

On a Starting-Up Circuit of a Converter Inductor 161-1111-11
1111

can be successfully used in two-phase converter circuits. In a three-phase circuit it is only applicable subject to certain restrictions, as it leads to a distortion of the magnetization curve. The suggested circuit can be of interest under certain conditions, as it is simple and economical. There are references to Soviet references. The publication of this article was recommended by the Kafedra elektricheskogo transporta Moskovskogo energeticheskogo instituta (Chair of Electric Transportation at the Moscow Institute of Power Engineering).

ASSOCIATION: Kafedra elektricheskogo transporta Moskovskogo energeticheskogo instituta (Chair of Electric Transportation at the Moscow Institute of Power Engineering); Kafedra elektrotekhniki Moskovskogo vysshego tekhnicheskogo uchilishcha im. Baumana (Chair of Electrical Engineering at the Moscow Higher School of Technology imeni Bauman)

SUBMITTED: January 21, 1958

1111 3 1

NEKRASOV, Oleg Alekseyevich, kand. tekhn. nauk, starshiy nauchnyy

~~sovetnik~~

Frequency regulation of asynchronous driving motors. Izv. vys.
ucheb. zav.; elektromekh. 1 no.6:77-89 '58. (MIRA 11:9)

1. Kafedra elektricheskogo transporta Moskovskogo energeticheskogo
instituta.

(Electric locomotives) (Electric motors, induction)

8(6)

AUTHOR:

Nekranov, Oleg Alekseyevich, Candidate of Sci., 1941-58-2-27, 30
Technical Sciences, Senior Scientific Worker, Chair of
Electric Transportation, Moscow Power Engineering Institute

TITLE:

On the Current Supply of Mine Transportation Means for Condenser
Electric Engines (Ob elektrosnabzhenii rudnichnoy otkatki pri
kondensatornykh elektrovozakh)

PERIODICAL:

Nauchnyye doklady vysshey shkoly. Elektronekhanika i avtomatika,
1958, Nr 2, pp 217 - 222 (USSR)

ABSTRACT:

The energy-supply system of the transportation with a single-
phase current and condenser locomotives shows some peculiarities
which consist of an asymmetric load on the train-transformers
and in increased difficulties to protect the system against
short-circuit currents. These questions are now treated
briefly, i.e. on the basis of the author's elaborations and
practical experience gained in the transportation by means of
electric engines KE-2. The calculations were applied to these
locomotives (Ref 1). The results of these calculations are
given here. Admissible transformers loads are investigated
and calculations of a system for minimum voltage at the

Card 1/2

On the Current Supply of Mine Transportation Means for 30V 101-11-07, 10
Condenser Electric Engines

collector are performed. The system for short-circuit currents is calculated; the reactance protection of a short-circuit current is investigated and it is demonstrated that it is the best means of simplifying and reducing costs of the current-supply system. There are 2 figures and 4 Soviet references.

ASSOCIATION: Katedra elektricheskogo transporta Moskovskogo energeticheskogo instituta (Chair of Electric Transportation at the Moscow Power Engineering Institute)

SUBMITTED: March 11, 1968

Card 2/2

8(5), 12(3)

AUTHORS:

Nekrasov, Oleg Alekseyevich, Candidate of SOV/161-58-4-13/28
Technical Sciences, Senior Scientific Associate of the Chair,
Bekus, Grigoriy Gavrilovich, Assistant

TITLE:

On the Condenser-auxiliary-machines of Alternating Current
Locomotives With Rectifiers (O kondensatornykh vspomogatel'nykh
mashinakh elektrozovozov peremennogo toka s vypryamitelyami)

PERIODICAL:

Nauchnyye doklady vysshey shkoly. Elektromekhanika i avtomatika,
1958, Nr 4, pp 150 - 160 (USSR)

ABSTRACT:

In electro-locomotive construction in the USSR, asynchronous
condenser-motors and three phase induction motors (fed from a
phase splitter (Ref 3)) are used for driving the auxiliary units
of alternating current locomotives with the industrial frequency.
Some results are given here of the examination of auxiliary
condenser motors, in order to determine the most economical,
reliable, and simple circuit diagram. The following units belong
to these auxiliary machines: Motor-ventilators, motor-compressors,
motor-cooling water pumps and motor-generators of the control
circuits. The working conditions of these auxiliary motors of the
single-phase direct-current locomotives are very difficult. On the
current take-off devices of the locomotives, voltage fluctuations

Card 1/3

On the Condenser-auxiliary-machines of Alternating Current SOV/161-58-4-17/28
Locomotives With Rectifiers

of the nominal value are allowed within the limit of from 0.75-1.1, and the range of outside temperature is limited between $+40^{\circ}$ - -50° Celsius. The examination carried out here showed that the installed power of the condensers requires a system of auxiliary condenser-motors and a hydraulic drive of the compressors for starting from the cold, since no switched-off condensers are available if all motors are working. Applied to the electro-locomotive of the NC-type, it is shown in table 1 that this allows reducing the total capacity by 2.2 times, at simultaneous improving the starting properties of all motors. At the same time, the compressors are protected against increased wear during starting at voltages coming close to the nominal voltages. The circuit diagram developed here is illustrated and described on an example in figure 2. The examination showed that with the mentioned circuit diagram and drive respectively, any motor can be started and stopped, independent of the condition of the other motors. When starting all motors in succession, all contactors close with the exception of one. With the circuit diagram for the condenser-motors of the electro-locomotive of the NC-type, 8 contactors must be switched-off by 8 relays, for starting all auxiliary motors. The

Card 2/3

On the Condenser-auxiliary-machines of Alternating Current SOV/161-58-4-19/28
Locomotives With Rectifiers

circuit is simple and reliable. The control circuit can also be simple and reliable, especially in the case of contactless relays being used. There are 5 figures, 1 table, and 9 Soviet references.

ASSOCIATION: 1) Kafedra elektricheskogo transporta Moskovskogo energeticheskogo instituta (Chair for Electrical Transportation at the Moscow Institute of Power Engineering), 2) Kafedra teplovogo kontrolya i avtomatiki Moskovskogo energeticheskogo instituta (Chair for Heat Control and Automation at the Moscow Institute of Power Engineering) (1. Nekrasov; 2. Rekus)

SUBMITTED: August 2, 1958

Card 3/3

8(5), 8(2), 12(3)

SOV 105 59-5-8 29

AUTHORS: Nekrasov, O. A. Candidate of Technical Sciences, Chikhin, A. Ya, Engineer

TITLE: Self-regulation of Diesel Locomotive Generators Using Magnetic Amplifiers (O samoregulirovani: teplovoznnykh generatorov s ispol'zovaniyem magnitnykh usiliteley)

PERIODICAL: Elektrichestvo, 1959. Nr 5. pp 31-36 (USSR)

ABSTRACT: In connection with the production of new heavy Diesel locomotives in the USSR, great attention is being paid to the problem of self-regulation of generators with the use of magnetic amplifiers. On Diesel locomotives the generator excitation is produced by direct current exciters. It is shown here that the use of a synchronous exciter instead of the direct-current exciter greatly reduces the spreading of self-regulation, and offers a possibility of reducing the amplifying coefficient and the capacity of the system for the automatic regulation of the capacity of the Diesel engine and of the generator. But the stability of the automatic regulation is also affected by other factors. The problem of stability with the use of a synchronous

Card 1/3

SOV'05 59 5-8 29
Self-regulation of Diesel Locomotive Generators Using Magnetic Amplifiers

exciter is investigated here and the analytical correlations between the properties of self-regulation and the properties of the individual building groups of the wiring are determined in a general form. This general correlation is ascertained by means of an example for a specific case of combination of certain building groups. A method of obtaining this correlation is but not given here. The correlation obtained is then generalized. On the basis of this generalization some variants of wirings and combinations of building groups of the regulating systems for the generators of Diesel locomotives were investigated theoretically and in practice. The investigation of the system at a reduced number of revealed the necessity of the calculation of the necessary properties of the regulating building groups were also carried out. The calculation of the general correlations given here. The experimental control in the laboratory is described. The general correlations given for systems of self-regulation of generators for Diesel locomotives with the use of magnetic amplifiers make it possible to investigate wirings, and to carry out theoretical calculations of stationary operating conditions. The correlations obtained can also be

Card 2, 3

SOV/105-59-5-8/29

Self-regulation of Diesel Locomotive Generators Using Magnetic Amplifiers

used for other drives in a generator-d.c.motor system. There are 6 figures and 3 references, 1 of which is Soviet.

ASSOCIATION: Moskovskiy energeticheskij institut (Moscow Power Engineering Institute)

SUBMITTED: January 31, 1959

Card 3/3

NEKRASOV, O.A.

S/271/63/000/001/017/047
D413/D308

AUTHORS: Nekrasov, O.A. and Shikhin, A.Ya.

TITLE: On the calculation of operating range for automatic control systems for diesel locomotive electric transmissions

PERIODICAL: Referativnyy zhurnal, Avtomatika, telemekhanika i vychislitel'naya tekhnika, no. 1, 1963, 45, abstract 1A248 (Tr. Mosk. energ. in-ta, no. 37, 1961, 75-85)

TEXT: A description is given of a graphic-analytical method for calculating the required variation of magnetizing force F_m to drive the DC split-pole exciter used on Soviet diesel locomotives to achieve generator self-regulation for constant diesel power. A certain range of variation of magnetizing force is necessary to compensate for a considerable spread in self-regulation characteristics, and is secured by the systems of automatic control of power and current. The calculation is based on the technical data of the machines, exciter circuit diagrams of the diesel locomotive and families of

Card 1/2

On the calculation ...

S/271/63/000/001/017/047
D413/D308

exciter load curves. These curves are obtained with the generator exciter windings both hot and cold, for a number of independent exciter winding current I_1 with one fixed value of shunt exciter winding current I_2 . Using the exciter load curves, a plot of exciter voltage against magnetizing force $U_E (F_1)$ is constructed (for a given value of I_1 and generator exciter winding impedance). The actual self-regulation characteristic is derived graphically by finding the intersection points of the curve of exciter voltage against magnetizing force (constructed from the exciter load curves) and the curve of magnetizing force against exciter volts obtained by considering the exciter circuit diagram. An example of the calculation is given. Self-regulation characteristics obtained in practice are stated to have agreed with the calculated one to an accuracy of about 3%. 4 figures. 1 reference.

[Abstracter's note: Complete translation]

Card 2/2

NEKRASOV, Oleg Alekseyevich, kand. tekhn. nauk, starshiy nauchnyy so-
trudnik; GORIN, Nikolay Nikolayevich, inzh.

Utilization of the power of asynchronous short-circuited ma-
chines operating under conditions deviating from nominal.
Izv. vys. ucheb. zav.; elektromekh. 6 no.8:946-951 '63.

