AUTHORS: Yelpat'yevskiy, A. N. and Konovalov, B. A. (Moscow) SOV/24-58-8-19/37

TITLE: The Application of a Variational Method to Calculations for Conical Shells (Primeneniye odnogo variatsionnogo metoda k raschetu konicheskikh obolochek)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 8, pp 106-111 (USSR)

ABSTRACT: The method is applicable to shells of small apex angle. The standard shell is assumed to have constant thickness. The work is based on the variational method which V. Z. Vlasov developed for prismatic shells. Equations are obtained from which it is possible to improve the solution obtained by assuming plane cross-sections. By representing the longitudinal and transverse displacements in the form of several terms in which the first terms correspond to the hypothesis of plane cross-sections, a solution can be obtained which more accurately describes the stressed and deformed state of the type of shell

Card 1/2

KONOVALOV, B. A., Candidate Tech Sci (diss) -- "The computation of conic membranes on the basis of V. Z. Vlasov's variation method". Moscow, 1959. 11 pp (Min Higher Educ USSR, Moscow Order of Lenin Aviation Inst im S. Ordzhonikidze), 150 copies (KL, No 24, 1959, 137)

25827 S/535/60/000/130/002/007
E081/E335

24.4200

AUTHOR: Konovalov, B.A., Candidate of Technical Sciences

TITLE: Calculation of Conical Shells by the Variational Method of V.Z. Vlasov

PERIODICAL: Moscow. Aviatsionnyy institut. Trudy. No. 130, 1960. Prochnost' aviatsionnykh konstruktsiy. pp.19 - 56

TEXT: The object of the paper is to obtain equations for calculations of weakly conical shells of constant thickness, allowing for warping of the cross-section both in bending and torsion and, on the basis of these equations, to show the possibility of establishing accurate solutions for shells similar to aircraft wings. As a theoretical basis the author applied the general variational method of reducing complicated two-dimensional contact problems of the theory of plates and shells to the unidimensional one expounded by Professor V.Z. Vlasov. The material of the article is subdivided into three sections. In the first section a system of differential equations is

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derived for calculating slighly conical shells of equal thickness, taking into consideration the strain along the contour (using the moment theory). These equations represent a direct generalisation of equations derived in earlier work of the author and A.N. Yelpat'yevskiy (Ref. 4 - Izv. AN SSSR, OTN, No. 8, 1958). On the basis of the results given in the first section, accurate solutions are derived in the second and third sections for the cases of bending and torsion of a "singly-closed" conical shell assuming that the contour cannot be deformed. The equations given in the first section are very general and from these, sufficiently accurate solutions can be derived for a wide range of problems. The degree of accuracy of the solution will depend, to a considerable extent, on the number of approximating functions used. Particular attention is paid to investigating the stress and strain states of a slighly conical shell, taking into consideration the warping of the cross-sections during bending by shear stresses. Such a formulation of the problem is fully justified since,

stresses, the results of which are in good agreement. The solution for bending and torsion of straight-line conical shells can be applied to the calculation of arrow-shaped conical shells; in this case, part of the boundary conditons have to be written for a cross-section along an oblique edge (Ref. 8). In principle, there is no difficulty in taking into consideration the elasticity of the clamping. The proposed method of calculation for bending and torsion can also be extended to multiply closed conical shells. The conical shell is shown in the figure and the problem is formulated in terms of a longitudinal coordinate z and a contour coordinate S. Vlasov's method consists of expressing the longitudinal and transverse displacements as power series in the coordinate S. The general equations appropriate to the method are stated and applied to the bending and torsion of the shell. In the case of bending, the warping of the section is represented as a linear and a quadratic function and the normal and shear stresses in the

shell are obtained for both functions. The normal and shear stresses are also obtained for torsion of the shell. The calculated normal stresses in this case agree with those previously obtained by L.I. Balabukh and B.P. Tsibulya.

Acknowledgments are expressed to A.N. Yelpat'yevskiy (Institut mekhaniki AN SSSR (Institute of Mechanics of the AS USSR)) for useful advice and recommendations.

There are 8 figures, 6 tables and 13 Soviet references.

KONOVALOV, B.O., inzh.

Measurement of the magnitude of stresses by imprints. Vest.mashinostr. 43 no.4:60-61 Ap '63. (MIRA 16:4)
(Strains and stresses—Measurements)

L 8646-65 EWT(m)/EWP(w)/T/EWP(k)/EWP(b) Pf-4 MJW/JD/HW

ACCESSION NR: AP4044136 S/0129/64/000/008/0029/0033

AUTHOR: Gorelik, S. S.; Spektor, Ya. I.; Spektor, E. N.; Konovalov, B. O.

TITLE: Inhomogeneity of the structure of steel tubes after thermomechanical treatment

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 8, 1964, 29-33

TOPIC TAGS: martensitic low alloy steel, 40KhSNA steel, steel thermomechanical treatment, treated steel structure, structure inhomogeneity, steel property

ABSTRACT: A study has been made of the structural changes along the cross section of high-strength tubes made of low-alloy 40KhSNA martensitic steel after low-temperature thermomechanical treatment (ntmo). The ntmo consisted of a 70% deformation in two-pass transverse roll-rolling, at 550C and subsequent oil quenching. It was found that the transverse rolling produces sharply varying degrees of deformation and structural change along the tube cross section. The outer metal

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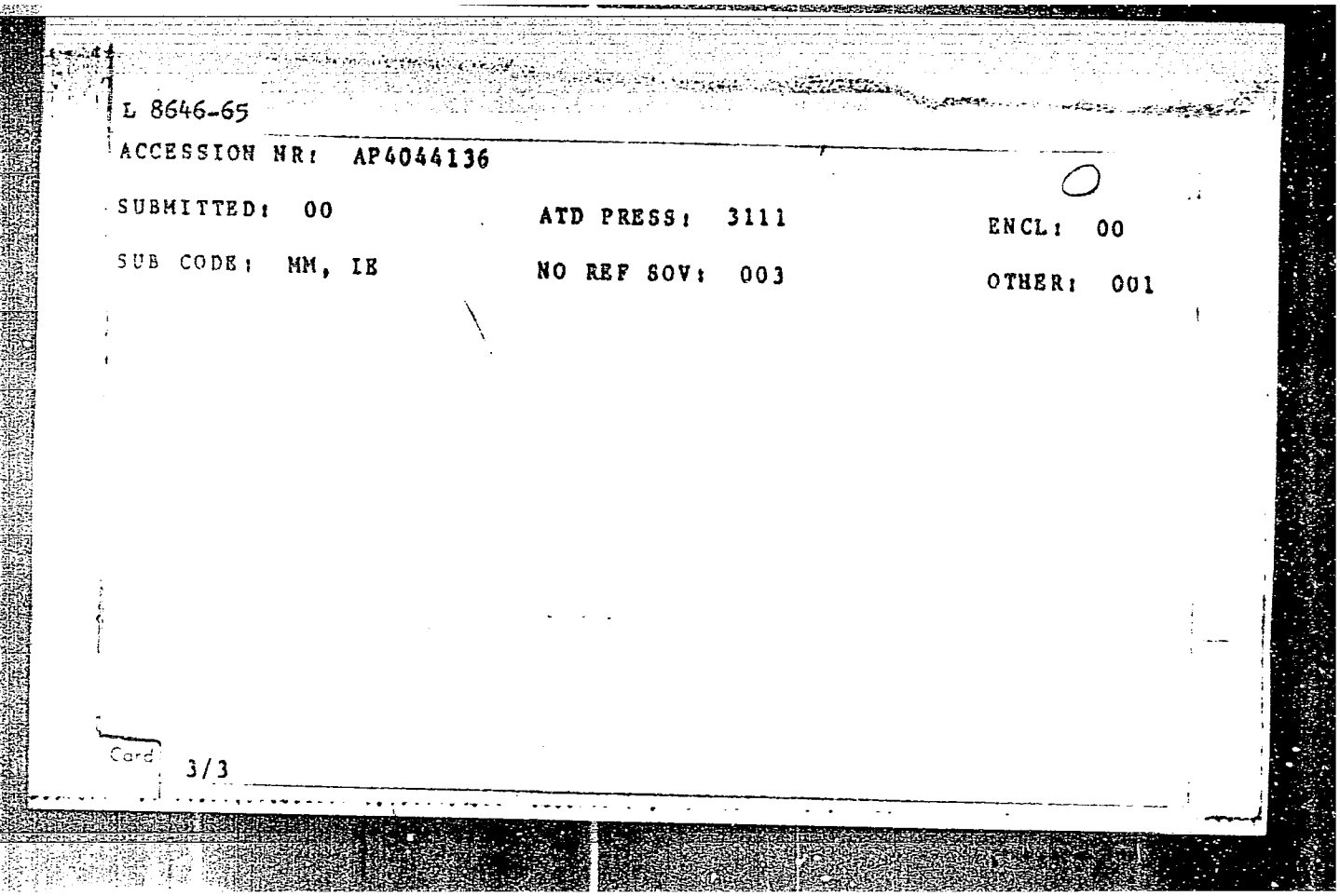
ACCESSION NR: AP4044136

layer, 0.15—0.2 mm thick, undergoes the greatest plastic deformation and, correspondingly, the highest strengthening in the austenitic condition and more pronounced formation of the deformation texture. In deeper layers, 0.3—0.4 mm from the surface, the strengthening and texture formation are less pronounced. The inhomogeneity of the metal flow along the cross section causes elastic stresses reaching 35 to 40 kg/mm^2. The conditions of deformation of the 40KhSNA-type steel in the austenitic condition in the region of subcritical temperatures (550C) cause a loss of carbon in the austenite of the outer layer, owing to precipitation of carbides during deformation, and, consequently, formation of carbon-poor martensite in subsequent quenching. As a result, this layer, most strengthened in the austenitic condition, is the least strengthened by quenching. The structural, but not the textural, inhomogeneity along the cross section can be partially decreased by an additional heat treatment. Orig. art. has: 3 figures.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute for Steel and Alloys)



L 8646-65

ACCESSION NR: AP4044136

SUBMITTED: 00 ATD PRESS: 3111 ENCL: 00

SUB CODE: MM, IE NO REF SOV: 003 OTHER: 001

Card 3/3

SOV/123-59-16-64023

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 16, p 62 (USSR)

AUTHORS: Venkov, B.V., Konovalov, B.P.

TITLE: The Experience in Spring Manufacture

PERIODICAL: Prom.-ekon. byul. Sovnarkhoz Permsk. ekon. adm. r-na, 1958, Nr 6, 7-10

ABSTRACT: Some particulars about the manufacture of large springs by hot twisting of round and square gage material of silicon steel of 60S2A, 70S3A, 65S2VA grades, of a diameter up to 45 mm or a cross section up to 20 x 160 mm, are reported. It is recommended to heat the rods before twisting them in furnaces of direct electrocontact heating. Examples are quoted of the edgewise twisting of springs with a square cross section of 4.3 x 6.1 x 25.5 mm from rods of 8,500 mm length, and also edgewise twisting of strips of 4 x 100 mm into spirals for the manufacture of worms. The design of the worm-twisting machine is briefly described, as well as the method of milling the face sides (supporting sides) of the springs with a milling head of 200 mm in diameter with 11 inserted cutters, strengthened with hard alloy plates VK-15, the method of bending under

Card 1/2

KONOVALOV, B.S.; LAPITSKIY, V.I.; YEM, A.P.; KHITRIK, S.I.

