123-59-16-66832

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 16, p 420 (USSR)

AUTHORS: Gurevich, A.M., Nagovitsyn, N.A., Bolotov, A.K.

TITLE: Investigations of the Wear of a Test Crankshaft of the D-54 Engine

PERIODICAL: Tr. Kirovskogo s.-kh. in-ta, 1958, 13, Nr 25, 42 - 48

ABSTRACT: The new "loop" lubrication system of the crankshaft reduced the wear of the crank journals of the shaft and of the bushings of the crank bearings. The service life of the crankshaft without balance weights with the new lubrication system is determined by the oval journals of the connecting rod and the maximum clearance in the connecting rod bearings.

Card 1/1

NAGOVITSYN, N. A.

Afforestation

Projecting and research work in afforestation of steppes in 1950-1951.
Les. khoz. 5 no. 2, 1950

9. Monthly List of Russian Accessions. Library of Congress, July 1952. Incl.

1. NAGOVITSYN, N. A.
2. USSR (600)
4. Afforestation - Volga-Don Canal Region
7. Protective forest stands on the Volga-Don, L.s. Khoz, 5, No. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

K-4

USSR / Forestry. Forest Crops

Abs Jour: Ref Zhur-Biol., No 13, 1958, 58422

Author : NAgovitsyn, N. A. , Lozovoy, A. A.

Inst : Not given

Title : Problems of Forest Cultivation in the Chinese Peoples' Republic

Orig Pub: Lesn. kh-vo, 1957, No 10, 83-87

Abstract: According to the data of 1957, the forest-covered area in China constitutes about 8 percent of the total surface of the country. Afforestation on a vast scale has been conducted in the last ten years. Ten million ha. of forest area were planted, 941 forestries were organized, 1,700 forest nurseries were created, and so on.

Card 1/2

32

BOGOLYUBOV, V.A.; NAGOVITSYN, V.V.; TARATYNOV, V.P.; TEMER, D.A.;
FILYAND, M.A.

Stainless free-cutting steel. Metalloved. i term. obr. met.
no.11:41-43 N '61. (MIRA 14:12)

1. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy
metallurgii.

(Steel, Stainless)
(Tool steel)

18.1130

30459
S/129/61/000/011/008/010
E073/E135

AUTHORS: Bogulyubov, V.A., Nagovitsyn, V.V., Taratynov, V.P.,
Teymer, D.A., and Filyand, M.A.

TITLE: Stainless free cutting steel

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov,
no.11, 1961, 41-43

TEXT: Machining of the steel 1X18H9 (1Kh18N9) can be effectively improved by introducing 0.20-0.40% S. However, a content of over 0.20% S brings about a deterioration in the hot-working properties of the material. This difficulty can be largely overcome if the sulphur is added in the form of sulphides of zirconium or molybdenum. However, the presence of sulphur will always reduce the plasticity and the resistance-to-corrosion of the material. The machinability of stainless steel can also be improved by introducing selenium. A content of 0.15-0.30% Se has no appreciable influence on the mechanical properties of chromium-nickel stainless steel; the elongation, contraction and impact strength are higher than in the case of adding S; the decrease in the resistance-to-corrosion is insignificant. Since Se cannot
Card 1/3

Stainless free cutting steel

30459
S/129/61/000/011/008/010
E073/E135

be used in its pure form, experiments have been made to find Se-containing master alloys which would enable obtaining the required Se content, without generating excessively poisonous substances during the process of melting. The experiments were carried out in high-frequency furnaces of 35-50 kg and 0.5-1.5-ton capacity and in a 1.5-ton capacity arc furnace. It was found that Se-containing steel should be produced in high-frequency furnaces with acidic linings since in these the amount of selenium oxide generated is 5-10 times lower than in basically-lined furnaces (the selenium contamination of the air was evaluated by V.P. Yershov of the Institut gigiyeny truda i profzabolevaniy AMN SSSR (Institute of Hygiene and Industrial Diseases of AMN USSR). The selenium-generation from arc furnaces is higher. The iron-base master alloy should contain 20-25% Se; if the Se content is higher its evaporation increases appreciably. Forming of the steel was without special difficulty, the initial forging temperature being 1150-1180 °C and the final one 900 °C. The thus-obtained blanks were hot-rolled to 6.5 mm and 4.5 - 4 mm strip for further cold-rolling. The hot-rolled strip was quenched from

Card 2/3

30459

Stainless free cutting steel

S/129/61/000/011/008/010
E073/E135

1050 °C in running water; the Se and S contents did not affect the hardness of the metal after heat-treatment. The machinability and the corrosion-resistance were also tested and comparative tests were made on steel containing S additions. It was found that additions of S or Se to the steel under investigation improved its machinability so that it approaches that of carbon steels. It was also found that additions of S did reduce the resistance-to-corrosion of the material. Addition of Se in a quantity greater than 0.15-0.30% reduces the corrosion-resistance of this steel on exposure to a hot and humid climate, an atmosphere which is contaminated by sulphurous gases, human perspiration and sea mist. There are 2 figures.