(MIRA 16:9)

1. Tsentral'nyy nauchno-issledovatel'skiy institut Minister-
stva putey soobshcheniya.

TIFHMENEV, B.N., doktor tekhn.nauk, IZOSIMOV, A.V., kand.ekonom.nauk,
NEYRASOV, O.A., kand.tekhn.nauk; LAPIN, " B , inzh.

Technical and economic comparison of methods for joining a.c. and d.c.
electrified railroad districts. Trudy TSNII MPS no.256:108-122 '63.
(MIRA 16:6)

(Electric railroads)

NEKRASOV, O. A., kand. tekhn. nauk; SHEVCHENKO, V. V., kand tekhn nauk;
REKUS, G. G., kand. tekhn. nauk

Calculation of the heating of asynchronous machines using
a thermal parameter method. Izv vyz ucheb zav; energ 7
no. 1:40-46 Ma '64. (MIRA 17:5)

1. Moskovskiy khimiko-tekhnologicheskiy institut. Predstavlena
kafedroy elektrotekhniki i elektroniki.

NEKRASOV, O.A., kand.tekhn.nauk; NOVIKOV, V.Ye., inzh.

Results of the traction and power tests of the experimental VL20
electric locomotive. Trudy TSNII MPS no.286:5-34 '65.

(MIRA 18:8)

NEKRASOV, O.A., kand.tekhn.nauk

Comparing the traction and power characteristics of a.c. multiple-unit trains with collector motors and with rectifier type traction.

Trudy TSNIi MPS no.286:71-82 '65.

(MIRA 18:6)

NEKRASOV, O.A., kand.tekhn.nauk; GORIN, N.N., kand.tekhn.nauk

Auxiliary a.c. motors. Trudy TSNII MPS no.286:103-117 '65. (MIRA 18:8)

NEKRASOV, Oleg, Aleksseyevich, kand. tekhn. nauk, ANDERS, Vitaliy Ivanovich,
assistant

Compensation of the current of an idle three-phase magnetic amplifier.
Izv. vys. ucheb. zav., elektromekh. 8 no. 5: 573-579 '65. (MIRA 18:7)

1. Bukov dilet' laboratorii elektropodvizhnogo sostava Tsentral'nogo
nauchno-issledovatel'skogo instituta Ministerstva putey soobshcheniya
(for Nekrasov) 2. Kafedra elektromekhnicheskogo transporta Moskovskogo
energeticheskogo instituta (for Anders).

MALYSHEV, V.S., gornyy inzhener.; NEKRASOV, O.P., gornyy inzhener.; RYTIKOV, K.M.,
gornyy inzhener.

Systems of mining thin, flat skarn deposits. Gor. zhur. no.2:14-18
P '57. (MLBA 10:4)

1. Dzhennichkinskoye rudoupravleniya.
(Mining engineering) (Silicates)

NEKRASOV, P.A., akademik [deceased]; TYUTYUNNIKOV, A.I.

Experience in using T.S.Mal'tsev's method for shallow tillage heavy
loam soils. Trudy MIMESKH 4 no.2:3-35 '59. (MIRA 15:4)
(Tillage) (Mal'tsev, T.S.)

14

The action of potassium and calcium ions upon the fatigued muscle. I. The action of potassium and calcium ions upon the curve of fatigue with indirect stimulation of muscle. I. A. Nekrasov. *Izv. Akad. Nauk SSSR Ser. Biol. Med. Sci. (in German)* 1952, 1953. From muscle nerve preps. were fatigued by elec. stimulation and then exposed to Ringer soln. contg. various amts. of KCl and CaCl₂ (0.055-0.005%, KCl and 0.025-0.104%, CaCl₂). Control expts. with unfatigued muscles were made. K⁺ and Ca²⁺ in increased concns. produced in fatigued muscles strongly marked recovery. The K⁺ effect was transient and followed by most profound depression, while the recovery effect by Ca²⁺ was more slowly attained, was much more lasting, and the total

activity was greater than in the control (unfatigued) muscle. This effect is not explained by the washing out of fatigue products as shown by control expts. The recovery effect is produced by removal of K⁺ or Ca²⁺ 2-3 times that in ordinary Ringer soln. In lower concns. Ca²⁺ produces the greater effect, while in higher concns. the effect of K⁺ is more marked. The usual effect manifests itself in two phases: a rapid rise of the curve with a subsequent fall, rapid with K⁺ and gradual with Ca²⁺. Occasionally 3 phases were observed: initial fall, followed by a rapid rise and then by a variable decline. Increased concns. of K⁺ act upon the fatigued in the same general way as upon the unfatigued muscle, only the initial positive phase is either weak or missing, followed by a depression of function which is the usual phase. Ca²⁺ acting on the unfatigued muscle either produces no effect or depresses the contraction without any subsequent increase, and causes in the later stages a retardation of the action of Ca²⁺ upon muscle and of the action of sympathetic nervous system in em. phasized. II. The action of potassium and calcium ions upon the fatigue curve of muscle in asphyxiation and direct stimulation. *Ibid.* 1953 (in German) 7-11. In these expts. the muscles were first subjected to asphyxiation by immersion in Ringer soln. contg. KCN instead of the KCl (0.02 M) and were then treated with increased concns. of KCl or CaCl₂ in Ringer soln. still contg. the above concn. of KCN. The controls were treated with Ringer KCN only. In some expts.

the Ca effect was compared in KCN-treated preps with the effect upon muscles subjected to an oxygenated Ringer soln. without KCN. In the experiments with direct stimulation normal and curarized muscles were compared. The preliminary treatment with KCN not only did not diminish the ion effects upon the nerve-stimulated muscle, but actually increased them. The basic character and phases of the effects of these ions remain the same as in the normal fatigued muscles, except that the initial drop in activity is unusually lacking. This initial phase is evidently related to the oxidative processes in the muscle. The K and Ca effects upon the directly stimulated normal, not curarized, muscles are in general the same as upon nerve-stimulated muscles. In the curarized fatigued muscle the effects are different. Ca⁺⁺ produced a transient, slowly increasing diminution of contractions which then gradually abates, so that the amplitude of the contractions reaches that of the control muscle. The K⁺ under the same conditions produces its usual biphasic effect of initial stimulation followed by depression of the contractions. The character of the curves of the unfatigued muscles is in general the same as that with the fatigued preps, only the effects are weaker and require higher currents of the two ions and more prolonged exposure to them. The K-treated muscle performs less work and is more rapidly fatigued than the control, while the muscle treated with Ca, even before the onset of fatigue, compares well with the control or exceeds it in this respect. These data are correlated with the known physical effects of K⁺ and Ca⁺⁺ upon membrane permeability and potentials, irritability and chronaxie and of K⁺ upon viscosity and contractility of muscles.

W. A. Preissner

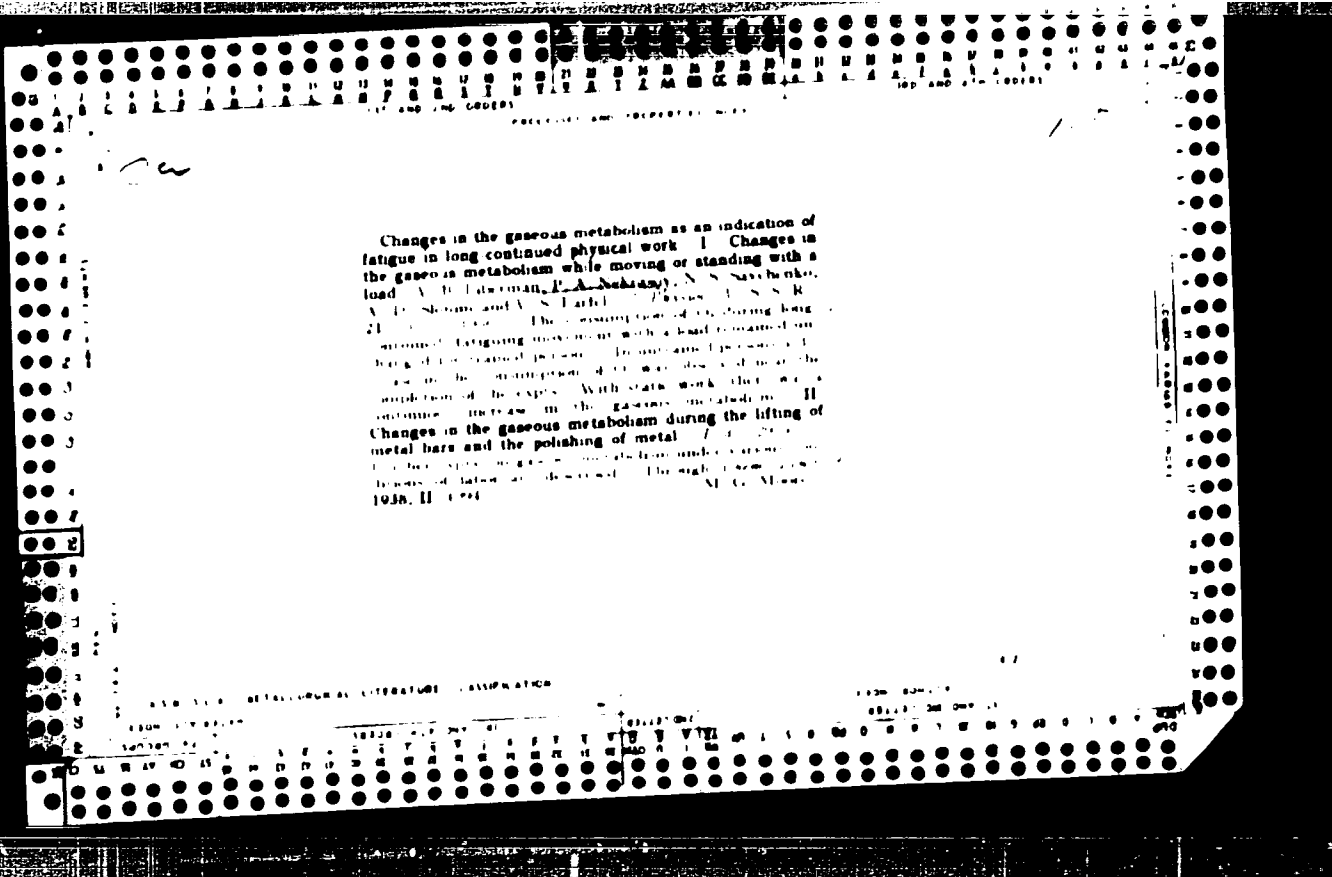
**Analysis of the action of the sympathetic nervous system
and of potassium and calcium salts on the skeletal muscles**
1. The action of the normal sympathetic system and of
potassium and calcium salts on muscle poisoned with
monochloroacetic acid P. A. Nekrasov