Use of exothermic three-component ferroalloys as addition elements in 14KhGS steel. Izv. vys. ucheb. zav.; chern. met. 4 no.12:45-49 '61. (MIRA 15:1)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Steel alloys--Metallurgy) (Iron alloys)

BADYSHTOVA, K.M.; CHESNOKOV, A.A.; IVANKINA, E.B.; ZHADANOVSKIY, N.B.; KONYUKHOVA, M.V. Prinimali uchastiye: KONOVALOV, B.S., inzh.; NAUMOVA, A.P., inzh.; PYATILETOVA, N.I., inzh.; SMIRNOVA, S.M., inzh.; CHIBRIKOVA, L.I., laborant; BUGROVSKAYA M.S., laborant.

Effect of the nature of raw stock on the stability of transformer oil. Nefteper. i neftekhim. no.11:15-17 '64 (MIRA 18:2)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut neftyanoy promyshlennosti , Kuybyshev i Novokuybyshevskiy zavod.

KONOVALOV, B.T.

Application of hydrogeochemical methods of prospecting by the sum of metals in the conditions of Sadon Unal area Mountain Osetiya. Izv. vys. ucheb. zav.; tsvet. met. 7 no.5:10-15 '64
(MIRA 18:1)

1. Severokavkazskiy gornometallurgicheskiy institut. Kafedra poleznykh iskopayemykh i poiskovo-razvedochnogo dela.

KRYAZHEV, G.S.; OL'KHOVSKIY, G.P.; KONOVALOV, B.T.

Regularities in the distribution of mineralization in the Buron ore field. Izv. vys. ucheb. zav.; tsvet. met. 4 no.5: 15-23 '61. (MIRA 14:10)

1. Severokavkazskiy gornometallurgicheskiy institut, kafedra poleznykh iskopayemykh i poiskovo-razvedochnogo dela.
(Buron region--Ore deposits)
(Geology, Structural)

KONOVALOV, B.V. (Ul'yanovsk)

A vicious circle. Zdorov'e 2 no.6:19 Je '56. (MLRA 9:8)
(HYGIENE)

FILIPPOV, G.A., inzh.; KONOVALOV, B.Ya., inzh.; KOSAREV, S.B., inzh.

Effect of the voltage fluctuation factor on the electrical strength of transformer oil. Izv.vys.ucheb.zav.; energ. 8 no.12:21-24 D '65. (MIRA 19:1)

1. Ivanovskiy energeticheskiy institut imeni V.I.Lenina. Submitted November 26, 1964.

L 04453-67 EWT(m)/T DJ

ACC NR: AP6014146 (A) SOURCE CODE: UR/0143/65/000/012/0021/0024

AUTHOR: Filippov, G. A. (Engineer); Konovalov, B. Ya. (Engineer); Kosarev, S. B. (Engineer) 22 B

ORG: Ivanovo Power-Engineering Institute imeni V.I. Lenin (Ivanovskiy energeticheskiy institut)

TITLE: Effect of voltage ripple ratio on electric strength of transformer oil

SOURCE: IVUZ. Energetika, no. 12, 1965, 21-24

TOPIC TAGS: transformer oil, power rectifier, voltage ripple ratio

ABSTRACT: The results of an experimental study of the electric strength of transformer oil are reported. Dry transformer oil was humidified or contaminated and its breakdown strength was determined. The dissolved (not emulsified) water caused a very considerable reduction of the electric strength: from 70—80 kv down to about 30 kv for moisture content from 0 to 0.007%. The reduction of the electric

Card 1/2 UDC: 621.315.615.2.015.5

L 04453-67

ACC NR: AP6014146

strength at ac is somewhat less than at dc or ripple voltages. For any constant moisture content, the coefficient k increases with the ripple ratio; $k = U_r / U_{ac}$, where U_r and U_{ac} are the maximum breakdown ripple and a-c voltage, respectively. Also, curves of breakdown voltage vs. ripple ratio for various contaminations of the transformer oil with cellulose fiber are shown. The maximum reduction of the oil electric strength at ripple voltage, as compared to that at ac, was noticed at zero ripple ratio. Orig. art. has: 5 figures and 3 formulas.

SUB CODE: 09 / SUBM DATE: 26Nov64 / ORIG REF: 004 / OTH REF: 002

Card 2/2

L 14175-66 EWT(1)/FCC GW

ACC NR: AT6004159 SOURCE CODE: UR/2531/65/000/167/0161/0167

AUTHOR: Konovalov, D. A.

ORG: Main Geophysical Observatory, Leningrad (Glavnaya geofizicheskaya observatoriya)

TITLE: Some characteristics of transformation of the air flow above the Tsimlyanskiy Reservoir in the spring

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 1, 1965. Fizika pogranichnogo sloya atmosfery (Physics of the boundary layer of the atmosphere), 161-167

TOPIC TAGS: wind direction, wind velocity, atmospheric temperature, atmospheric humidity, meteorology

ABSTRACT: The author analyzes the results of experimental meteorological observations made from a helicopter above the Tsimlyanskiy Reservoir in the spring of 1963. The effect of transformation is clearest in this period since there is a maximum difference between the surface temperatures of water and dry land. The helicopter

Card 1/2

L 14175-66

ACC NR: AT6004159

was equipped with instruments for measuring temperature, humidity and pressure. Profiles are given for the temperature and humidity of the air above the reservoir and above dry land. The results show that helicopters may be used successfully for studying meteorological conditions over confined bodies of water. The author recommends both horizontal flights at low altitudes of 10-100 m, and sounding flights above the surface of the water and dry land at altitudes of approximately 1,000 m. Tables are given comparing the results of data from horizontal flights with surface observations for temperature, humidity, wind direction and wind velocity. Orig. art. has: 3 figures, 4 tables.

SUB CODE: 08/ SUBM DATE: 00/ ORIG REF: 003/ OTH REF: 000

Card 2/2

VASILENKO, V.P., kand.ekon. nauk; PODOPLELOV, V.P., kand. ekon. nauk; KONOVALOV, D.A., nauchn. sotr.; KANEV, G.V., aspirant; KARNAUKHOVA, Ye.S., doktor ekon. nauk, otv.red.; BELOV, V.K., red.

[Potentialities for reducing costs in the agriculture of the Komi A.S.S.R.] Rezervy sokrashcheniia zatrat v sel'skom khoziaistve Komi ASSR. Moskva, Nauka, 1965. 178 p. (MIRA 18:10)

1. Akademiya nauk SSSR. Komi filial, Syktyvkar.

KONOVALOV, D.A.

Methodology and some results of studying the zones of increased turbulence on the Kutaisi-Shovi route. Trudy GGO no.171:91-95 '65. (MIRA 18:9)

1. Glavnaya geofizicheskaya observatoriya im. A.I. Voyeykova, Leningrad.

KULIKOV, K.K., inzh.; ZORIN, M.I., inzh.-meliorator; DASHKOVSKAYA, L.T., rybovod; GUDYM, L.M.; KONOVALOV, D.N., rybovod; KOTIKOV, A.P., inzh.; ROZHKOV, N., red.; PRIKHOD'KO, S., red.; OLEYNIKOV, A., red.; ZLOBIN, M., tekhn. red.

[Fishery resources of Kazakhstan; a manual for fishermen] Rybnye bogatstva Kazakhstana; spravochnik rybaka. Alma-Ata, Kazgosizdat, 1963. 262 p. (MIRA 17:2)

1. Glavnyy spetsialist otdela pishchevoy promyshlennosti Gosudarstvennogo Komiteta Soveta Ministrov Kazakhskoy SSR po koordinatsii nauchnykh i tekhnicheskikh rabot (for Gudym).

ROGOVOY, M.I., inzh., laureat Stalinskoy premii; KONOVALOV, D.O., inzh.

Selecting designs of kilns providing a fully automatic heat treatment of ceramic bricks. Stroi.mat. 5 no.9:13-16 S '59. (MIRA 12:12)

(Kilns)

CA

Pyrolysis of derivatives of lactic acid. D. S. Konovalov and E. N. Migotina. *Zhur. Prikład. Khim.* (J. Applied Chem.) **22**, 910–13(1949).—Formal 2nd-order rate consts., $k = (1/t)[x/100(100 - x)]$ (time t in sec.), were calcd. from exptl. data of Smith, *et al.* (*C.A.* **36**, 2841[9]); Fischer, *et al.* (*C.A.* **37**, 4361[9]); Ratchford, *et al.* (*C.A.* **39**, 4961[9]), on the high-temp. decompn. of esters, $MeCH(OAc)CO_2R$, which proceeds partly along $MeCH(OAc)CO_2C_nH_{2n+1} \rightarrow CH_2{:}CHCO_2C_nH_{2n+1} + AcOH$, partly according to $MeCH(OAc)CO_2C_nH_{2n+1} \rightarrow MeCH(OAc)CO_2H + C_nH_{2n}$. The rate const. k of the 1st reaction (formation of ester of acrylic acid) separately was calcd. in the same manner, with $x = 100 - (100c/a)$, where c = per cent yield of the acrylate, a = per cent decompn. of the initial ester. Both k and k' obey the Arrhenius equation, $\log k = A - (B/T)$, with the following values of the consts. for the total decompn. (temp. range in parentheses): R = Me, A = 15.1925, B = 14360 (395–581°); $CH_2{:}CHCH_2$, 13.9345, 13260 (525–572°); MeCH:$CHCH_2$, 13.9300, 13200 (475–550°); Ph, 6.5455, 7607 (440–600°); *o*-MeC_6H_4, 2.0185, 3867 (500–591°). The rate const. k' of formation of esters of acrylic acid through decompn. of the corresponding esters of $MeCH(OAc)CO_2H$, is, for R = $CH_2{:}CHCH_2$, A' = 6.6435, B' = 7500 (525–572°); MeCH:$CHCH_2$, 6.6435, 7500 (475–550°); *o*-MeC_6H_4, 5.3550, 7188 (500–591°). Degrees of decompn. and percentages of acrylate formed, calcd. with the aid of these data for R = $CH_2{:}CHCH_2$, MeCH:$CHCH_2$, and *o*-MeC_6H_4, are in good agreement with the exptl. data. For the decompn. of the acrylates according to $CH_2{:}CHCO_2C_nH_{2n+1} \rightarrow CH_2{:}CHCO_2H + C_nH_{2n}$, A = 13.0790, B = 12430 (499–574°), equal for R = Et and iso-Bu. The 2nd order is purely formal, being simulated by a highly complex reaction mechanism.

V. Thon

KONOVALOV, D. S.; MIGOTINA, E. V.