ASSOCIATION: TsNIChM

Card 3/3

S/130/52/000/002/003/005
A006/A10.

AUTHORS: Teymer, D. A., Nagovitsin, V. V., Afonina, V. M.

TITLE: Hot drawing of hard-to-deform steel and alloys (From materials of the Coordination Conference)

PERIODICAL: Metallurg, no. 2, 1962, 28 - 30

TEXT: At the Moscow Conference on hot-drawing of hard-to-deform steels, organized in July 1961 by TsNIICHM, most of the reports were devoted to the problem of selecting a method to heat the wire prior to drawing. Among various means, such as preheating in molten lead, in gas furnaces and salt baths, the Conference selected preheating by high-frequency current as the most advanced and efficient method. The experimental investigations were made with a 100 kw high-frequency valve generator for preheating up to 9 mm thick wire; for wire of greater thickness a generator of up to 3,000 cycles frequency was used. Subsequently, high-speed steel wire was successfully drawn to 12 - 35% partial and up to 80% total reduction. The drawing speed varied within 30 - 100 m/min. TsNIICHM recommended 230 - 320°C preheating temperature for P18 (R18) grade steel. The properties of high-speed steel wire, drawn by the hot method, were not different from the pro-

Hot drawing of hard-to-deform steel...

0/13/12/15/16/17/18
AG06/A10:

properties of cold-drawn wire. Surface defects can be eliminated by polishing the wire in bundles. This is however only effective in the case of wire not over 2.5 mm thick. The design of machines for polishing wires in bundles should be improved in such a manner that the polishing disk would rotate around the wire.

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

Card 2/2

L 17451-63

EWP(a)/EWT(m)/BDS AFPTC/ASD RDW/JD

ACCESSION NR: AP3004580

S/0130/63/000/008/0015/0016

AUTHORS: Hagovitsin, V. V.; Taraty'nov, V. P.

62
61

TITLE: Technology of smelting stainless selenium-containing automatic steel

SOURCE: Metallurg, no. 8, 1963, 15-16

27

TOPIC TAGS: automatic steel, stainless steel, selenium steel, ferroselenium, selenium, rolled selenium steel

ABSTRACT: The technology of smelting stainless, selenium-containing automatic steel was developed to insure a minimum vaporization of the highly toxic selenium and its compounds in work installations. The laboratory studies were conducted jointly by TsNIIchernmet and by Institut gigiyeny* truda i profsabolevaniy Akademii meditsinskikh nauk SSSR (Institute of Occupational Diseases, Academy of Medical Sciences, SSSR). It was subsequently tested in the "Electrostal'" and Chelyabinsk plants. The first step in the process consists in the preparation of a ferroselenium alloy, which is achieved by sintering at 900-950C in a well-ventilated gas-heated chamber furnace a mixture of 25% powdered selenium and 75% powdered iron in closed 20-kg sheet iron cans. These cans are subsequently dipped in the molten steel in acid-lined induction furnaces after the steel has undergone reduction and the slag

27

Card 1/2

L 17451-63

ACCESSION NR: AP3004560

drained off. The ingots of the resulting steel should contain 0.4% selenium. It is claimed that the observation of the enumerated rules results in a hundredfold reduction in vaporization of selenium. Orig. art. has: 1 table.

ASSOCIATION: TsNIChernmet (Central Scientific Research Institute of Ferrous Metallurgy)

SUBMITTED: 00

DATE ACQ: 27 Aug 63

ENCL: 00

SUB CODE: ML

NO REF SOV: 000

OTHER: 000

Card 2/2

LUBENETS, P. A., NAGOVITSYNA, A.V.

Grasses

Use of seeds of wild-grown perennial grasses in Kuban. Korm. baza 3 No. 1, 1952

Monthly List of Russian Accessions, Library of Congress, September 1952. UNCLASSIFIED.

NAGOVITSYNA, A. V.