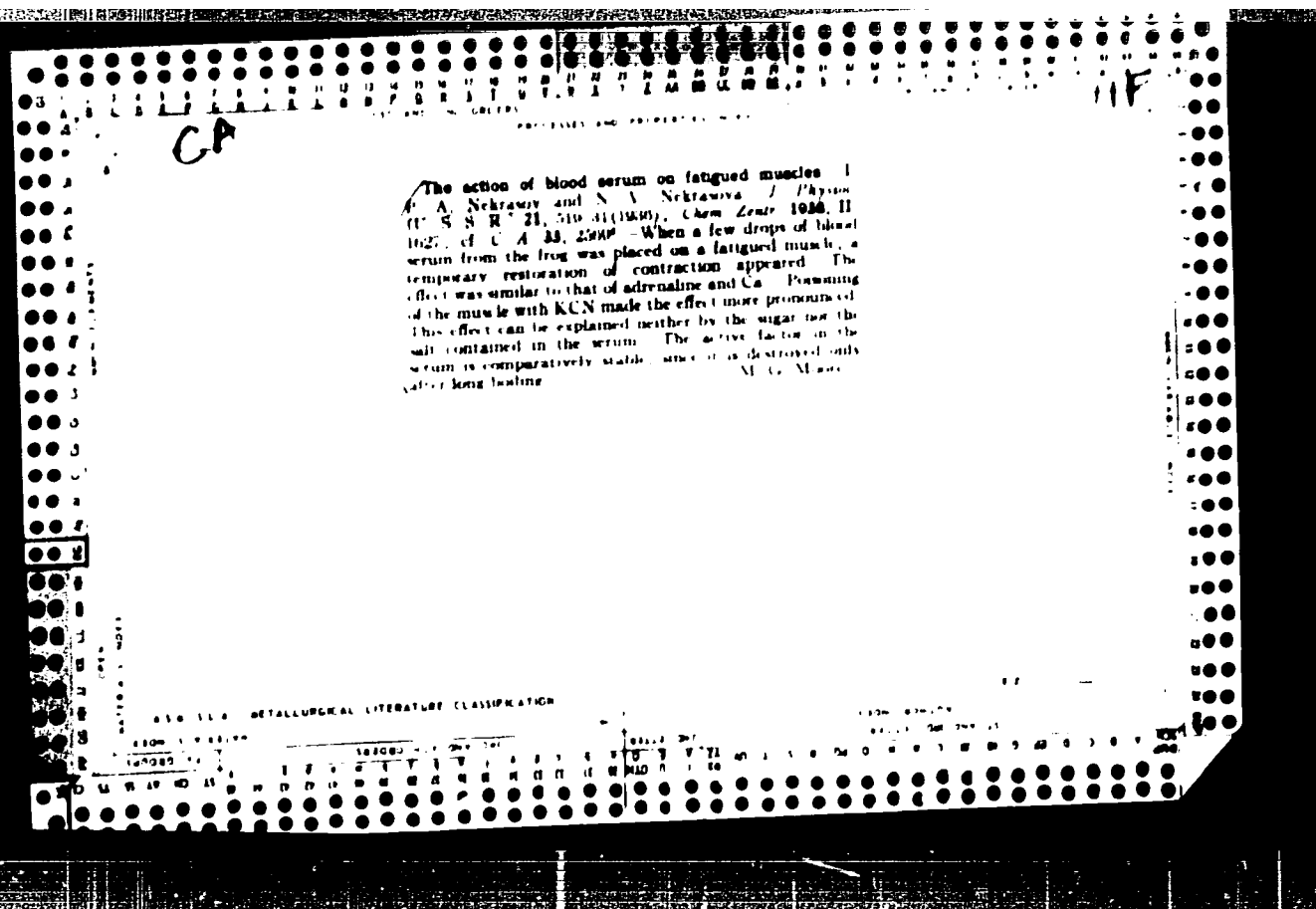
1. *U.S.S.R.* 20, 817-27 (1956) (in Russian) 1956, 44
1956. A muscle fatigued and poisoned with CH₂ClCOOH
showed little or no response to the stimulation of the sym-
pathetic system. Ca and K salts in small concentrations
restored the response. The action of the salts was attributed
to their effect on the transmission of impulses from the nerve to the muscle (M.P.M.).

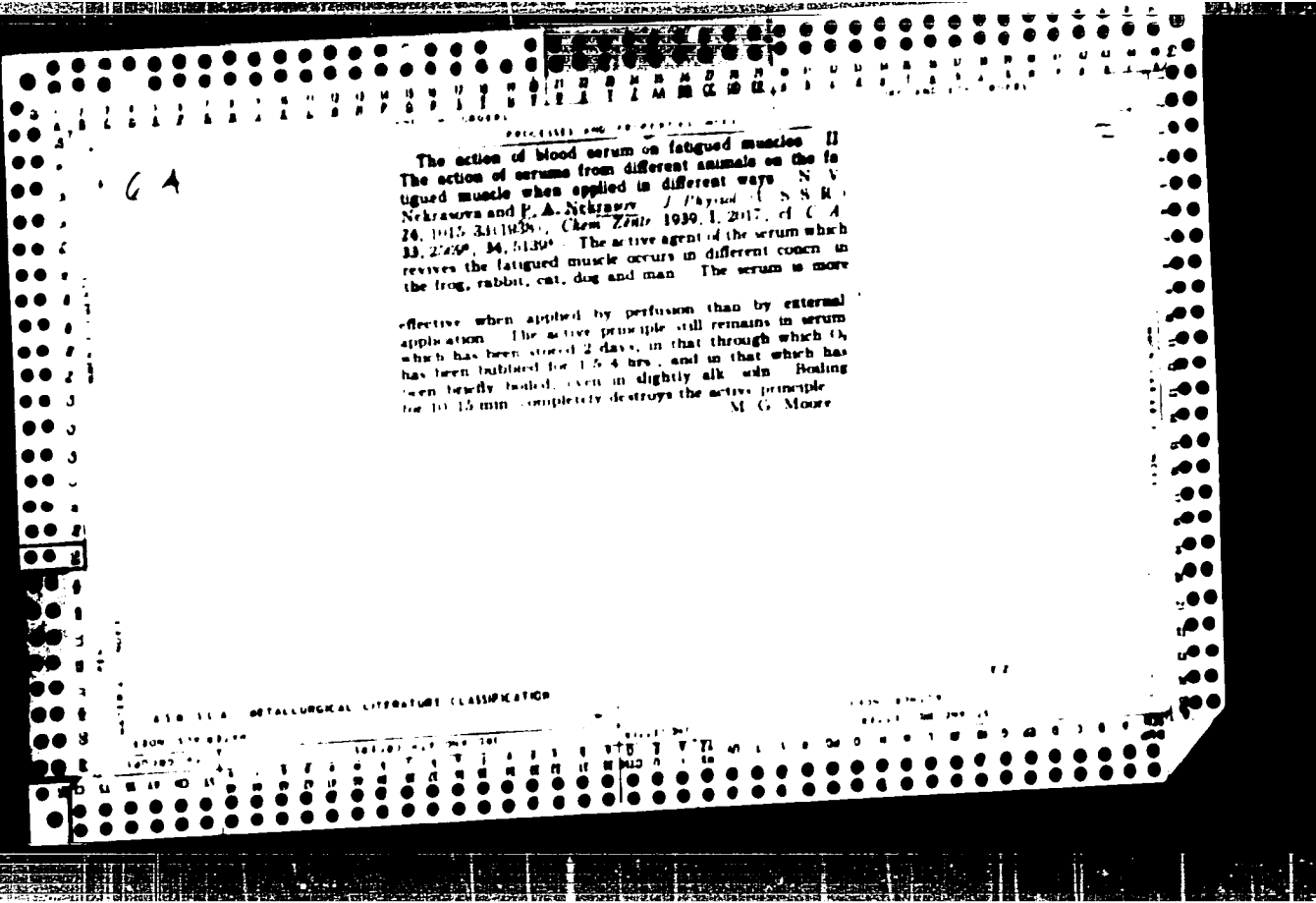
14

analysis of the action of the sympathetic nervous system and of salts of potassium and calcium on the skeletal

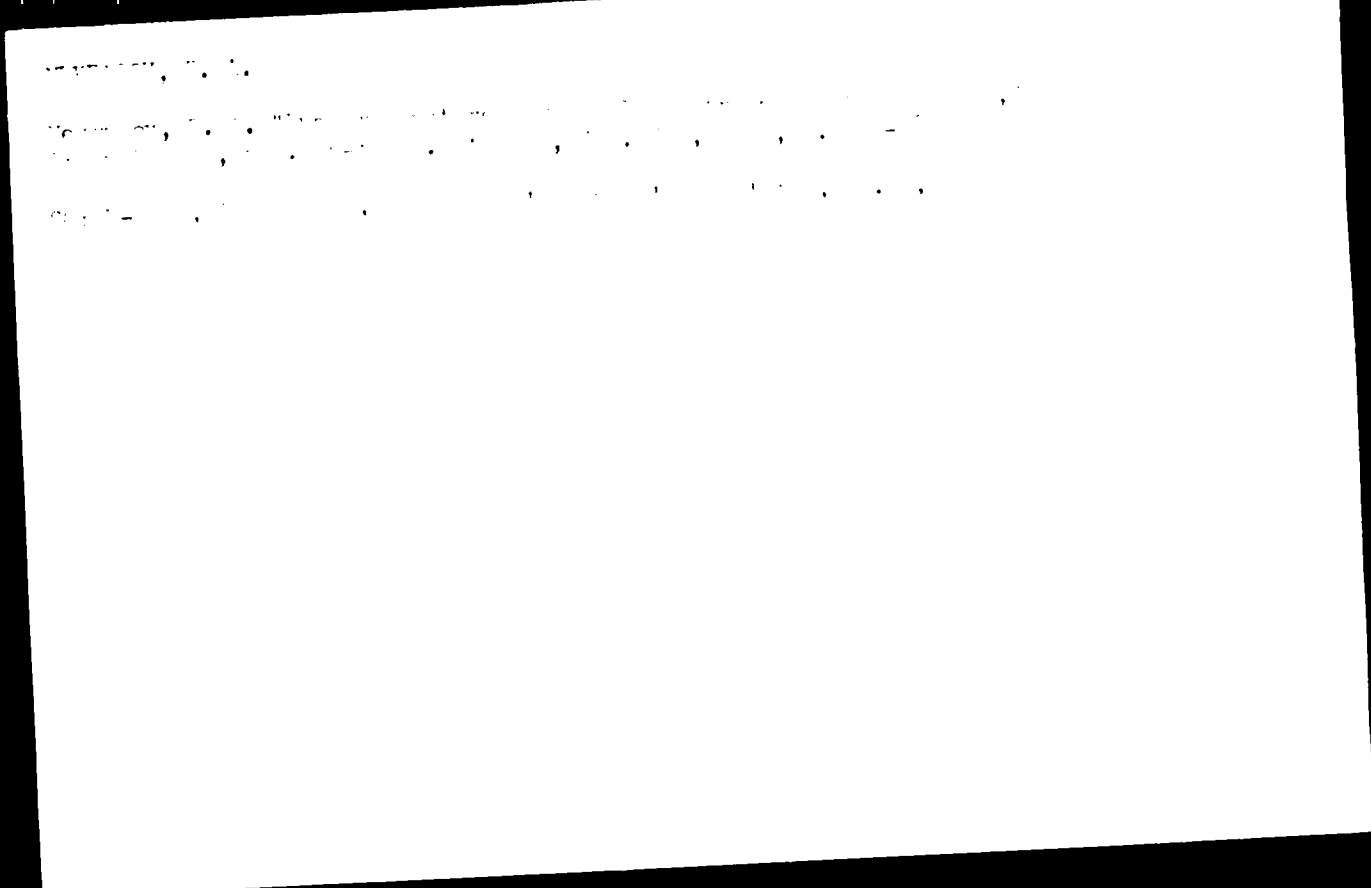
muscles. II. The effect of salts on muscles poisoned by monosodiumacetate acid under various conditions of transfer of the stimulus from the nerve to the muscle. P. A. Nekrasov and B. P. Chuvpinskiy. *Trav. Acad. Sci. USSR Div. Biol. Sci. Ser. Zool.* 1948, 1: 1-11. (1948, 4: 33, 6448). Studies on the skeletal muscles prepared from frogs indicated that the failure of salts of calcium and potassium as well as of the salts of sodium to produce any effect on muscles poisoned by a HELLERHOLM toxin is due to any influence of the toxin on the neuromuscular junction. The general physiology of the neuromuscular junction is connected with the neuromuscular junction of the neuromuscular stimulus.