"Slowed-Down Reactions of Thermal Decomposition of Organic Compounds," J. App. Chem. (USSR) 25 (3), 291-5 (1953) English Translation.

Evaluation B-85325, 14 Jun 55

KONOVALOV, D.S.

3

Self-accelerated thermal decomposition reactions of organic compounds. D. S. Konovalov and E. N. Alagotina. *J. Appl. Chem. U.S.S.R.* 26, 295-9(1953)(Engl. translation).—See *C.A.* 47, 10329f. H. L. H.

KONOVALOV, D.S.; MIGOTINA, Ye.N.

Slowed-down thermal decomposition reactions of organic compounds. Prikład. Khim. 26, 328-31 '53. (MLRA 6:3)
(CA 47 no.20:10329 '53)

KONOVALOV, D. S.; MIGOTINA, Ye. N.

Chemical Reaction - Mechanism

Autocatalytic reactions of thermal decomposition of organic compounds. Zhur. prikl. khim. 26, No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

83974

S/080/60/033/009/006/021
A003/A001

5.4700

AUTHORS: Konovalov, D.S., Migotina, Ye.N.

TITLE: The Thermal Decomposition of Antimony and Germanium Hydrides

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol. 33, No. 9, pp. 1995-2001

TEXT: Recently the possibility of developing a single theory of chemical kinetics is considered based on the theory of heterogeneous-homogeneous catalysis both for the case of gaseous reactions which were regarded until now as homogeneous reactions and also for conditions of usual catalysis (Ref. 1). In this connection the reaction of thermal decomposition of hydrides, especially of antimony and germanium, is of great interest, because it is accompanied by the formation of a solid phase. The analysis of the experimental data led to the conclusion that the thermal decomposition mentioned must be regarded as an autocatalytic reaction, the acceleration of which takes place at the expense of an excess of chemical energy of the atoms and radicals formed during the process of chemosorption. The change of the monomolecular constant K of the reaction rate with the temperature T, the pressure P and the decomposition depth x has a

Card 1/2

MESHKOVA, N.D.; MIGOTINA, Ye.N.; KONOVALOV, D.S.

Dissociation energy of the carbon-halogen as dependent on the molecular volume. Zhur. fiz. khim. 38 no.9:2251-2252 S '64.
(MIRA 17:12)

KONOVALOV, E. V., Cand Biol Sci (diss) -- "The problem of the nervous regulation of antibody (agglutinin) formation". Perm', 1958. 8 pp (Acad Med Sci USSR, Perm' Sci Res Inst of Vaccines and Sera of the Min Health USSR), 200 copies (KL, No 15, 1960, 133)

USSR/Medicine/Pharmacology FD-2954

Card 1/1 Pub. 17-18/23

Author : Konovalov, E. V.

Title : Influence of anesthesia at the locus of primary application of antigen on the formation of antibodies (agglutinins)

Periodical : Byul. eksp. biol. i med. 7, 62-63, July 1955

Abstract : Author investigated the difference in antibody formation upon application of antigens to the desensitized and to the normal knee joint of rabbits. He used both novocaine and "anestezin" 15 to 20 minutes before injection of warm dysentery monovaccine. The agglutinin titer was examined beginning with the 4th to 5th day after immunization. Author observed inhibition of the antibody formation in all his experiments. In the controls the titer was twice that of the experimental animals. Author believes that this inhibition results from a "switching on" of an early neuro-reflex mechanism in the regulation of the antibody development; that even a momentary "switching on" of the initial step of this mechanism inhibits the processes of immunity. 8 references, 8 USSR, 8 since 1940, Graph.

Institution : Experimental Laboratory, Molotov Scientific-Research Institute of Vaccines and Sera (Dir: A. P. Kobyl'skiy)

Submitted : 20 Oct 1954

USSR/Piston Rings
Engines - Parts

Apr 1947

"Use of ZIS-5 Piston Rings in Studebaker Motors," E. Konovalov, ½ p

"Avtomobil'" Vol XXV, No 4

Sketch and instructions for making subject replacement.

12T16

L 46329-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6019766 SOURCE CODE: UR/0370/66/000/003/0084/0089

AUTHOR: Konovalov, E. Ye. (Obninsk); Peyzulayev, Sh. I. (Obninsk); Larionova, I. Ye. (Obninsk); Kondrat'yeva, L. I. (Obninsk); Pinchuk, G. P. (Obninsk)

19
B

ORG: none

TITLE: Determination of equilibrium distribution coefficients of impurities in bismuth

SOURCE: AN SSSR. Izvestiya. Metally, no. 3, 1966, 84-89

TOPIC TAGS: bismuth, metal zone melting, distribution coefficient, metal crystallization

ABSTRACT: In order to calculate the process of zone melting with optimum parameters, it is necessary to have the values of equilibrium coefficients of distribution of the impurities (k_0). These coefficients can be calculated by the method of Burton, Prim, and Slichter (J. Chem. Phys. 21, 1987, 1953) if the effective distribution coefficients k are known from experiments conducted at different crystallization rates (f) but under the same conditions of stirring of the melt. Using this method, the authors determined the values of k_0 for the impurities Ag, Pb, Cu, Tl, Cd, and Ni in bismuth. The values of k were determined by two independent methods, one involving zone melting processes and the other a normal directed crystallization. The two methods produced very similar results. This permitted the recommendation of their mean values as the most reliable values of the equilibrium coefficients of

Card 1/2 UDC: 669.764

Card 2/2 fv

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28(5)

AUTHORS: Konovalov, E. Ye., Matyukhin, V. V., Yemel'yanov, V. P., Karabash, A. G. SOV/32-25-10-48/63

TITLE: A Conductometric Signaler for Oxygen in Gases

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 10, pp 1260-1262 (USSR)

ABSTRACT: A device was constructed (E. Ye. Konovalov, Ye. A. Kochetkova, V. M. Morozov, V. D. Kolesnikov, V. M. Andreyev, A. G. Karabash - Patent No 1113837), which is intended to be used for the continuous control of the oxygen content in noble gases. It makes it possible to determine the moment at which the oxygen absorber becomes saturated and prevents pollution of the system with oxygen-containing gas. The transmitter of the device (Fig 1) is a porcelain tube filled with coppered silica gel. A porcelain rod is introduced into the tube round which a chrome nickel coil with resistivity of 500 Ohm is wound. The tube itself is in a steel casing. The working piece of the transmitter is heated by means of an electric furnace to 300 to 350°. The gas to be controlled flows through the porcelain tube by way of the "coppered" silica gel. If the gas contains oxygen, the latter oxidizes the copper, thus

Card 1/2

L 35903-66 EWT(m)/T/EWP(t)/ETI/EWP(k) IJP(c) JD

ACC NR: AP6007351 SOURCE CODE: UR/0126/66/021/002/0228/0234

AUTHORS: Peyzulayev, Sh. I.; Konovalov, E. Ye.; Uznadze, O. P.; Zuyeva, T. F.

ORG: none

TITLE: Methods for the determination of the effective distribution coefficient of additives during alloy crystallization. 2. Zone melting

SOURCE: Fizika metallov i metallovedeniye, v. 21, no. 2, 1966, 228-234

TOPIC TAGS: zone melting, metal zone melting, bismuth alloy, DISTRIBUTION COEFFICIENT, PHASE TRANSITION

ABSTRACT: Two methods for the determination of the effective distribution coefficient of additives during zone melting of alloys are presented. This paper supplements the results of an earlier publication by Sh. I. Peyzulayev, E. Ye. Konovalov, and L. I. Kondrat'yeva (FMM, 1965, 19, 707). The first method consists in determining the distribution coefficient from the position of the transition point. The position of the transition point x_1 after n transitions was calculated after I. Braun and S. Marshall (Brit. J. appl. Phys., 1957, 8, 157).

$$C_n(x) = C_n(r)e^{-k(x-r)} + ke^{-kx}\int_{1+r}^{1+x} C_{n-1}(t)e^{k(t-1)}\,dt$$

for $0 \leqslant x < (N-1)$;

$$C_n(x) = (N-x)^{k-1} C_n(N-1) \quad \text{при } (N-1) < x < N,$$

Card 1/3 UDC: 532.78:548.53

where r is the distance to the initial zone point m and N is the length of the ingot, both in units of the zone length. A graph for the estimation of errors in k (the distribution coefficient) is presented. It is concluded that as the number of zone passages n increases the position of the transition point tends to the limiting position of V. Dzh. Pfann (Zonnaya plavka, M., Metallurgizdat, 1960). The second method, which is called the integral method, is based on the determination of the coefficient of impurities concentration K_I after Sh. I. Peyzulayev and E. Ye. Konovalov (Zhurnal analit. khimii, 1963, 18, 1155)

$$K_I = 1 - \frac{1}{NC_0}\int_0^{N-e} C_1(x)\,dx = \frac{e}{N} + \frac{1-k}{kN}\left[1 - e^{-k(N-e)}\right].$$

and

$$\frac{1}{k} = 1 + \frac{(N-e)\left[1 - \left(\frac{\bar{C}_p}{\bar{C}_1}\right)^{1/(p-1)}\right]}{1 - e^{-k(N-e)}}.$$

The methods were tested on the distribution of Ag, Pb, Cu, Tl, and Cd in Bi during zone melting. A schematic of the zone refining apparatus is presented. The experimental results are presented in graphs and tables (see Fig. 1).

L 35903-66

ACC NR: AP6007351

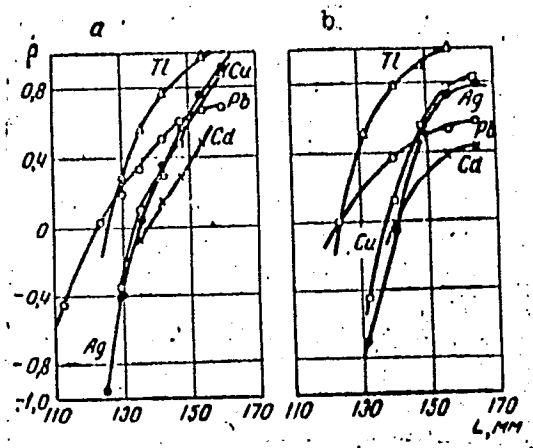

Fig. 1. Graphs for the determination of transition points; f = 0.84 mm/sec, length of ingots 170 (a) and 172 mm (b); ℓ = 14.7 mm (ℓ - length of zone).

Orig. art. has: 3 tables, 4 figures and 10 equations.

SUB CODE: 11/ SUBM DATE: 16Jan65/ ORIG REF: 007/ OTH REF: 002

Card 3/3 ллб

KONOVALOV, E.Ye.; PEYZULAYEV, Sh.I.; YEMEL'YANOV, V.P.

Use of zone melting for concentrating silver and copper impurities in the spectrographic analysis of pure lead. Zhur. anal.khim. 18 no.12:1500-1501 D '63. (MIRA 17:4)

KONOVALOV, E.Ye.; PEYZULAYEV, Sh.I.; PINCHUK, G.P.; LARIONOVA, I.Ye.; KONDRAT'YEVA, L.I.