"Wild Perennial Grasses of the Krasnodar Kray and Their Role in Grass-Field Rotation." Cand Agr Sci, All-Union Inst of Plant Growing, Leningrad, 1954. (RZhBiol, No 6, Nov 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (11)

SO: Sum. No.521, 2 Jun 55

SHCHERBAKOV, V.N.; NAGOVITSYNA, L.N.; OSIPOV, I.S.

X-ray investigation of structural changes and mutual arrangement of individual grains in specimens of low-alloy iron in the process of deformation by pure tension. Fiz. met. i metalloved. 9 no. 4:510-514 Ap '60. (MIRA 14:5)

1. Gor'kovskiy issledovatel'skiy fiziko-tekhnicheskiy institut. (Iron alloys—Metallography) (Deformations (Mechanics))

MAK SIMOV, M.A.

MAKSIMOV, P.M., professor; NAGOVITSINA, M.A.

Exchange transfusion in the treatment of hemolytic shock and of posttransfusion anuria. Khirurgiia' no.3:51-53 Mr '55. (MLRA 3:7)

1. Iz gosital'noy khirurgicheskoy kliniki (zav. prof. P.M.Maksimov) Ivanovskogo meditsinskogo instituta.

(BLOOD TRANSFUSION,

exchange, ther. of post-transfusion hemolytic shock & anuria)

(SHOCK,

post-transfusion hemolytic shock, ther., exchange blood transfusion)

(BLOOD TRANSFUSION, complications,

shock & anuria, ther., exchange transfusion)

(ANURIA, etiology and pathogenesis,

blood transfusion, ther., exchange transfusion)

MAKSIMOV, P.M., professor; NEVSKIY, A.A., assistant; NAGOVITSINA, M.A.,
assistant; MARTYNOV, P.V., assistant; URLASHEVA, A.V., assistant

Substitution of blood in clinical practice. Vest.khir. no.5:
30-33 '61. (MIRA 15:1)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - prof. P.M.
Maksimov) i gospital'noy terapevticheskoy kliniki (zav. - prof.
Ye.S. Myasoyedov) Ivanovskogo meditsinskogo instituta.
(BLOOD PLASMA SUBSTITUTES)

NAGOVITSYNA, M. I.

USSR/For Subject: The Swine

Q-4

Abstr Jour : Ref Zhur - Biol., No 11, 1958, No 500'6

Author : ~~Nagovitsyna, M. I.~~
Inst : Kirgizian Scientific Research Institute of Animal Husbandry
and Veterinary Sciences.
Title : Characteristics of Early Maturity, Fatter Get, and Meat/
Lard Qualities of Leading Interrelated Breeds of Sows.

Orig Pub : Dyul. nauchno-tekhn. inform. Kirg. n.-i. inzh. zhivotnovod-
stvo i vet., 1956, No 1-2, 32-34

Abstract : Experimental fattening of 4 interrelated groups of young swine was performed at the kolkhoz named K. Marx in the Kirgiz SSR. In the 1st group, the average nutrient value of daily rations which consisted of 13.3 percent of roughage and juicy feeds, of 79.8 percent of concentrated feed, and of 6.9 percent of animal origin feeds, amounted to 3.08 kg of feed unit, in the 2nd group to 3.00 kg, in the 3rd group to 2.87 kg, and in the 4th group to 3.21 kg. At the age of 10 months the highest live weight of 177 kg was found to exist

Card : 1/2

USSR/Fern. Animals. The Swine

Q-4

Abstr Jour : Ref Zhur - Bi.1., No 11, 1958, No 500¹⁵

in the 1st group. In the 2nd group it amounted to 170.1 kg, in the 3rd group to 170.7 kg, and in the 4th group to 171.4 kg. According to groups, the following feed units were expended during the entire fattening-up period: 844.5 kg, 787.0 kg, 721.2 kg, and 790.0 kg. Best results were achieved with young pigs of the 3rd group in terms of feed costs; in terms of early maturity with those of the 1st group.

Cont : 2/2

IZOKH, E.P.; KOLMAK, L.M.; NAGOVSKAYA, G.I.; RUSS, V.V. KUREK, N.N., red.;
GODOVIKOVA, L.A., red.izd-va; AVERKIYEVA, T.A., tekhn.red.

[Pozdnemezozoiskie intruzii tsentral'nogo Sikhote-Alinia i
sviaz' s nimi orudeneniia. Moskva, Gos. nauchn.-tekhn. izd-vo
soiuznyi geologicheskii institut. Trudy, vol.21). (MIRA 11:4)
(Sikhote-Alin' Range--Mineralogy)

NAGR, J.