The action of blood sera on fatigued muscles III
The effect of the sera of venous and arterial blood, and the
influence of labor on the serum effect - P. A. Nehrasov
and N. V. Nekrasova / *Physiol. USSR* 1957, 1, 5-11
in German, 22-10(18) / *J. C. A.* 20, 5806. Serum ob-
tained from the venous blood of dogs and rabbits is less ac-
tive in stimulating fatigued frog muscle than is the serum
of arterial blood. The serum of human blood, taken after
slight labor, is more active than when taken at rest. After
hard labor all the serum activity is lost. It is suggested
that the substances responsible for the activation are ad-
sorbed from arterial blood as it passes through the capil-
laries. S. A. Karala



NEKRASOV, P.A., prof.; ZEMSKAYA, Ye.I., assistant

Influences from the receptors of the nerve trunks on the spinal
motor reflexes. Sbor. turd. Kursk. gos. med. inst. no. 13:280-286
'58. (MIRA 14:3)

1. Iz kafedry fiziologii (sav. - prof. P.A.Nekrasov) Kurskogo
gosudarstvennogo meditsinskogo instituta. (REFLEXES)
(RECEPTORS (NEUROLOGY))

NEKRASOV, P.A.

Physiology of the receptors of the peripheral nerve trunks. Fiziol.
zhur. 47 no.9:1105-1113 9 '61. (M.A. 14:9)

. From the Department of Physiology, Medical Institute, Kursk.
(RECEPTORS (NEUROLOGY))

NEKRASOV, P. Ya. (Kiyev, 74, ul. Verbovaya, d. 2b.)

A case of angiosarcoma of the mediastinum. Nov. chir. arkh. 5:123-124
S-0 '58. (MIRA 12:1)

1. Kafedra onkologii (zav. - prof. I.T. Shevchenko) Kiyevskogo instituta
usovershenstvovaniya vrachey.
(MEDIAS'TINUM--TUMORS)

LESECHENKO, P.I. (Kiyev, ul. Vorovskogo, d.14, kv.14); NEKRASOV, P.Ya.

Diagnosis and treatment of melanomas of the rectum. Nov.khir.arkh.
no.5:95-97 S-0 '59. (MIRA 13:3)

1. Kafedra onkologii (zaveduyushchiy - prof. I.T. Shevchenko) Kiyev-
skogo instituta usovershenstvovaniya vrachev.
(MELANOMA) (RECTUM--TUMORS)

POKROVSKIY, S.A. (Kiyev, ul. Tolstogo, d.7, kv.1); SEMENOVA, A.M.;
NEKRASOV, P.Ya.

Radiotherapy in malignant bone tumors. Nov. khir. arkh. no.2:
89-96 Mr-Ap '60. (MIRA 14:11)

1. Kiyevskiy nauchno-issledovatel'skiy rentgeno-radiologicheskiy
i onkologicheskiy institut.
(BONES--CANCER) (RADIOTHERAPY)

VCINAY, Ye.A. (Kiyev, Yevgeniya 3lna, kv.17); NEMZOV, I.Ya.; LEBEDEV, M.P.; LOBCHA, I.P.

X-ray, radio and surgical method for treating internally and externally located cancer. Klin. khir. no.3:12-18 '66.

1. Radio-khirurgicheskiy otse. (zav. - zastupniky: direktor nauki, prof. I.T.Shevchenko) Kiyevskogo nauchno-issledovatskogo rentgenoradiologicheskogo i onkologicheskogo instituta.

NEKRASOV, Roman Mikhaylovich; ALYAB'YEV, V.I., red.; MIKHAYLOVA, L.G.,
red. izd-va; VDOVINA, V.M., tekhn. red.

[Rigging of skidding and loading equipment] Montazh trelevochno-
pogruzochnogo oborudovaniia; prakticheskoe rukovodstvo. Moskva,
Goslesbunizdat, 1961. 130 p. (MIRA 16:2)
(Lumbering)

MYNIV, V.I., kind. Kh. nu;

... ..
large

(Liberating—agency)

(... ..)

PERFILOV, M.A.; ALYAB'YEV, V.I.; NEKRASOV, R.M.; GRECHISHNIKOV, V.V.;
MASHIN, G.K.; FEDOROV, N.S., *otv. red.*; KALININA, L.M., *red.*
izd-va; SHIBKOVA, R.Ye., *tekhn. red.*

[Album of auxiliary skidding and loading equipment] Al'bum
vspomogatel'nogo trelevochno-pogruzochnogo oborudovaniia. Mo-
skva, Goslesbumizdat, 1962. 119 p. (MIRA 16:4)
(Lumber--Transportation)

ALVA-1987, 7/11/87, 10/1/87, 10/1/87; ADMIN, 1/1/87
MEMORANDUM FOR THE DIRECTOR, CIA

(See always for initial review of documents received from
free-press sources in the area of the above-mentioned
subject. The information is to be used for the purpose of
subject to the provisions of the Freedom of Information Act.
This information is to be used for the purpose of the
subject to the provisions of the Freedom of Information Act.
This information is to be used for the purpose of the
subject to the provisions of the Freedom of Information Act.

54
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NEPRASOV, Roman Mikhailovich; ALYAB'EV, V.I., ed.

[Assembly of equipment at outposts kontainirovaniya
na lesossekakh. 2. izd. Moskva, Izdatel'stvo prognozov, 1964.
211 p. (MIRA 1964)]

ALYAB'YEV, V.I., kand.tekhn.nauk, MASHIN, G.K., inzh., NEKRASOV, R.N., inzh.,
TIMOFEYEV, L.G., inzh.

The new TPU-4 Ysnime skidding and loading equipment. Mekh.i avtom.
proizv. 14 no.5:32-35 My '60. (MIRA 14:2)
(Lumbering—Machinery)

NEKRASOV, S. A.

WSP/Miscellaneous--machine construction

Card 1/1

Author : Nekrasov, S. A., engineer

Title : About methods of projection without making a copy

Periodical : Vest. mash. 34/3, 101, Mar/1954

Abstract : The WSP-1 apparatus is intended for direct manifolding of drawings from pencil originals, for photographic copying without changing the scale, and for mechanized chemical copying of drawings. Much time is saved by this apparatus. Drawings.

Institution :

Submitted :

**NEKRASOV, Sergey Afanas'yevich; KUZNETSOVA, M.I., red.; GALICHENKOVA,
M.I.; TONKH, red.**

[Manual for inspection commissions of the plant-factory and local
committees] V pomoshch' revisionnykh komissiiam FZMK. [Moskva] Izd-
vo VTsSPS Profisdat, 1957. 47 p. (MIRA 11:9)
(Trade unions)

McKasov, S. S.

Design of Roll Passes for High Quality Steel & C. (In Russian). The main characteristics of rolled sections in some tolerances and to obtain the required quality of surface is discussed. These requirements of high quality rolls for a wide range of steel by using a finishing pass slightly widened along the horizontal axis. The theory of the operation of such rolls is considered. The use of this design is said to increase roll life and productivity and to decrease rejects — S. K.

Metal

57

SHURALEV, M.V., inzhener, NEKRASOV, S.G.

Rolling of square bar steel with sharp edges. Stal' 16 no.11:997-
999 M '56. (MIRA 10:1)

1. Zlatoustovskiy metallurgicheskiy zavod.
(Rolling (Metalwork))

130-9-13/21

AUTHORS: Shuralev, M.V. (Eng.) and Nekrasov, S.G. (Calibration
Engineer)
TITLE: Operation of a 600 Mill according to a New Schedule.
(Rabota stala 600 po novomu grafiku)

PERIODICAL: Metallurg, 1957, Nr 9, pp. 27-28 (USSR)

ABSTRACT: The 600 mm roll diameter mill at the Zlatoustovsk metallurgical works rolls rounds of carbon and alloy steel 90 to 150 mm in diameter from 170 x 170 and 190 x 190 mm square billets weighing 520 to 780 kg. The mill consists of four three-high stands with two continuous furnaces. The rolling schedule and pass designs were recently revised, leading to higher productivity on account of more uniform loading of the stands and working with overlap. The setting and control of the mill was facilitated by the use of separate stands for producing the starting square billets, and separate furnaces were also used for different sizes. An annual economy of about 500,000 roubles has been effected. Pass designs and rolling schedules for the old and revised systems are given. There are 3 figures.

ASSOCIATION: Zlatoust Metallurgical Works (Zlatoustovskiy
Metallurgicheskiy Zavod)

AVAILABLE: Library of Congress.
Card 1/1

AUTHORS: Shuralev, M.V., and Nekrasov, S.G., Engineers.

TITLE: Determination of Spread during Rolling (Opredeleniye ushireniya pri prokatke)

PERIODICAL: Stal', 1968, no.1, pp. 57 - 60 (USSR).