Use of zonal fusion for concentrating impurities in spectral analysis of pure bismuth. Zhur. anal. khim. 18 no.5:624-633 My'63. (MIRA 17:2)

ABAKUMOV, G.I.; KONOVALOV, E.Ye.

Apparatus for zone melting. Zav.lab. 29 no.12:1506-1507 '63.
(MIRA 17:1)

PEYZULAYEV, Sh.I.; KONOVALOV, E.Ye.

Some problems involved in using zone melting for the preparation of analytical concentrates. Zhur.anal.khim. 18 no.10:1155-1160 O '63. (MIRA 16:12)

L 21977-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD
ACCESSION NR: AT5012689 UR/2513/65/015/000/0375/0391

AUTHOR: Konovalov, E. Ye.; Peyzulayev, Sh.I.

TITLE: Use of zone melting in the preparation of analytical concentrates

SOURCE: AN SSSR. Komissiya po analiticheskoy khimii. Trudy, v. 15, 1965. Metody kontsentrirovaniya veshchestv v analiticheskoy khimii (Methods of concentrating substances in analytical chemistry), 375-391

TOPIC TAGS: zone melting, analytical concentrate, bismuth analysis, metal phase

ABSTRACT: On the basis of reported data and using the concentration of impurities in bismuth metal as an example, the authors classify the impurity elements present in bismuth according to their behavior in zone melting. For this purpose, they [illegible] the four types of phase diagrams covering the interaction of bismuth with [illegible] shown in Fig. 1 of the Enclosure. Analysis shows that the overwhelming majority of the impurity elements should have distribution coefficients less or much [illegible] unity, this being a prerequisite for achieving the concentration of impurities [illegible] melting of bismuth. Secondary processes occurring in the course of zone [illegible], such as selective evaporation of the impurities and their oxidation, are also

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L 51977-65
ACCESSION NR: AT5012689

[illegible]ered, again in the case of bismuth. Experiments on the zone melting of bismuth [illegible] artificially introduced impurities confirmed that the character of the distribution of impurities along the length of the sample was in [illegible] agreement with the [illegible] based on the analysis of the phase [illegible] [illegible] took part in the experimental work [illegible] and [illegible] formulas.

ASSOCIATION: Komissiya po analiticheskoy khimii, AN SSSR (Commission on Analytical Chemistry, AN SSSR)

SUBMITTED: 00 ENCL: 01 SUB CODE: IC, MM

NO REF SOV: 025 OTHER: 009

Card 2/3

L 51222-65

ACCESSION NR: AT5012689

ENCLOSURE: 01

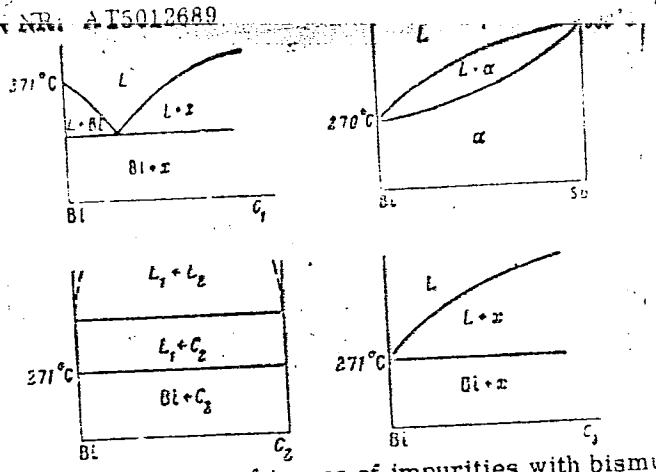

Fig. 1 Type of interaction of traces of impurities with bismuth:

C_1 — Ag, Cu, Cd, Sn, As, Hg, Ge, Tl, Te, In, Mg, K, Ca, Sr, Pb, Sb, Ni, Au, Sc, Mn, Ce, Ca, Li, Na, Ba, Pd, Pt, U, Pu, Rh, Zn, Co, Si, Be; C_2 — Fe, Cr; C_3 — Al, Th

Card 3/3

VOROB'YEV, V.F., general-leytenant, dotsent, kand.voyennykh nauk; LIPITSKIY, S.V., polkovnik, kand.istor.nauk; KUZ'MIN, N.F., polkovnik, kand.istor.nauk; MURIYEV, D.Z., polkovnik, kand.voyennykh nauk; KONOVALOV, F.P., general-mayor, kand.voyennykh nauk; GRIDOV, I.L., polkovnik, kand. voyennykh nauk; ARUTYUNOV, A.S., polkovnik; VNOTCHENKO, L.N., polkovnik, kand.voyennykh nauk; SHEKHOVTSOV, N.I., polkovnik, kand.voyennykh nauk; MINYAYLO, S.N., kand.voyen.nauk, polkovnik; YELISEYENKO, D.Kh., podpolkovnik, red.; ZUBAKOV, V.Ye., polkovnik, red.; SOKOLOVA, G.F., tekhn.red.

[Battle history of the Soviet Armed Forces] Boevoi put' Sovetskikh Vooruzhennykh Sil. Moskva, Voen.izd-vo M-va obor.SSSR, 1960. 570 p. [___Atlas of battle maps] ___Al'bom skhem. (MIRA 13:4)

1. Moscow. Voyennaya akademiya imeni M.V.Frunze. 2. Kafedra istorii voyennogo iskusstva Voyennoy akademii imeni M.V.Frunze (for all, except Zubakov, Sokolova).
(Russia--Army)

ILYUSHIN, S.V.; IPATOVA, S.I.; KONOVALOV, F.S.; LORENTSSON, I.G.; MARSHAK, I.S.; MESHKOV, V.V.; NILENDER, R.A.; PLOKHOTSKIY, Ye.S.; SOKOLOV, I.I. SOUSTIN, V.F.; TSVETKOV, G.M.; YANI, A.K.

Viktor Nikolaevich Fomin, 1904- ; on his 60th birthday. Svetotekhnika 10 no.11:30 N '64. (MIRA 17:12)

NIKOLAYEV, R.P.; ROMANOVA, A.F.; KONOVALOV, F.V.; ZHIDKOVA, A.V.

Influence of sulfurous anhydride on the preservation of ascorbic acid in dry dog rose. Trudy VNIVI 6:161-164 '59. (MIRA 13:7)

1. Biokhimicheskaya laboratoriya Vsesoyuznogo nauchno-issledovatel'skogo vitaminnogo instituta i Shchelkovskiy vitaminnyy zavod.

(ASCORBIC ACID) (SULFUR DIOXIDE)

NIKOLAYEV, R.P.; ROMANOVA, A.F.; ZHIDKOVA, A.V.; KONOVALOV, F.V.

Preservation of vitamin C in the purified fruit of the dog rose. Trudy VNIVI 6:158-161 '59. (MIRA 13:7)

1. Biokhimicheskaya laboratoriya Vsesoyuznogo nauchno-issledovatel'skogo vitaminnogo instituta i Shchelkovskiy vitaminnyy zavod.

(ASCORBIC ACID)

KONOVALOV, F. YA.

USSR / Cultivated Plants. Cereal Crops. M-3

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 58549

Author : Konovalov, F. Ya.
Inst : Northern-Ossetia Agricultural Institute
Title : Corn Selection by the Number of Cobs on the Plant

Orig Pub : Tr. Severo-Osetinsk. s.-kh. in-ta, 1956, 17, 121-132

Abstract : A comparative study of corn seeds, selected from various hybrid populations, was carried out by the Northern-Ossetia agricultural institute in 1953. The yield of the majority of these was not less than that of the standard variety-double interlinear hybrid VIR - 37. The increase in the average number of cobs on a plant (in the range of 0.7-1.5) in a considerable number of families is not accompanied by a decrease in the average weight of cobs. Selection by double spadiceous plants is recommended. -- G. N. Chernov

Card 1/1

KHOKHLOV, N.N.; KONOVALOV, F.Ya.

Remote control of gate valves of tank batteries and petroleum-refinery pumps. Mash. i neft. obor. no.9:37-39 '63.
(MIRA 17:2)

1. Omskiy sektor Spetsial'nogo konstruktorskogo byuro po avtomatike v neftepererabotke i neftekhimii.

25(7) SOV/117-59-7-25/28

AUTHOR: Konovalov, G.

TITLE: A Demonstration of the Creative Labor of the Soviet People

PERIODICAL: Mashinostroitel', 1959, Nr 7, p 45 (USSR)

ABSTRACT: The article gives a description of an exhibition of the achievements of the national economy of the USSR, which was opened in Moscow on the 16th of June, 1959. The exhibition occupies 200 hectares and has 4 sections. In the general section there are 15 pavilions belonging to the separate Republics of the Union, the pavilion of the Moscow district, and 12 All-Union ones. In the section of "Industry and Transport" there are 18 pavilions, in the "Agricultural" section - 20, and 10 pavilions are in the "Building" section. In all, there are about 36 thousand exhibits. The metallurgical equipment includes a working model of a new agglomeration machine, the newest coking-chemical equipment, a working model of a unit for the vacuum pouring of steel. Of great interest is a working model of the automatic blooming mill

Card 1/4

A Demonstration of the Creative Labor of the Soviet People

"1150". Powder metallurgy is represented by a working model of the general cycle of production of metal-ceramic articles and other exhibits. In the field of foundry equipment the semi-automatic molding machine "91271" of the zavod "Krasnaya Presnya" ("Krasnaya Presnya" plant) is of interest. It can fill 120 molding boxes per hour. There is an all-purpose core-making machine, for producing 360 cores per hour, and other machines. The "Uralmashzavod" is exhibiting a working model of a 12,000-ton hot hydraulic stamping press for stamping pipes and complex shapes. The Voronezhskiy zavod tyazhelykh pressov (Voronezh Heavy Press Plant) shows a welded 315-ton single-crank press. The Taganrogskiy zavod (Taganrog Plant) is showing the high-speed automatic press "A-840", the Odesskiy zavod (Odessa Plant) a 630-ton press for plastics. Among the machine tools there is the large horizontal boring machine "262PR"

A Demonstration of the Creative Labor of the Soviet People

with program control, produced at the Leningradskiy zavod im. Sverdlova (Leningrad plant imeni Sverdlov) and the vertical six spindle automatic lathe "1272", made by the plant "Krasnyy Proletariy" ("Krasnyy Proletariy" plant), which received the "Grand Prix" award in Brussels. ENIMS is showing a high-productivity automatic balancing machine "9720" with electronic control. The Zavod im. Ordzhonikidze (Plant imeni Ordzhonikidze) is showing an automatic production line "MP - 107", consisting of two machines developed from the mass produced semi-automatic hydro-copying machine tools. For this line the plant was also awarded the "Grand Prix". The same award was received in Brussels by the zavod "Stankokonstruktsiya" ("Stankokonstruktsiya" plant) for its milling machines with program control and program setting by direct reading of the drawing or by the mathematical expression for the part to be machined. Of great interest is the complex automatic line for

A Demonstration of the Creative Labor of the Soviet People

the production of bushings for the cutting mechanism of harvesting machines, developed by the NIITraktorsel'khozmash. This line can produce 28 million bushings per year and only four persons are needed to operate it. In the halls for the "new technology in machine building" the newest technology in welding is demonstrated, e.g. automatic electric arc welding under a layer of flux with the welding tractor "UT-2000" and a photographic observation system for directing the electrode along the seam, developed by TsNIITMASh. In the pavilion "Radioelectronika", with sound recorders replacing the excursion guides, there are television units for remote control of different industrial production processes; the computers are represented by the small "MN-M" unit, computing machines built using semiconductor devices, etc. The pavilion of the Ukrainskaya SSR demonstrates working models of the Diesel locomotive "TE-10" and of the rolling mill "2500".