Autumn work in the fields must be finished in time. p.21/

MECHANISACE ZEMEDELSTVI. (Ministerstvo zemedelstvi a lesniho hospodarstvi)
Praha, Czechoslovakia. Vol.9, no.10, Oct.1959

Monthly List of East European Accessions (EEAI) LC, Vol.3, no.12
Dec.1959
Uncl.

NAGRADOVA, N. K.

Cerebral metabolism in reflexory epilepsy. A. V. Golubtsova and N. K. Nagradova (Moscow State Univ.). *Byull. Eksp. Biol. i Med.*, 60, No. 9, 39-41 (1956).—Rats that were unaffected and rats that were greatly excited by sound were exposed to sound and quickly decapitated. The heads were immersed in liquid air for 30-60 sec., transferred to a liquid-air-cooled mortar, ground to a fine powder, deproteinized with CCl_3COOH , and inorg. P and its org. fractions and NH_4 were detd. The org. fractions showed an intensive degradation in the active group which affected mainly phosphocreatine and to a much smaller extent adenosinetriphosphate (ATP). In some cases ATP increased. The carbohydrate-P compds. of the active group remained unchanged and NH_4 increased considerably.

A. S. Martin

NAG-RADOVA, N.K.

2885. Mechanism of carnosine effect on glycolytic oxidation-reduction system coupled with phosphorylation. N. K. Nagradova *Biochimia*, 1956, 21, 17-25 (Chair of Animal Biochem., Moscow Univ., Moscow, U.S.S.R.).—Addition of carnosine to dialysed rabbit and frog muscle extract in phosphate buffer, ATP, fructose 1,6-diphosphate, NaF, creatine, and DPN, increases the rate of accumulation of phosphoglyceric acid. There is no increase in the rate when arsenate is present i.e. when oxidation-reduction and phosphorylation are uncoupled. Since carnosine does not increase the activity of cryst. dehydrogenase, it is concluded that it acts by accelerating the rate of transfer of phosphate to ADP. (Russian)

A. K. GIZYNSKI

NAGRADOVA, N.K.

Effect of carnosine on glycolytic oxidation-reduction reaction associated with phosphorylation [with summary in English]. *Bio-khimiia* 23 no.4:511-522 J1-Ag '58. (MIRA 12:3)

1. Chair of Animal Biochemistry, The Moscow State University, Moscow.

(CARNOSINE, effects,
on glycolytic oxi-reduction with phosphorylation
(Rus))
(PHOSPHATES, metabolism,
eff. of carnosine on phosphorylation with glycolytic
oxi-reduction (Rus))
(OXIDATION REDUCTION,
same)

NAGRADOVA, N.K.

Studying the properties of 3-phosphoglycerdehyde dehydrogenase and soluble α -glycerophosphate dehydrogenase. Biokhimiia 24 no.2:336-344
Mr-Apr '59 (MIRA 12:7)

1. Chair of Animal Biochemistry, the State University, Moscow.
(DEHYDROGENASES,
3-phosphoglycerdehyde dehydrogenase & soluble α -glycero-
phate dehydrogenase (Rus))

AUTHORS: Severin, S. Ye., Corresponding Member, SOV/26 121-3-34/47
Academy of Sciences, USSR. Nagradova, N. K.

TITLE: Characteristic Features in the Action of Dehydrase of Phospho-
glycerin Aldehyde (Ob osobennostyakh deystviya degidrazy fosfo-
glitserinovogo al'degida)

PERIODICAL: Doklady Akademii nauk SSSR, Vol. 121, Nr. 3.
pp. 519-522 (USSR) 1958

ABSTRACT: Among all factors determining the velocity of the enzymic
reaction those effects which influence the suppression or the
activation of the ferment are most important. We know from
publications that not only substances of non-physiological nature
(poisons, various synthetical compounds) but also natural trans-
formation products may act as inhibitors. The effect of those
natural products may be used to regulate the velocity of bio-
chemical processes. The authors noticed that the activity of the
dehydrase PGA depends to a great extent on the type of buffer
used in connection with the reaction of the glycolytic oxide
reduction. The glycine buffer had the most favorable effect on
the ferment. In the veronal and phosphate buffer the dehydrase