ABSTRACT: Four methods of calculating spread on rolling (Refs. 1, 2, 3 and 5) were checked by comparing the calculated results with those actually obtained on rolling on three different mills. Characteristic data on mills are given in Table 1. The experiments were carried out as follows: a) templets were cut off from various strips after passes at the same setting of the rolls; b) the temperature of the strips was determined by an optical pyrometer; c) transverse dimension of cold templets, parameters of templets and their cross-sectional areas were measured and d) the spread was also calculated by the above four methods and the determined and calculated results compared. The comparison is given in Table 2. The results obtained by the calculations differed from the experimental results, so that all methods of calculating require some experimentally determined correcting coefficients. Therefore, it would be advantageous to use for practical purposes the most simple formulae, introducing into them the corresponding experimental coefficients. Such formula was obtained by the authors

Card 1/2

Determination of Spread during Rolling

17-1-1/24

(Formula 6) based on S.N. Petrov's formula (Ref.6). The formula proposed is suitable for determining spread in roll passes and on a smooth roll. A comparison of results calculated using the above formula with the actual spread (Table 2) indicated that a good agreement was obtained. It is stated in the editorial note that the use of the proposed formula under conditions of other works requires a preliminary experimental check of correcting coefficient m for various passes. There are 2 tables, 1 figure and 6 Russian references.

ASSOCIATION: Zlatoust Metallurgical Works (Zlatoust'skiy metallurgicheskiy zavod)

AVAILABLE: Library of Congress

Card 2/2

SOV/133/52-9-17/29

AUTHORS: Shuralev, M. V., Nekrasov, S. G. (Engineers) and Azarenko, B. S. (Cand. Tech. Sciences)

TITLE: Review of the Book of A. A. Protasov and F. P. Zuyev, "Calibration of Rolls for Rolling High Speed Cutting Steel" (Retsonziya na knigu A. A. Protasova i F. P. Zuyeva, "Kalibrovka valkov dlya prokatki bystrorezhushchey stali")

PERIODICAL: Stal', 1958, Nr 9, pp 825-827 (USSR)

ABSTRACT: The book was published by Metallurgizdat in 1958. The review is favourable.

ASSOCIATION: Zlatoustovskiy metallurgicheskiy zavod, MTU in Bauman (Zlatoust Metallurgical Works and MTU in Bauman)

Card 1/1

NEKRASOV, S.G., inzh.

Improved grooving for punching die shapes no. 3. Izv.vys.ucheb.zav.;
chern.met. no.11:145-147 N 158. (MIRA 1211)

1. Zlatoustskiy metallurgicheskiy zavod. Rekomendovano kafedroy
obrabotki metallov davleniyem Sibirskogo metallurgicheskogo instituta.
(Rolls (Iron mills))

SOV/133-59-1-13/23

AUTHORS: Shuralev, M.V. and Nekrasov, S.G.

TITLE: Roll-pass Designing and Rolling of Shaped Profiles from Alloy Steels (Kalibrovka i prokatka fasonnykh profiley iz legirovannoy stali)

PERIODICAL: Stal', 1959, Nr 1, pp 58 - 63 (USSR)

ABSTRACT: Rolling of shaped economical profiles (channel beams PS-102, PS-103 and PS-120) from alloy steels (1Kh18N9T, 30KhGSA and Kh17N2) (Figure 1, Table 1) which are supplied to consumers instead of strip resulted in a 20-30% economy in the consumption of metal and simplified the manufacturing of finished parts. The rolling is done on a three-stand mill 400. Billets are heated in a two-zone continuous furnace with bottom heating. The dimensions of roll passes are given in Tables 2 and 3 and Figures 2 and 4. Some special features of rolling alloy steels are discussed. It is pointed out that for steel 1Kh18N9T the permissible angles of grip are 2-3° lower than for carbon steels which is explained by a higher resistance to deformation of this steel at the rolling temperature. Steels 1Kh18N9T and Kh17N2 are strongly spreading during rolling. Therefore, in designing roll passes for these steels, the limitation of spread should be smaller than

Card1/2

SOV/133-59-1-13/23

Roll-pass Designing and Rolling of Shaped Profiles from Alloy Steels
for carbon steels. In designing finishing passes an
increased shrinkage of alloy steel (particularly
1Kh18N9T) should be taken into consideration. There are
6 figures and 4 tables.

Card2/2

25(1)

SOV 148-59-1-14 19

AUTHOR: Nekrasov, S.G., Engineer

TITLE: Computation of Height Deformation in Non-Uniform Rolling (C
raschëte vysotnoy deformatsii pri neravnomernom obzhatii)PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Chernaya metallurgiya,
1959, Nr 1, pp 121-126 (USSR)ABSTRACT: Average reduction for computing deformation of metal in groove
rolling was determined by the method of shifted volume suggest-
ed by I.Ya. Tarnovskiy [Ref 1, 2]. Complicated calculation
was the basic deficiency of this method. The author presentsa formula: $\frac{1}{\eta} = \frac{h_0}{h_1} = \frac{\omega_0}{\omega_1}$, where η is the average height

coefficient of deformation; h_0 and h_1 are the initial and final
average heights of the strip, and ω_0 and ω_1 are the initial
and final cross-section surfaces of the strip. This formula
serves to compute height deformation in non-uniform absolute
and relative reduction by the width of the deformed strip,
without preliminary equalization of absolute reduction. The
proposed method can be used to compute height deformation in

Card 1/2

SOV 146-53-1-14 19

Computation of Height Deformation in Non-Uniform Rolling

rolling with different-shaped grooves.

There are 1 sets of diagrams, 2 tables and 13 viet references

ASSOCIATION: Zlatoustskiy metal processing zavod (Zlatoust Metallurgical Plant)

SUBMITTED: August 20, 1958

Card 2/2

S/137/60/000/011/018/043
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No. 11, p. 117,
26144

AUTHOR: Nekrasov, S.G.

TITLE: Rolling of High-Speed Steel at the Zlatoust Metallurgical Plant

PERIODICAL: Tr. Mezhevuz. nauchno-tekhn. konferentsii na temu: "Sovrem.dostizh.
prokatn. proiz-va", Vol. 2, Leningrad, 1959, pp. 220 - 227

TEXT: An ingot, weighing with the riser 200 kg, is rolled to a blank of 78 x 78 mm on a 620 mm three-high mill after heating for 10 hours up to 1,170 - 1,200°C (grade P-18 (R-18)) or to 1,150 - 1,180°C (grade P 9 (R9)) with twice preheating. Grooving of the rolls includes 9 box-, 8 rhombic- and 2 square grooves. R18 steel is rolled in 19 passes with a mean coefficient of extension equal to 1.15. R9 steel is rolled in 15 passes with a mean coefficient of extension equal to 1.19. The effective yield is 76.5 - 77.5%. The blank is rolled to a finished shape after preheating to the same temperature, for 2 hours

Card 1/2

S/137/60/000/011/018/043
A006/A001

Rolling of High-Speed Steel at the Zlatoust Metallurgical Plant

30 minutes in the case of 78 x 78 mm sections and for 1 hour 50 minutes at 30 x 30 mm sections with an extension coefficient up to 1.63 in oval grooves and 1.45 in square grooves. The temperature at the end of rolling process is 980°C.

P.G. ✓

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

SHURALEV, M.V. ; NEKRASOV, S.G., kalibrovshchik

Change in the grooving of no.4 stamp strips. Metallurg 4 no.3:26-27
Mr '59. (MIRA 12:4)

1. Zamestitel' glavnogo inzhenera Zlatoustovskogo metallurgicheskogo zavod (for Shuralev). 2. Zlatoustovskiy metallurgicheskiy zavod (for Nekrasov).

(Rolling mills)

1972
A. B. Ivanov

AUTHOR: Nekrasov, A. B.

TITLE: Rolling of wide flange profiles of high alloy steel.

PERIODICAL: Referats, 1972, No. 1, Metallurgiya, Moscow, USSR, p. 113-117.
"Tr. Konferentsii 'Tekhn. progress v tekhn. obrabotke proiz-va'"
Sverdlovsk, Metallurgizdat, 1972, 113-117.

TEXT: Data on grooving and rolling of profiles (flanges, channels, etc. type) are given. Rolling of profiles is carried out in four rolled forming passes from squares of 200 mm side, grade X 4, Kh 2N2 and 3XFGA (30KhGSA). The coefficient of elongation of the metal for the end temperature of rolling 980 - 1,038 was 1.4 for steel Kh 2N2 and 1.1 for steel 30KhGSA. The grooving for profiles PE-20 and PE-25 is given. It is noted that for grooving shaped profiles from high alloy steels it is necessary to take into account the deterioration of metal properties (lower than for carbon steel), the higher value of strain rigidity, necking, and spread.

Abstractor's note: complete translation.

A. B. Ivanov

Card 1/1

18.01.86

AUTHOR :

... ..

TITLE:

Rolling Mill - Steel

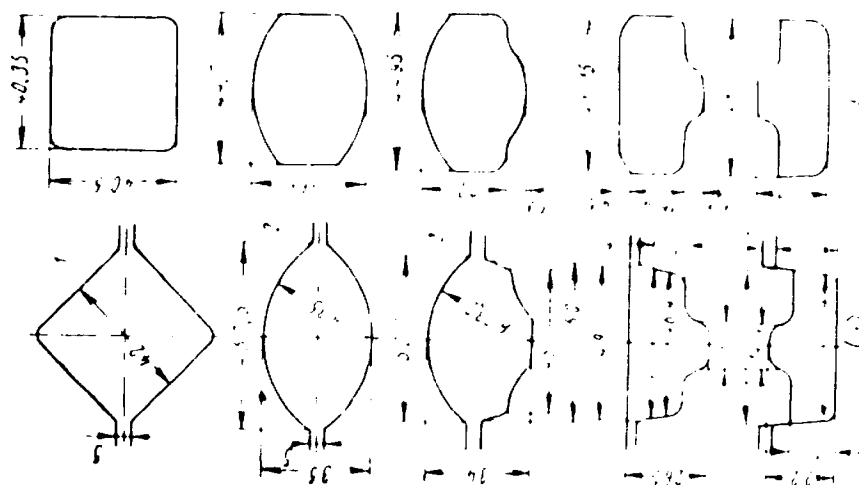
PERIODICAL:

Metallurgiya, No. 1, 1966 (USSR)

ABSTRACT:

At Zlaty Irtysk (USSR) the rolling mill for the production of steel is being modernized. The section is rolled with passes from a square cross-section to a round one. The rolling mill is presented in a section of Figure 1. The diagram is divided into two parts: the upper part is a plan view of the mill; the lower part is a side view of the mill. The section is rolled with three shaped I-beam passes (see Figure 2). The section is rolled in a square pass (see Figure 3). The section is a semi-finished product. The section is a semi-finished product. The section is a semi-finished product.