Card 4/4

SOV/117-59-8-21/44

AUTHOR: Konovalov, G.

TITLE: A Youth Brigade of Communist Labor

PERIODICAL: Mashinostroitel', 1959, Nr 8, p 24 (USSR)

ABSTRACT: The article tells the story of the first "brigade of Communist labor" at the Uralmashzavod, a team of 5 lathe operators with N. Tyulenev leading. The "commandments" of the team are included. They include mutual assistance, the use of thought in work, collective responsibility, using free time for education and books, respect to the old. The work obligations of the team are to fulfill the seven year plan in six years, to increase work efficiency by 60% by 1965, to attain a 200% fulfillment of the monthly quota of work by each member. The members of the chair of technology of machine building of the Ural'skiy politekhnicheskiy institut (Ural Polytechnical Institute) Professor S.I. Samoylov,

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A Youth Brigade of Communist Labor

Docent A.A. Spiridonov and others undertook to give technical aid to the brigade, and to improve the qualifications of its members. Students of the Institute Samusevich, Vitebskiy and Filippov are helping members of the brigade in their studies.

Card 2/2

KONOVALOV, G.

At the Czechoslovakian Exhibition of Measuring Instruments and Electronics. Mashinostroitel' no.10:46-48 O '59.
(MIRA 13:2)

(Moscow--Exhibitions)
(Czechoslovakia--Measuring instruments)
(Czechoslovakia--Electronics)

KONOVALOV, G.

Being an inventor keeps you on the alert. Mashinostroitel' no.11:34 N '59. (MIRA 13:3)
(Technological innovations)

KONOVALOV, G.

English plastics. Mashinostroitel' no.9:39-41 S '60.
(MIRA 13:9)

(Moscow--Exhibitions)
(Great Britain--Plastics)

KONOVALOV, G.

Chairman of the committee of labor protection. Mashinostroitel' no.10:46-47 '60. (MIRA 13:10)
(Moscow--Bearing industry)

KONOVALOV, G.

Disseminate the experience of scientific technological societies ("Scientific and technological achievements in industry" by K.Stepanov). Reviewed by G. Knovalov. Mashinostroitel' no.6:47 Je '61. (MIRA 14:6)

(Stepanov, K.)
(Technological innovations)

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S/117/61/000/010/008/008
A004/A101

AUTHORS: Konovalov, G., Pigolev, S.

TITLE: Industrial exhibition of the Leningrad Economic Rayon in Moscow

PERIODICAL: Mashinostroitel', no. 10, 1961, 42-45

TEXT: At the industrial exhibition of the Leningrad Economic Rayon at the Moscow VDNKh some 700 exhibits, specimens of the production program of 150 Leningrad Sovnarkhoz plants, were shown. The authors present a survey on the achievements of the Leningrad plants and describe the following machine tools, new fixtures and devices which they consider to be of special interest: The 1СПШ (1SPSh) grinding machine is intended for the profile finish grinding of templets, punches, split dies, etc., with an accuracy of 0.01 mm. Grinding is effected with diamond or abrasive wheels at a rotation speed of up to 7,000 rpm. The modernized T-65 lathe is fitted with a small-size pneumatic clamping device for the instananeous clamping and unclamping of the parts being machined by compressed air. The clamping pressure produced is 120 kg. The 4КШС-М (4KShS-M) jig-grinding machine is intended for the finish machining of profiled and circular holes in steel and sintered carbide parts. Machining is effected with diamond

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Industrial exhibition of the Leningrad ...

wheels from 3 to 15 mm in diameter. The basic operation motions of the machine are mechanized. Interchangeable electric spindles make it possible to grind parts at rotation speeds in the range of 72,000 - 36,000 rpm. The program-controlled 1П326 (1P326) turret lathe is the modernized version of the 1P326 lathe of the Novocherkasskiy stankostroitel'nyy zavod (Novocherkassk Machine Tool Plant). It is intended for the gang machining of parts from rods up to 25 mm in diameter and with a machining length of up to 140 mm. The following operations can be carried out in an automatic cycle: rough and finish profile turning, drilling, countersinking, reaming, cutting-off, facing, grooving and fluting. The operating feeds of the longitudinal and transverse slides are 0.05 0.1, 0.2 and 0.025, 0.05 and 0.1 mm/rev respectively. The ultrasonic 2ЭПС (2EPS) precision machine is used for the machining of sintered carbide dies with an accuracy of up to 0.01 and a 9th class surface finish. Moreover, the machine can be used for the precision working of precious stones, ceramic glass, germanium and other hard and brittle materials. The machine capacity in working sintered carbides amounts to 700 mm^3/hour. An interesting exhibit was a tong mechanism for the feeding of blanks into blanking dies. This appliance is mounted on the die face end within 2-3 minutes and ensures 20,000 - 30,000 blanks per hour. The vertical ИЗВ-2 (IZV-2) optical device is intended for measurements of

Industrial exhibition of the Leningrad ...

external linear dimensions of gages, thin sheet materials, films and other precision parts of mechanical engineering. The measuring tip of the device is set by a centering microscope. The electrophotographic ЭФКА-1 (EFKA-1) printer is intended for the automatic reproduction of drawings and typescripts in a 1 : 1 scale on any paper or tracing paper. The printer has a capacity of 300 copies per hour on 310 mm wide paper rolls, and is supplied with 220 v, 50 cps alternating current. The overall dimensions of the printer are 1,080 x 540 x 640 mm, it weighs 110 kg. The authors mention the names of the following Leningrad innovators: V. Ya. Karasev, V. N. Trutnev, I. D. Leonov, V. M. Biryukov, V. S. Semenov, N. N. Vasil'yev and M. A. Zaytsev; they describe a number of new tools and fixtures which were shown at the exhibition. Vibration-proof boring tools, a design of K. V. Lakur, prevent the warping of tool holders and the excessive infeed of tools in the metal. Turner V. N. Trutnev of the "Bol'shevik" Plant, the Deputy President of the City Council of Innovators, showed a new fixture for the machining of spherical surfaces, a ball-type mandrel to obtain a surface finish of the 8th—10th class and a special threading head with automatic tool retraction. Turner A. D. Chelnokov of the KINAP Plant exhibited the original design of a multipurpose mandrel with inertial flywheel which is to prevent the wedging of parts and reduces the non-cutting time by 70-80%. A cutting-off

Industrial exhibition of the Leningrad ...

milling cutter of miller I. D. Leonov of the Kirov Plant increases the labor productivity by a factor of 3 to 5. The cutter has a greatly reduced number of teeth which facilitates the chip removal. A bench grinder for the dressing of milling cutters has been developed by V. D. Volkov and D. P. Kolpakov and was shown at the exhibition. There are 12 figures.

KONOVALOV, G.; PIGOLEV, S.

Leningrad is visiting Moscow. Mashinostroitel' no.10:42-45 O '61. (MIRA 14:9)

(Moscow--Exhibitions)
(Leningrad--Machine-tool industry)

KONOVALOV, G.

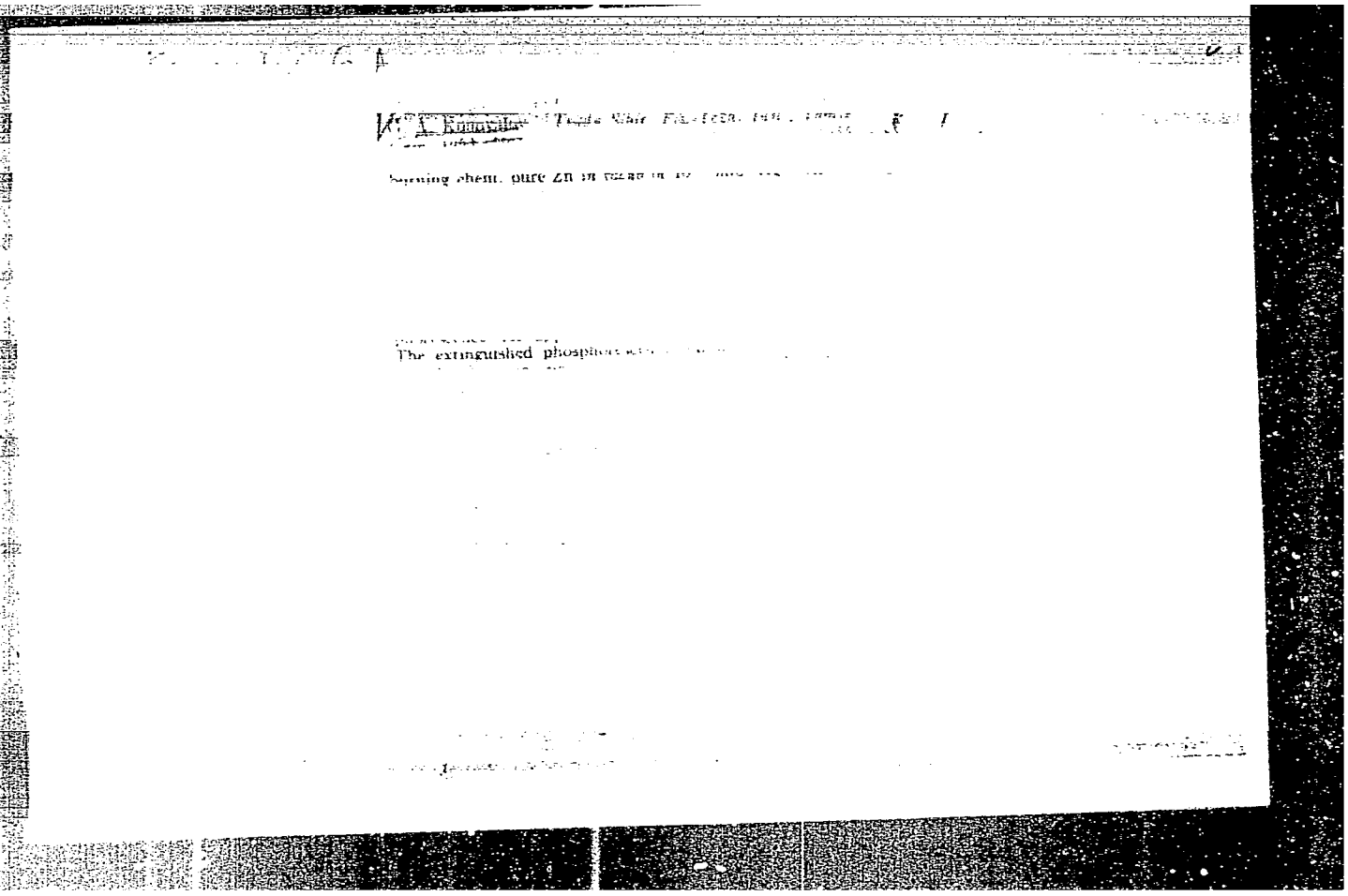
Honorary member of the scientific technological society.
Mashinostroitel' no.4:4-5 Ap '62. (MIRA 15:5)
(Lathes--Technological innovations)