Card 1/3

Characteristic Features in the Action of Dehydrase
of Phosphoglycerin Aldehyde

SOV/20-121-3-34/47

was suppressed. This suppression could be eliminated by the addition of amino acids and dipeptides. The reaction in the bicarbonate buffer which contained different amounts of phosphate enabled the authors to find out that the bicarbonate buffer suppresses the dehydrase PGA. This problem is treated in detail in the paper. The authors used a bicarbonate phosphate buffer without special activators; they did use, however, redistilled water. Table 1 A shows that the reaction depends on the concentration of inorganic phosphate. The impression is gained that higher phosphate concentrations bind the active dehydrase centers and thus prevent the reaction. An addition of histidine leads to the release of any reactive groups. Thus there is an increase of the enzymic activity and subsequently the amount of organic phosphorus, necessary for the reaction. The activating effect of the amino acid does not completely eliminate the inhibiting effect of phosphorus. Its importance may lie in the protection of dehydrase against the action of other inhibitors. As can be seen from figure 1 a part of this action apparently consists of interaction between phosphate, histidine and the active dehydrase centers. Various amino acids have different protecting

Card 2/3

Characteristic Features in the Action of Dehydrase
of Phosphoglycerin Aldehyde

SOV/20.121 3 34/47

effects. Furthermore, the nature of the mentioned inhibition was determined. Figure 3 shows that competitive reactions between the reaction substrate and the phosphate exist. The higher the substrate concentration the stronger the inhibition. Apparently phosphoglycerin aldehyde competes with phosphate for the possession of some active centers in the protein. The activating effect of the amino acids may be due to the protection of those centers against phosphate and to the guarantee of a more rapid interaction between ferment and substrate. Figure 4 reveals that the effect of the amino acids decreases with increasing concentration of phosphoglycerin aldehyde. There are 4 figures and 15 references, 1 of which is Soviet.

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

SUBMITTED: January 22 1958
Card 3/3

НАДЕЖИНА, Н.С.

Effect of heat-labile and other inactivating agents on the activity of 3-phosphoglycerate kinase from the muscle of a rabbit. *Biofizika* 9: 115-117, 1964. (MFA 18-6)

1. Надеина, Н.С. и др. Влияние термически лабильных и других инактивирующих агентов на активность 3-фосфоглицераткиназы из мышц кролика. *Биофизика* 9: 115-117, 1964.

NAGREBETSKIY, V., polkovnik

The principal instrument of imperialist aggression. Komm.Vooruzh.Sil
1 no.3:75-79 F '61. (MIRA 14:8)
(North Atlantic Treaty Organization)

NAGRINYAK, Ye.A.; KATS, G., red.; GORYACHENKO, F., tekhn. red.

[Thirty-seven centners of winter barley per hectare] 37 chentnere
de orz de toarne la khektar. Kishineu, Editura pentru literature
agrikulturii al RSS Moldovenesht', 1962. 11 p. [In Moldavian]
(MIRA 15:6)

(Moldavia—Barley)

MOROZOV, A.I.; NAGRODSKAYA, A.Z.

Prevention of radiation injuries to the eyes in radiotherapy. Vest.
rent. i rad. 31 no.4:48-51 J1-Ag '56. (MLRA 9:10)

1. Iz radiologicheskogo otdeleniya (zav. - prof. A.V.Kozlova)
TSentral'nogo nauchno-issledovatel'skogo instituta rentgenologii i
radiologii imeni V.M.Molotova (dir. - dotsent I.G.Lagunova)