FIGURE 11-10 (continued)



Card 3/4

FIG. 11-10 (continued)

NEKRASOV, S.G.

Calculating the horizontal projection of the contact area
in oval groove rolling. *Izv.vys.ucheb.sav.; chern.met.*
no.6:88-94 '60. (MIRA 13:7)

1. Zlatoustovskiy metallurgicheskiy zavod.
(Rolling(Metalwork))

S 14870 000 01 001 000
A 111 A 111

AUTHOR: Nekrasov, S. G.

TITLE: The grooving of straightening machine rolls for round bar steel.

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no. 12, 1960, 77 - 83

TEXT: Rapid and nonuniform wear of square roll grooves is the reason why most metallurgical plants use grooves with a curved outline for round bar steel. Three kinds of groove are discussed - 1) Of geometrical type half-circle shape (without divergence); 2) Circular with divergence (width increasing) at the base along the straight line; 3) Two-radius groove (Fig. 1). The article includes the calculation formulae (final formulae only, without derivation). Information is given on round grooves used at the Zlaty Metalleurgical Plant (Fig. 6) and their features and dimensions. The wear rate in a range of the grooves is determined by their holding capacity, which diminishes with increasing the space between metal and groove sides, and there is a critical value (δ_{cr}) that is calculated with the formula

$$\delta_{cr} > \frac{D_{max} - L}{2} \cdot (\sqrt{2K} \dots)$$

Card 1 of 5

S/110/60/100/01 17000
A101/A111

The grooving of straightening machine rolls...

at $r = \frac{D_{max} + D_{min}}{2}$ the K is < 1.6 for diameters 25 - 60 mm, and < 1.7 for diameters above 60 mm; at $r = \frac{D_{min}}{2}$ it is < 1.7 for diameters up to 60 mm, and < 1.6 for diameters above 60 mm. Both these limits of groove depth are significantly below the limit at the plant; the "unrealistic" limit is $r = \frac{D_{max}}{2}$.

Two-radius groove rolls wear slower and more uniformly than one-radius groove rolls, and do not loose the holding capability during operation campaign. An example of two-radius groove rolls is given below for 26 - 44 mm diameters at $\alpha = 45^\circ$: 1) Groove width and groove radius -

$B = 1.1 D_{max} = 1.1 \cdot 44 = 48.4 \text{ mm}; r = \frac{D_{min}}{2} = \frac{26}{2} = 13 \text{ mm};$

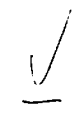
$R = \frac{0.25 \cdot B^2 + r^2 - B r \sin \alpha}{2 r_m - B \sin \alpha} = \frac{0.25 \cdot 48.4^2 + 13^2 - 48.4 \cdot 22 \cdot 0.707}{2 \cdot 22 - 48.4 \cdot 0.707} = 32.4 \text{ mm}$

$r = \frac{D_{max}}{2} = \frac{44}{2} = 22 \text{ mm}$

2) Groove depth - $H = r + \sqrt{(R-r)^2 - (R-r_m)^2 \sin^2 \alpha} - (R-r_m) \cos \alpha = 13 + \sqrt{(32.4-13)^2 - (32.4-22)^2 \cdot 0.707^2} - (32.4-22) \cdot 0.707 = 27.6 \text{ mm}.$

There are 6 figures.

Card 3/5



The grooving of straightening machine rollers...

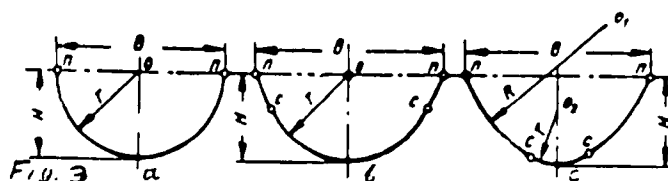
С. П. Златовский
А. Г. А. А. А.

ASSOCIATION: Zlatovskiy, Mikhailovich, et al. (Engineering Institute of the Academy of Sciences of the USSR)

SUBMITTED: August 7, 1959

Fig. 3.

Legend: a - circular;
b - with divergence;
c - two-radius.



Card 4/5

NEFRASOV, S. V.

Design of grooves in the square - oval system of no. 1000 - 10000 alloy steels. Izv. vuzov. Mashinostroyeniye, 1964, no. 10, p. 10-11.

1. Zlatoustovskiy, metalurgy, tekhnicheskoye nauchnoye obshchestvo. (Moscow, 1964, p. 10-11.)

NEKRASOV, S.G., inzh.

Design of rectangular grooves for the rolling of carbon and alloyed
steel. Stal' no.6:541-542 Je '61. (MIRA 14:5)

1. Zlatoustovskiy metallurgicheskiy zavod.
(Rolls (Iron mills))

07/17/61
A. A. A. A.

AUTHOR: Shuralev, M.V., Chief Engineer Deputy, Nefras V, 216

TITLE: Economical Alloyed Steel Sections

PERIODICAL: Metallurg, 1961, No. 4, pp. 21 - 24

ABSTRACT: New economical sections are now being rolled on the three-stand stand No. 2 at the Zlatoust Metallurgical Plant (Figure 1). The sections are made of 20Kh3MVP and 30KhGSA alloyed steel. Each section is rolled in 6 passes: passes 1 - 5 on stand No. I; pass 6 on stand II; pass 7 and 8 on stand III (Figure 2). A rectangular strip is used as initial strip for the rolling of shaped sections obtained from a ribbed groove with rounded edges (Figure 3), so that the initial strip width can be altered during rolling when switching over from one section to another one, and the final width of the strip is automatically controlled. Each of the 3 sections shown in Figure 4 is shaped in the closed grooves designed for rolling with limited widening. When the strip passes through the rolls of stand III it was taken into account that the tendency toward widening the strip jams in the closed pass and tends to increase the force. Therefore the closed passes of the pre-finishing grooves were arranged in the order: Card 17A

317 211 124 1/1
A 22 (A 2)

Economical Alloyed Steel Sections

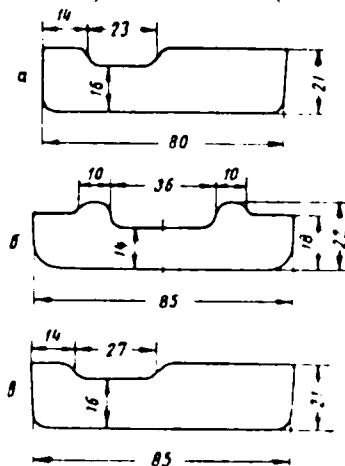
roll and those of finishing grooves on the lower roll. Fracture lines at width
 and an arrangement makes the strip bend downwards. To prevent bulging of the
 rolls, forged steel wires are placed into the closed passes of the upper
 general rolls. The described arrangement of grooves requires no additional
 new set of rolls only for stand III, and the boring of a ribbed groove in the
 existing rolls of stand III. Roll changing is only necessary for stand III when
 switching over to the method of economical rolling of sections. In determining
 nature of strip deformation and the filling of grooves during the rolling of the
 strips, templets were taken from strips of the intermediate passes. When rolling
 section a) (Figure 1) of 20Kh3MVP steel the strip showed lateral bulging out of
 entering the ribbed groove. The bulging was not fully eliminated by the
 1.5 mm groove. When rolling a rectangular strip in the initial state of
 pass 2), reduction in length of the peaks of sections was observed. It was
 uniform compression over the width of the groove. The amount of the compression
 was 4 and 6 mm at the edges. The final shaping of peaks is performed in the
 finishing groove. When rolling sections a) and b) (Figure 1) the amount of the pre-
 finishing groove with the metal is in agreement with calculations. Data charac-
 terizing the rolling of economical sections are presented in the table below. The
 use of the described sections yields 22% savings of expenditure on metal and

Economical Alloyed Steel Sections

3/130/61/000/004/07 3/1/65
A006/1001

reduces labor-consuming machining operations when manufacturing machine parts.

Figure 1: Economical sections; a - GK-01 (GK-01); b - GK-09; c - GK-014

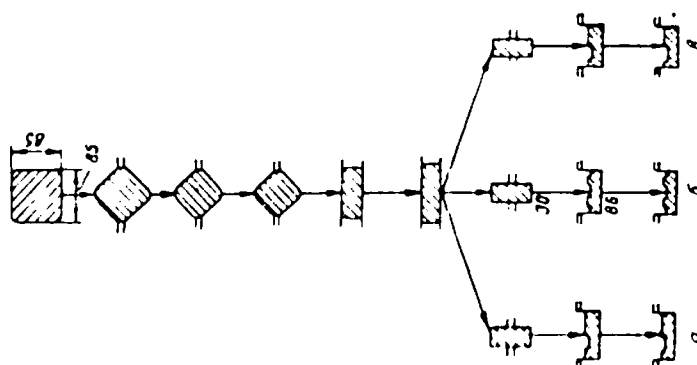


Card 3/8

Economical Alloyed Steel Sections

S/130/61/000/04/003/001
ACC6/ACC1

Figure 2: Schematic diagram of rolling sections; a - GK-01; b - GK-09;
c - GK-014

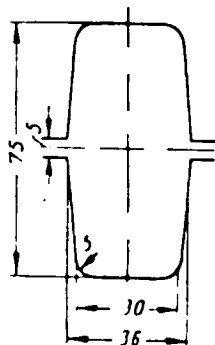


Card 4/8

Economical Alloyed Steel Sections

S/13/161/000/000/000/000-
A006/A001

Figure 3: Design of a ribbed groove

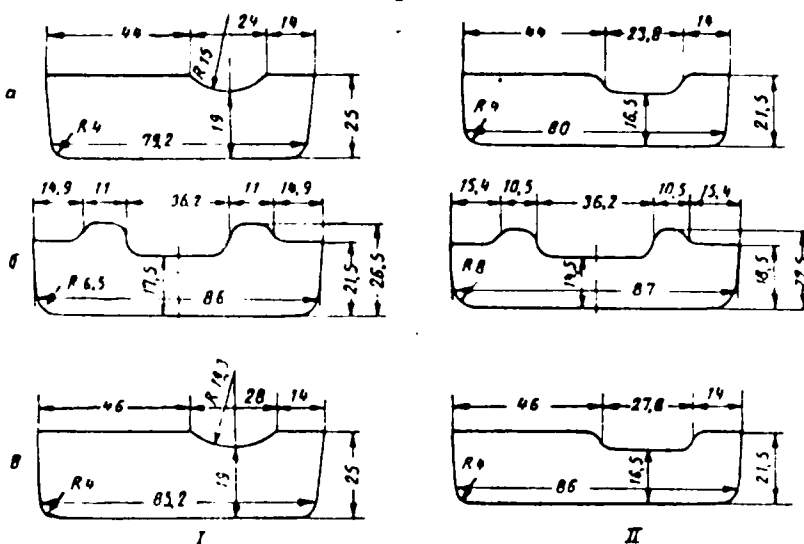


Card 5/8

Economical Alloyed Steel Sections

S/130/61/000/004/003/005
A006/A001

Figure 4: Design of grooves for sections
a - GK-01; b - GK-09;
c - GK-014; 1) pass a
2) pass B



Card 6/8

Economical Alloyed Steel Sections

S/130/61/000/004/003/004
A006/A001

There are 4 figures and 1 table.