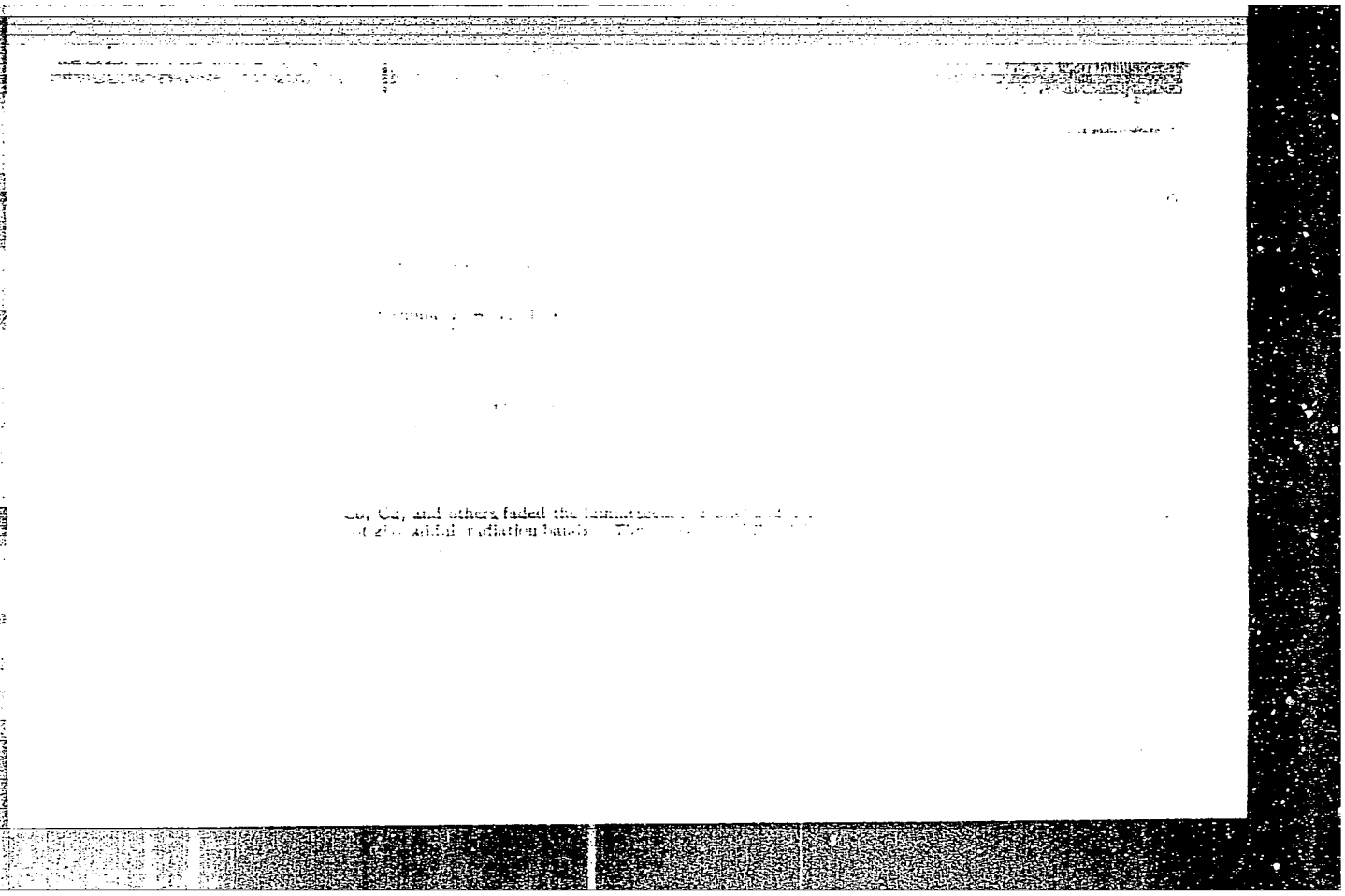
KONOVALOV, G.

From the life of penguins. Inform. biul. Sov. antark. eksp. no.36:48-49 '62. (MIRA 16:4)

(Lazarev Station, Antarctica—Penguins)

observed in ZnO at low temperature is explained by the activation for the process of recombination of free electrons with ionized centers. (tr-auth)





KONOVALOV, G.F., POPEL, S.I., YESIN, O.A.

"Surface Activity of Iron Oxide and Sulphur on the Boundary: Steel-Slag," lecture given at the Fourth Conference on Steelmaking, A..A. Baikov Institute of Metallurgy, Moscow, 1-6, 1957

KONOVALOV G. F.

Nonmetallic inclusions in ingots of rimming-steel deoxidized by different methods. S. I. Popel, G. F. Konovalov, and N. A. Butkevich (Met. Works, Seversk). *Izvest. Vysshikh Uchebn. Zavedenii, Chernaya Met.* 1958, No. 5, 51–7.—A study was made of chem. and phase compn. of nonmetallic inclusions in 650-kg. ingots of 0.13–0.18% C rimming steel deoxidized in the furnace (a) with ferromanganese, and (b) ferromanganese and ferrosilicon. The inclusions were extd. and studied in relation to the depth in the ingot. The results showed that introduction of ferrosilicon (2 kg./ton) decreases the amt. of inclusions to about ½. Their phase compn. is also altered by ferrosilicon addns.: the content of high-m.-p. inclusions, such as corundum and spinel, is decreased, while the quantity of low-melting silicates increases. Explanation of this is found in the nature of the emulsions formed. Introduction of ferrosilicon increases the emulsion concn. and lowers the viscosity of the dispersed phases and their adhesion to metal, thereby forming larger particles and facilitating their removal from the metal. 23 references. B. N. Daniloff

Distr: 4E2c

Ural Polytech Inst.

KONOVALOV, G.F. inzh.; RIMM, E.R., inzh.

Effect of nonmetallic inclusions on the weldability of sheet iron in pack rolling. Izv.vys.ucheb.zav.; chern.met. no.9:87-90 S '58. (MIRA 11:11)

1. Severskiy metallurgicheskiy zavod.
(Metals--Defects) (Rolling (Metalwork)) (Welding research)

KONOVALOV, G.F.

НЕМЕТАЛЛИЧЕСКИЕ ВКЛЮЧЕНИЯ СТАЛИ

С.И.Попель Г.Ф.Коновалов	Очистка жидкой стали от тугоплавких включений
С.Е.Волков А.М.Самарин	Влияние метода раскисления стали в индукционной печи на процесс ее десульфурации.
Д.К.Бутаков Л.М.Мельников	Влияние водорода на обособление серы в структуре литой стали.
С.Т.Ростовцев Д.И.Туркенич В.И.[illegible] К.С.Просвирин	Окисные неметаллические включения в конверторной рельсовой стали.
В.А.[illegible] Ю.Т.Лукашевич-Дуванова	Включения в малоуглеродистой стали, содержащей титан.
Ю.Т.Лукашевич-Дуванова О.В.[illegible] Е.В.[illegible]	Включения в малоуглеродистой стали, содержащей [illegible].
А.И.[illegible]	Осаждающее раскисление в процессе электроплавки стали.
С.Г.Воинов П.М.[illegible]	Разработка и внедрение новой технологии выплавки шарикоподшипниковой стали.
В.П.[illegible] П.Я.Агеев	Возможные пути ускорения раскисления металла.

report submitted for the 5th Physical Chemical Conference on Steel Production, Moscow-- 30 Jun 1959.

POPEL', S.I., kand.tekhn.nauk, dots.; KONOVALOV, G.F., inzh.

Interfacial tension in low-carbon steel at boundaries with oxidation products. Izv.vys.ucheb.zav.; chern.met. 2 no.8: 3-7 Ag '59. (MIRA 13:4)

1. Ural'skiy politekhnicheskiy institut i Severskiy metallurgicheskiy zavod. Rekomendovano kafedroy teorii metallurgicheskikh protsessov Ural'skogo politekhnicheskogo instituta.

(Steel--Metallurgy) (Surface chemistry)

S/133/60/000/004/001/010
A054/A026

AUTHORS: Kovyryalov, I.P., Engineer; Popel', S.I., Candidate of Technical Sciences; Konovalov, G.F., Engineer; Polzunov, A.M., Engineer

TITLE: The Effect of Deoxidation of Steel and its Treatment by Sodium Silicate on the Percentage of Non-Metallic Inclusions

PERIODICAL: Stal', 1960, No. 4, pp. 305 - 307

TEXT: At the Severskiy metallurgicheskiy zavod (Seversk Metallurgical Plant) the effect of deoxidation by ferromanganese and ferrosilicon, as well as the effect of a treatment with sodium silicate and a sand-scale mixture on the steel in the furnace were investigated. The steel tested had the following composition: C: 0.13 - 0.16%; Mn: 0.30 - 0.40%; Si: $\leq$ 0.03%; P: $\leq$ 0.050%; S: $\leq$ 0.055%. Melting was carried out according to the scrap process, in a basic, black oil fired Siemens-Martin open-hearth furnace. To deoxidation ferromanganese and an addition of blast-furnace ferrosilicon were applied, while for the slagging of floating inclusions on the surface of the molten metal a sand-scale mixture (65%: 35%) was dispersed. The percentage of inclusions in the metal varied between 0.03 - 0.07% and of this

The Effect of Deoxidation of Steel and its Treatment by Sodium Silicate on the Percentage of Non-Metallic Inclusions

percentage the high-melting components (corundum, spinel) were 70 - 90%, deteriorating the quality of steel. The analysis of the test showed that upon adding ferrosilicon the percentage of high-melting inclusions decreased by about 20 - 30%, whereas that of the silicate inclusions increased by about 30 - 50%, while the grain size of the glasslike inclusions also increased (up to 0.3 - 0.5 mm^2 and more). Thus, under the influence of deoxidation with ferromanganese and ferrosilicon the high-melting components could be slagged more efficiently. Tochinskiy and Perren (Ref. 6) applied low-melting silicates to the removal of inclusions and impurities from the steel. In the process described in the present paper low-melting sodium silicate powder (24.1% Na_2O and 62.8% SiO_2) was applied as fluxing agent which easily forms drops on account of its low surface tension at the gas zone (300 erg/cm^2). Sodium silicate was a) either sprinkled on the metal surface in the ingot mold or b) it was added partly to the metal when tapped from the furnace, partly to the ladle when one third full and finally it was also put into the ingot mold. In both test