(FACE, neoplasms

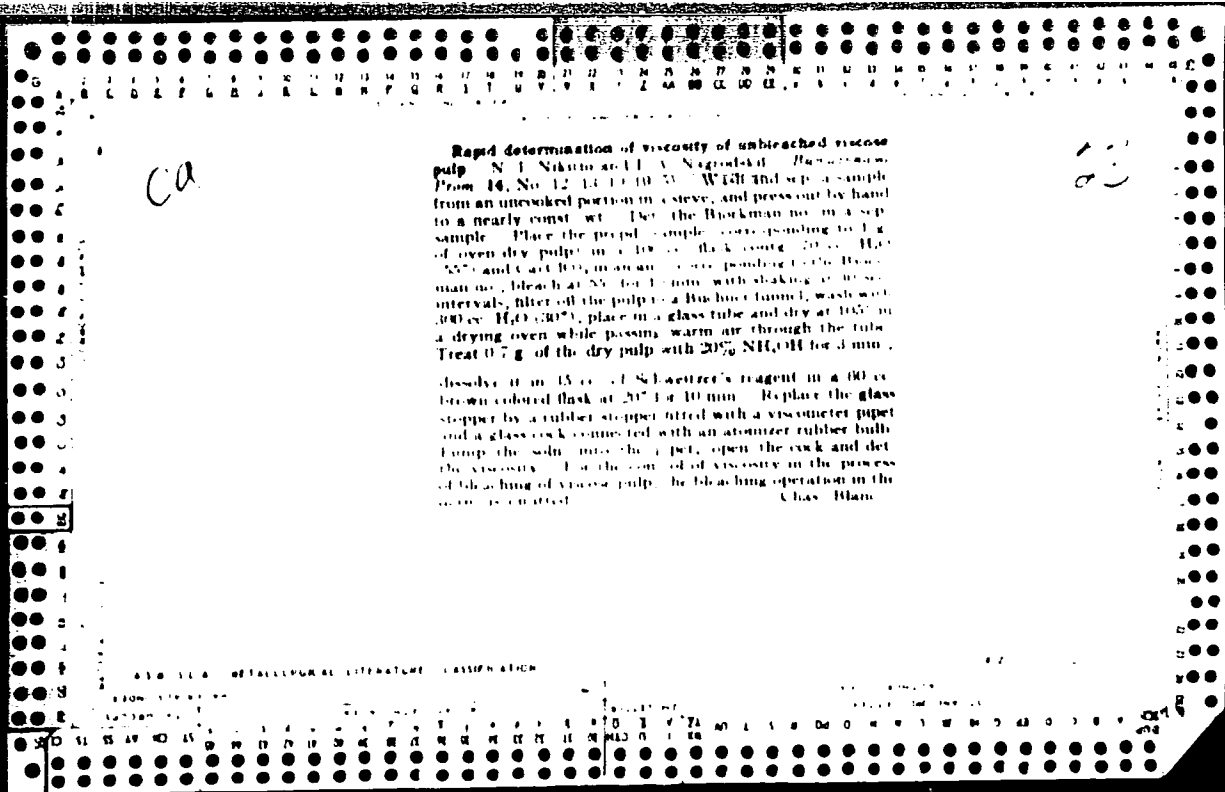
radiother., prev. of eye inj. with x-ray)

(RADIOTHERAPY, in various dis.

cancer of face, prev. of eye inj. with x-ray)

(EYE, wounds and inj.

x-ray inj. prev. in radiother. of cancer of face)



ca

Rapid determination of viscosity of unbleached viscose pulp - N. I. Nikitina and E. V. Nagodskii - Paper No. 14, No. 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

From an unsieved portion in a sieve, and press out by hand to a nearly const. wt. Use the Bockman no. in a sep. sample. Place the pulp sample, corresponding to 1 g. of oven dry pulp, in a 100 cc. flask (contg. 20 cc. H₂O, 5% and Cat B), in an amount corresponding to the Bockman no., bleach at 55° for 10 min. with shaking at 10 sec. intervals, filter off the pulp in a Buchner funnel, wash with 30 cc. H₂O (30%), place in a glass tube and dry at 105° in a drying oven while passing warm air through the tube. Treat 0.7 g. of the dry pulp with 20% NH₄OH for 3 min., dissolve it in 15 cc. of Schaeffer's reagent in a 100 cc. brown colored flask at 20° for 10 min. Replace the glass stopper by a rubber stopper fitted with a viscometer pipet and a glass cock connected with an atomizer rubber bulb. Pump the solution through pipet, open the cock and det. the viscosity. For the control of viscosity in the process of bleaching of viscose pulp, the bleaching operation in the above is omitted. Chas. Blanc.

CA

23

Bleaching of (sulfite) pulp with sodium hypochlorite
L. Komarov and I. Nagrodskii, *Sel'mshkhoz* / Tom 13,
No. 4, (2 8/1957). The results of experiments in bleaching
sulfite pulp by 1 stage with NaClO , and by 2 stages with
 NaClO and with $\text{NaClO} + \text{Ca}(\text{ClO})_2$ are tabulated and
discussed. The results were checked by parallel bleaching
with $\text{Ca}(\text{ClO})_2$ alone. One-stage bleaching with NaClO
gave unsatisfactory results. The 2-stage process with
 NaClO gave a good product in respect to viscosity and
brightness, a cellulose and ash contents. Substituting Ca
 $(\text{ClO})_2$ for NaClO in the 1st stage gave somewhat inferior
pulp, but a better one than is obtained by 1-stage bleach-
ing with NaClO . Chas. Blain