ASSOCIATIONS: Zlatoustovskiy metallurgicheskiy zavod (Zlatoust Metallurgical Plant) (Shuralev); Sibirskiy metallurgicheskiy institut (Siberian Metallurgical Institute) (NeKrasov)

Card 3,3

3/130/61/000/00/00/00
A006/A101

The new economical GK-06 (GK-06) shaped section

of the upper roll. Binding of the lower roll is avoided by the use of forged steel guide fixtures placed into the closed grooves. Experimental and industrial rolling of the GK-06 shape has shown that if the stands are correctly set-up satisfactory filling of the grooves with metal is assured, the finished sections possess the dimensions required and a satisfactory surface quality. The use of GK-06 sections instead of rolled strips in machinebuilding saves about 30% of alloyed metal and reduces labor consuming mechanical operations when manufacturing machine parts. There are 3 figures and 1 table.

ASSOCIATION: Zlatoustovskiy metallurgicheskiy zavod (Zlatoust Metallurgical Plant); Sibirskiy metallurgicheskiy institut (Siberian Metallurgical Institute)

Card 2/2

NEKRASOV, S.G.

Resistances in rolling with standard grooves. Izv.vys.ucheb.zav.;
chern.met. 5 no.4:91-101 '62. (MIRA 15:5)

1. Sibirskiy metallurgicheskiy institut.
(Rolling (Metalwork))

NEKRASOV, S.G.

Calculating the horizontal projection of the contact area in rolling with plain grooves. Izv. vys. ucheb. zav.; Chern. met. 6 no.4:88-97 '63. (MIRA 16:5)

1. Sibirskiy metallurgicheskiy institut.
(Rolling (Metalwork)—Graphic methods)

NEKRASOV, S.G.

Designing the next to the last oval planishing groove for
rolling round steel. Izv. vyz. ucheb. zav., Chern. met.

6 no.8:115-119 '63.

MIRA 10 11

1. Sibirskiy metallogicheskii institut.

Мирский, В. Г.

... .. the shape of the deformation
center during ... in plain grooves. Изв. выс. учеб. зав.;
физ.-мат. науки, 1964, № 12, с. 164. (Мирский, В. Г.)

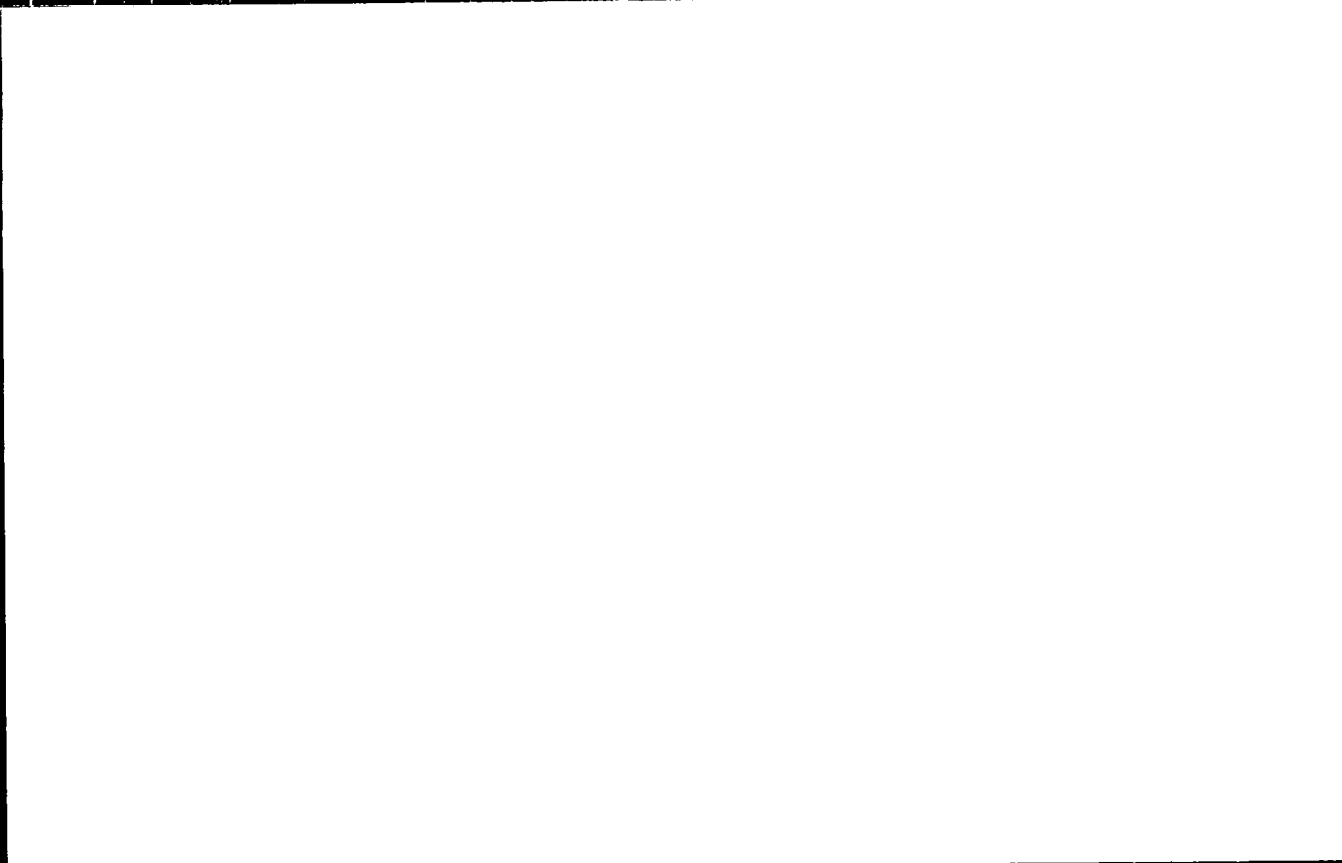
... .. институт.

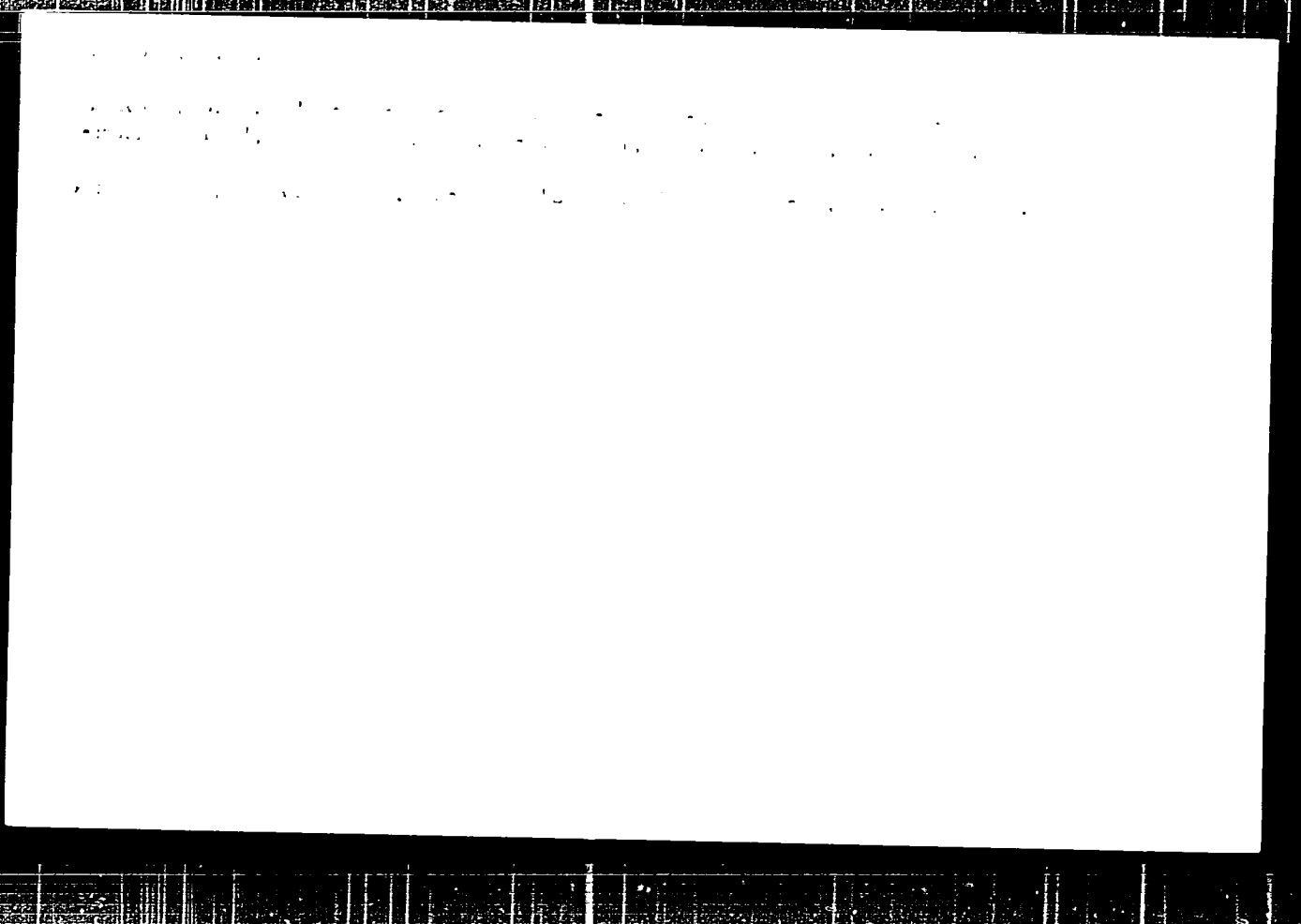
NEKRASOV, S.G.; SACHEG, N.S.; ABAKUMOVA, N.V.