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A054/A026

The Effect of Deoxidation of Steel and its Treatment by Sodium Silicate on the Percentage of Non-Metallic Inclusions

series the metal was reduced in the furnace by ferromanganese only. 300 g of a mixture of 65% of sand and 35% of scale was added to one part of the ingot molds, whereas an equal amount of sodium silicate to the other ingot molds. In the slag samples taken from the castings treated without fluxing agents, 30 - 40% spinel, 15% ferric oxide, 10% silicate glass and up to 40% manganese orthosilicate were found. Table 1 shows that when adding sodium silicate to the ladle and to the ingot mold the total amount of inclusions is not affected, but their chemical composition is changed. SiO_2 increased from 10 - 15% up to 48%, whereas the content of the high-melting components (manganese oxide and in many cases ferro-oxide content) decreased, sometimes magnesium and chrome oxide were even completely lacking. The amount of waste products was also reduced by this process. When milling strips from 139 tons of casting treated by sodium silicate, the waste products amounted to 1,329 kg, whereas the corresponding figure from an equal amount of castings treated by sand-scale mixture was 2,125 kg. The plastic properties of the steel also improved (relative elongation increased from 31.8 to 33.2%)

Card 3/4

The Effect of Deoxidation of Steel and its Treatment by Sodium Silicate on the Percentage of Non-Metallic Inclusions

and better results were obtained in the Ericsson test of sheets. The improvements can be put down to the fact that by the influence of the sodium silicate treatment the phase of the non-metallic inclusions was changed, the concentration of the high-melting inclusions decreased and their place was taken by plastic silicates (Ref. 2). The engineers V.N. Khorev, E.R. Rimm, N.I. Zelenyy, E.L. Mitropolitanskaya, R.B. Gel'man and V.L. Ogorodnikov took part in the work. Professor O.A. Yesin helped in the work.

ASSOCIATION: Severskiy metallurgicheskiy zavod (Seversk Metallurgical Plant) and Ural'skiy politekhnicheskiy institut (Ural Polytechnical Institute)

KONOVALOV, G. F.

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PHASE I BOOK EXPLOITATION SOV/5411

Konferentsiya po fiziko-khimicheskim osnovam proizvodstva stali. 5th, Moscow, 1959.

Fiziko-khimicheskiye osnovy proizvodstva stali; trudy konferentsii (Physicochemical Bases of Steel Making; Transactions of the Fifth Conference on the Physicochemical Bases of Steelmaking) Moscow, Metallurgizdat, 1961. 512 p. Errata slip inserted. 3,700 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni A. A. Baykova.

Responsible Ed.: A. M. Samarin, Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House: Ya. D. Rozentsveyg. Tech. Ed.: V. V. Mikhaylova.

Card 1/16

Physicochemical Bases of (Cont.) SOV/5411

PURPOSE: This collection of articles is intended for engineers and technicians of metallurgical and machine-building plants, senior students of schools of higher education, staff members of design bureaus and planning institutes, and scientific research workers.

COVERAGE: The collection contains reports presented at the fifth annual convention devoted to the review of the physicochemical bases of the steelmaking process. These reports deal with problems of the mechanism and kinetics of reactions taking place in the molten metal in steelmaking furnaces. The following are also discussed: problems involved in the production of alloyed steel, the structure of the ingot, the mechanism of solidification, and the converter steelmaking process. The articles contain conclusions drawn from the results of experimental studies, and are accompanied by references of which most are Soviet.

Card 2/16

KONOVALOV, G.F.; POPEL', S.I.

Interphase tension at the boundary of steel, slag, and products of their deoxidation. Trudy Ural. politekh. inst. no.93:73-79 '59. (MIRA 15:3)
(Steel--Metallography) (Surface chemistry)

POPEL', S.I.; DERYABIN, A.A.; KONOVALOV, G.F.

Effect of sodium oxide on the tension of a silicate melt at the boundary between gas and metal. Izv. vys. ucheb. zav.; chern. met. 5 no.8:5-8 '62. (MIRA 15:9)

1. Ural'skiy politekhnicheskiy institut.
(Flux (Metallurgy)) (Surface tension)

VOSTRYAKOV, A.A. (Sverdlovsk); VATOLIN, N.A. (Sverdlovsk); YESIN, O.A. (Sverdlovsk); KONOVALOV, G.F. (Sverdlovsk)

Electromagnetic separation of $FeSn_2$ crystals from liquid tin. Izv. AN SSSR. Met. no.6:58-61 N-D '65. (MIRA 19:1)

1. Submitted June 3, 1964.

ACC NR: AP6021768 SOURCE CODE: UR/0413/66/000/012/0021/0022

INVENTOR: Konovalov, G. F.

ORG: None

TITLE: A die for drawing parts with inclined walls from sheet material. Class 7, No. 182668

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 12, 1966, 21-22

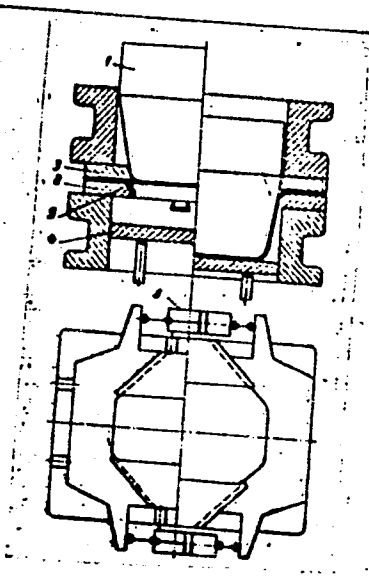
TOPIC TAGS: sheet metal, metal drawing, die, hydraulic device

ABSTRACT: This Author's Certificate introduces a die for drawing parts with inclined walls from sheet material. This unit consists of a punch, die and clamping device. High quality finished products are made in one operation by making both the die and the clamping device in sections which move apart in a radial direction under the effect of the loaded punch. The sections are returned to their original position by hydraulic cylinders placed within the die and connected with the die sections.

Card 1/2

UDC: 621.983.32

ACC NR: AP6021768



1-punch; 2-die; 3-clamping device; 4-knockout; 5-blank; 6-hydraulic cylinder

SUB CODE: 13/ SUBM DATE: 08Aug63

Card 2/2

KOZHEVIN, V.G., nachal'nik; INOZEMTSEV, P.P., nachal'nik; BELEVTSEV, T.N., upravlyayushchiy; GARYAZEV, V.V., upravlyayushchiy; GRACHEV, L.I., upralyayushchiy; KONOVALOV, G.I., upravlyayushchiy; GILLER, A.I., nachal'nik; GUBIN, N.I., glavnyy inzhener.

The Soviet miners honor Miners' Day with new industrial victories. Ugol' 28 no.8:5-15 Ag '53. (MLRA 6:7)

1. Kombinat Kuzbassugol' (for Kozhevin). 2. Kombinat Karagandaugol' (for Inozemtsev). 3. Trest Stalinugol' (for Belevtsev). 4. Trest Kalininugol' (for Gryazev). 5. Trest Molotovugol' (for Grachev). 6. Trest Shchekinugol' (for Konovalov). 7. Shakhtoupravlenie No.9/12 tresta Shchekinugol' (for Giller). 8. Shakhta No.34 tresta Krasnoarmeyskugol' (for Gubin). (Coal mines and mining)

KONOVALOV, G.I., inzh.; KONOVALOVA, N.A., inzh.

Expansion of railroad transportation in the German Democratic Republic. Zhel.dor.transp. 42 no.4:89-92 Ap '60. (MIRA 13:7)

(Germany, East--Railroads)

KONOVALOV, G. M., inzhener-mekhanik-nastavnik.

Modernizing the lubrication system for main steamship engines of the free-accession type. Mor.flot 15 no.12:14-15 D '55.(MLRA 9:3)

1. Ministerstva morskogo flota.
(Marine engines) (Lubrication and lubricants)

KONOVALOV, G.M., inzh.; KIRSH, A.K., inzh.; MARKIN, V.P., inzh.

Economic aspects of the type VKT-100 steam turbine built by the Kharkov works. Teploenergetika 7 no.3:73-80 Mr '60.
(MIRA 13:5)

1. Gosudarstvennyy trest po organizatsii i ratsionalizatsii elektrostantsiy i Dneproenergo.
(Steam turbines)

S/096/62/000/006/006/011
E194/E454

AUTHORS: Kirsh, A.K., Engineer, Konovalov, G.M., Engineer

TITLE: Determination of the efficiency of individual groups of stages when testing steam turbines

PERIODICAL: Teploenergetika, no.6, 1962, 35-37

TEXT: In determining the efficiency of individual cylinders or of groups of stages of steam turbines it is easy enough to measure pressures at bleed or tapping points but temperature measurements are more difficult partly because, the steam flow is not uniform. To determine true steam temperatures many thermometer pockets are required and all regulating valves must be fully open to avoid temperature drops. Thermometer pockets are commonly inserted in steam tapping lines 1 to 2 m from the turbine casing but special tests have shown that efficiencies determined from temperatures so measured were systematically in error because the temperature in the line beyond the tapping point is higher than that immediately beyond the stage, mainly because of steam that leaks through the radial clearance round the shrouding which is nearly at the temperature of stage inlet