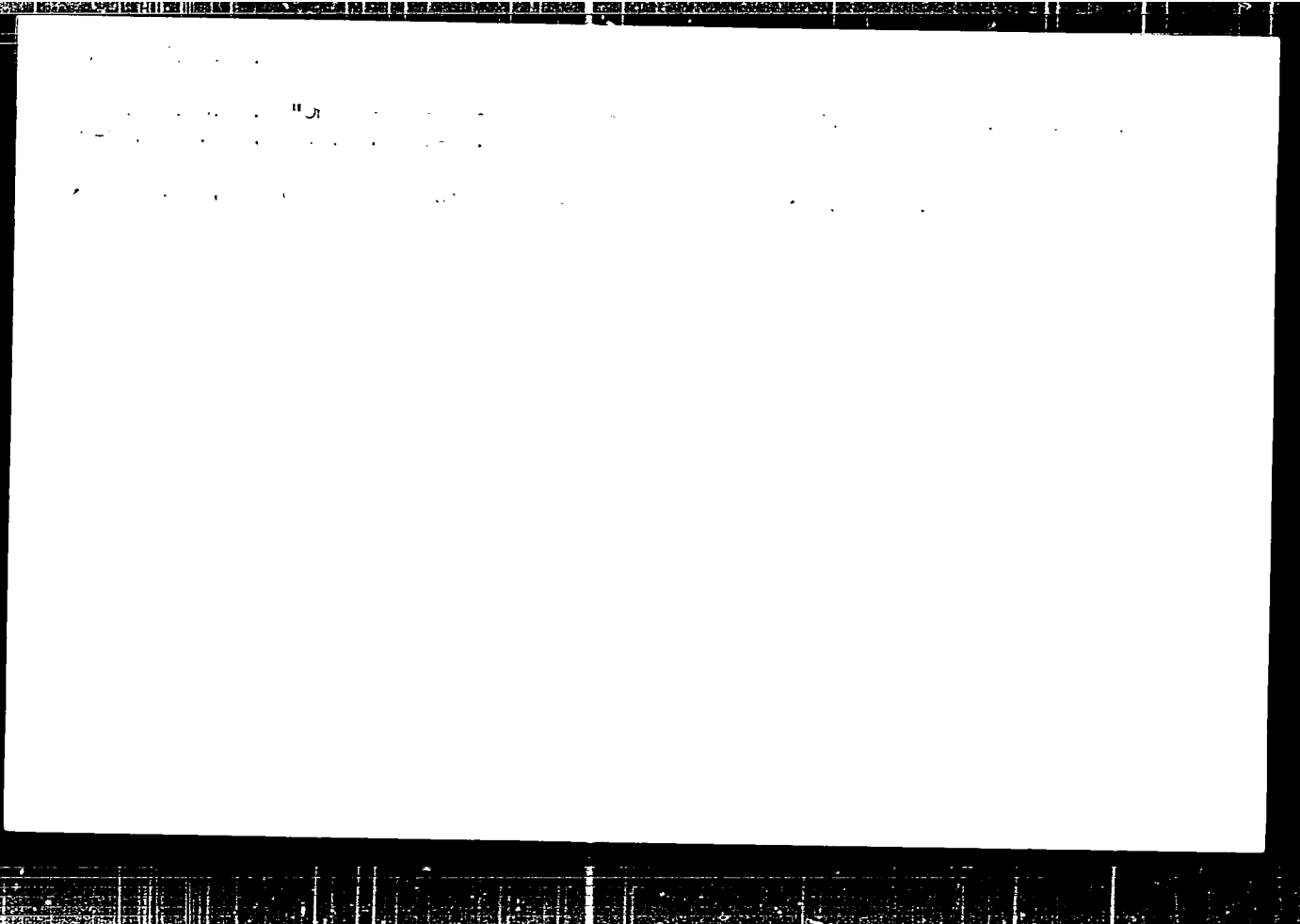
Book reviews. Izv. vyzn. ucheb. zav.; chem. nat. d. no. 8: 1974, p. 1-5.

1. Sibirskiy metalurgicheskiy institut.









NETKRAVON, 11A.

Miyar...
...
... (MIRA 17:0)

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ACCESSION NR: AR5007329

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681.142.62

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika.
Sv. t., Abs. 1B253

AUTHOR: Yefremov, V. D.⁴⁴; Nekrasov, S. P.⁴⁴

TITLE: Code converters based on a current-distribution principle

CITED SOURCE: Uch. zap.^{16C, 44} aspirantov i soiskateley. Leningr. politekh. in-t.⁴⁴
Elektroizmerit. tekhn. i avtomatika. L., 1963, 72-78

TOPIC TAGS: code converter, binary decimal converter

TRANSLATION: Several code converters constructed on a current-distribution principle and using square-loop ferrites are described. A circuit for converting binary code into "1 out of 2" code is presented. In the binary system of coding, the signal in the trunk corresponds to 1, the absence of a signal, to 0. In the "1 out of 2" code, a signal in one trunk means 1, in another trunk, it means 0. The circuit operation is described. A circuit for converting three digits of the "1 out

Card 1/2

L 1294-66

ACCESSION NR: AR5007329

of 2" code into a "1 out of 8" code is explained. The above circuits permit designing the converters of a binary number into any number system having base 2^n . A conversion circuit of one digit of a "2 out of 5" code into a "1 out of 10" code is considered, as is a circuit for conversion of the cyclic Gray code into a "1 out of 2" code. The conversion algorithm is presented, and operation is explained. Also, a binary-decimal converter is considered which includes a control device that coordinates the operation of various components, a counter that checks the moment of finishing the conversion, and decimal and binary registers; the converter operation is described. A circuit is given of one digit of the decimal register which permits doubling of the stored number. A structural diagram of a decimal-binary converter is presented. A circuit of one digit of the decimal register which permits division of the stored number by 2 is presented. Bibl. 2, figs. 8.

SUB CODE: DP

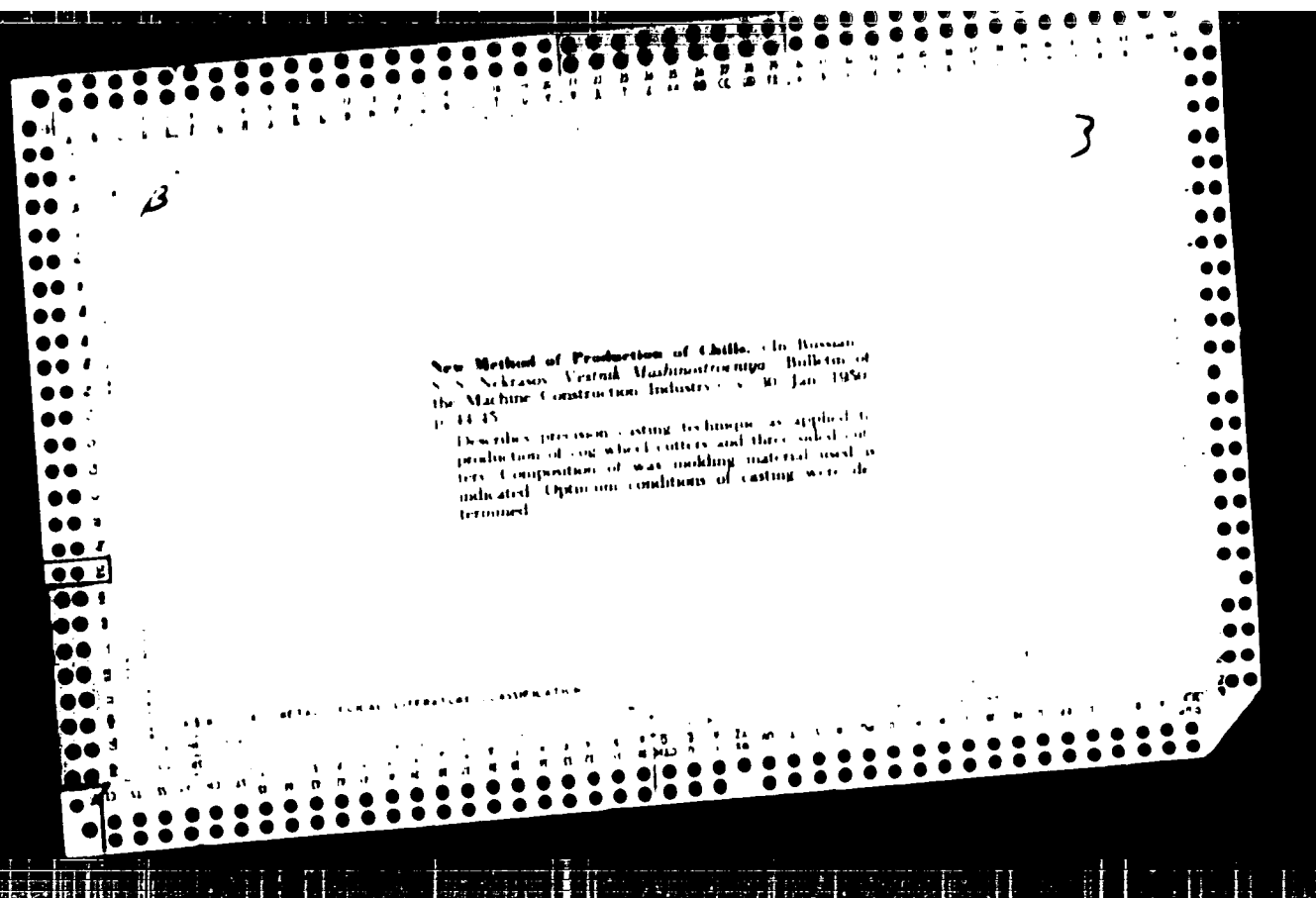
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Card 2/2

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Metallur ... 27-11-1943 ...

1. Name ... Главного инженера Златоустовского металлургического
завода ... инженер-калывровщик Златоустовского
металлургического завода (им. Некрасов).
(... ин. 11.8)



New Method of Production of Chills. (In Russian)
S. S. Nekrasov, *Vestnik Mashinostroyeniya*, Bulletin of
the Machine Construction Industry, 30 Jan. 1950,
p. 14-15.

Describes precision casting technique as applied to
production of cog wheel cutters and three-splined cut-
ters. Composition of wax modeling material used is
indicated. Optimum conditions of casting were de-
termined.

NEKHAZOV, S. G. and S. P. SHEVCHENKO.

Technika otlivki reznuschnykh instrumentov metodom voskovykh modelей.
(Vestn. Mash., 1950, no. 11, p. 40-43)

Precision casting of cutting tools by wax model method.

DIS: T-114

SC: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

1. NEKRASOV, S.S.
2. USSR (600)
4. Pipe, Steel
7. Workability of cold-rolled pipes made of steel ShKh 15. Podshlitskiy No. 9, 1961.

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

194507, S.S.

at: 10000

axial significance of specific utility stress, 10/1/1945, 1/1/1945

Monthly list of missile acquisitions, Library of Congress, 1/1/1945, 1/1/1945.

1. NEKRASOV, S. S.
2. USSR (600)
4. Plastics - Tables, Calculations, Etc.
7. Determination of cutting stress from the elongation diagram in machining plastic materials. Podshipnik No. 4, 1953.

9. Monthly List of Russian Accessions. Library of Congress, April 1953, etc.