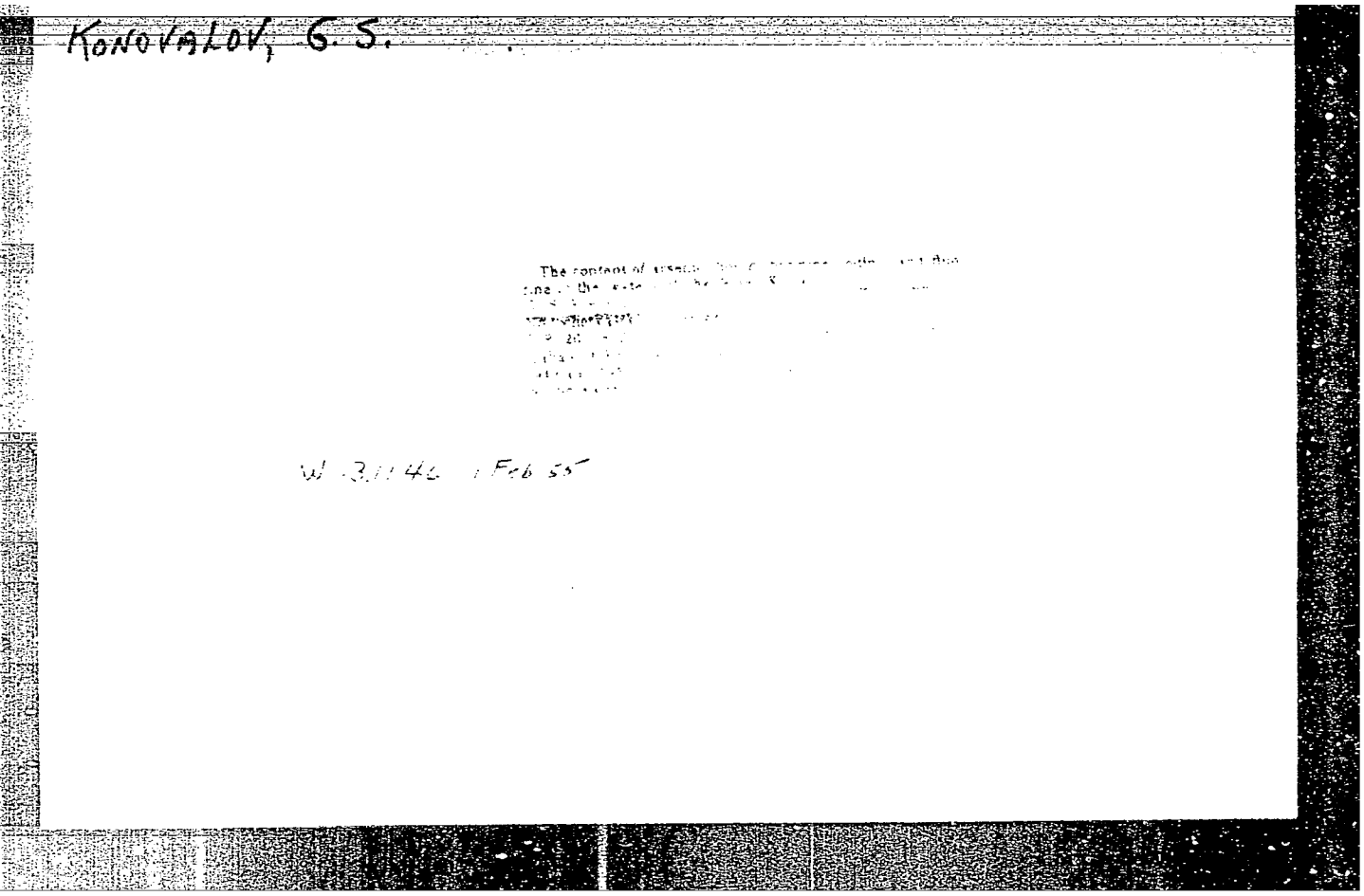
Card 1/2

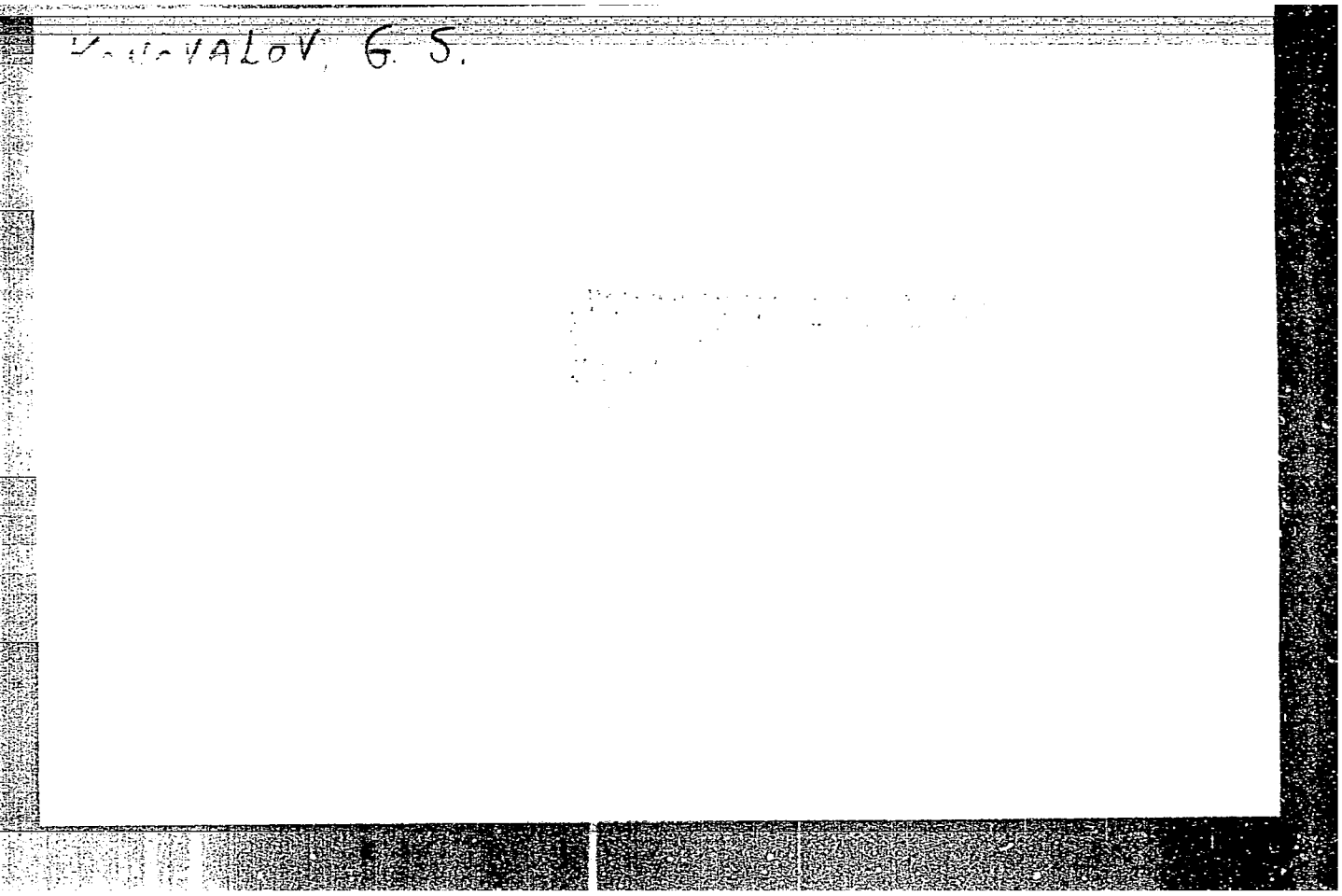
KONOVALOV, G.M., inzh.; YEGOROV, V.N., inzh.

Pump for obtaining water samples for chemical tests. Energetik 10 no.1:11-14 Ja '62. (MIRA 14:12)
(Pumping machinery)
(Water--Analysis)

KONOVALOV, G. S.

"A Vessel for Titration", Zavodskaya Laboratoriya, No. 7, p 892, 1952.





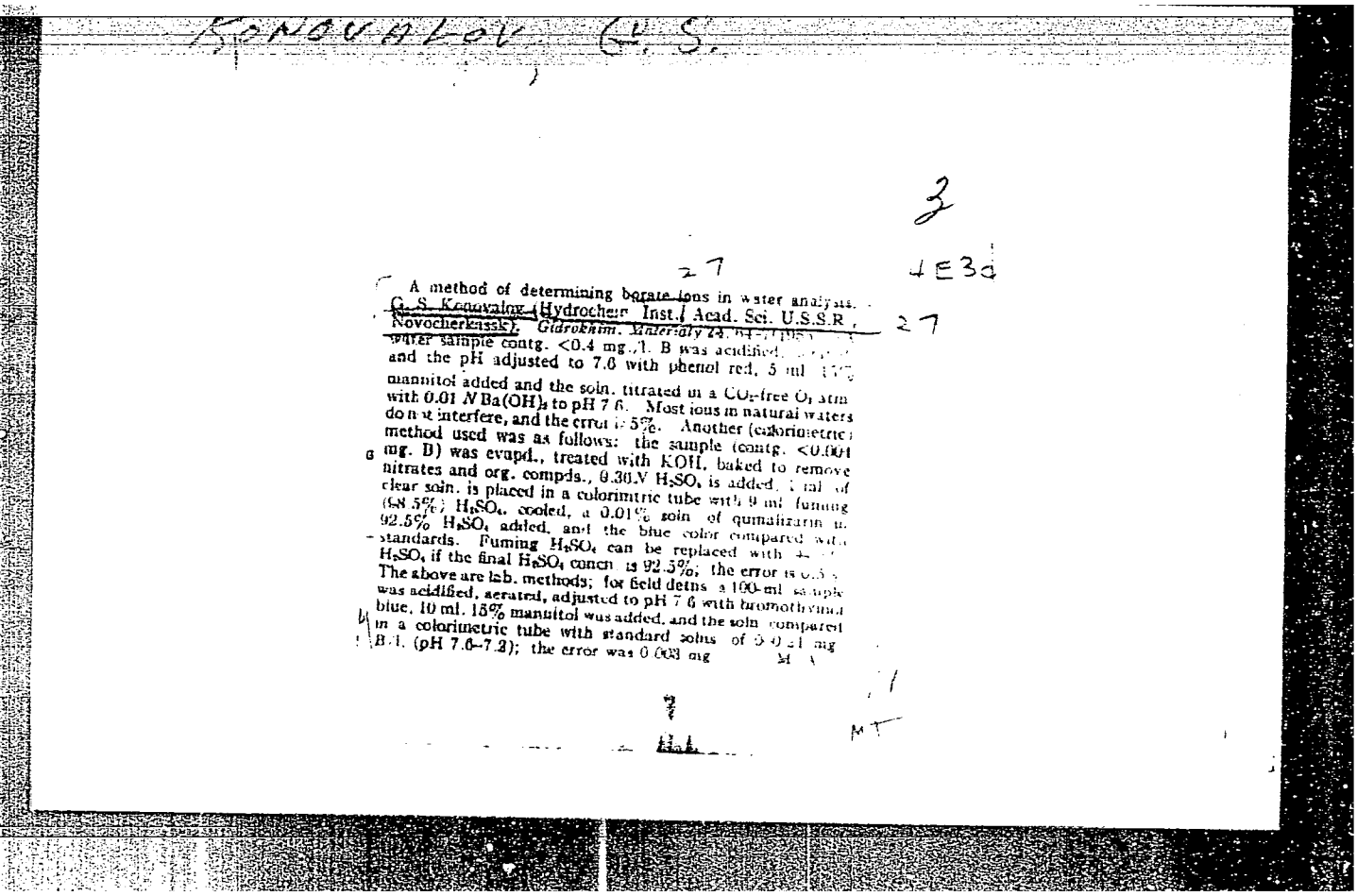
ALEKIN, O.A., professor; KRYUKOV, P.A., kandidat khimicheskikh nauk; KONOVALOV, G.S., kandidat khimicheskikh nauk.

Conference on hydrochemistry and discussion of problems concerning the composition of natural waters. Vest.AN SSSR 23 no.9:82-84 S '53. (MLRA 6:10)
(Water--Analysis)

KONOVALOV, G.S.

Colorimetric determination of pH in natural waters. Gidrokhim. mat. 24:18-19 '55. (MLRA 9:4)

1.Gidrokhimicheskiy institut Akademii nauk SSSR, g.Novocherkassk.
(Water, Underground) (Water--Analysis)



Konovalov, G. S.

A method of determining borate ions in water analysis. G. S. Konovalov (Hydrochem. Inst., Acad. Sci. U.S.S.R., Novocherkassk). *Gidrokhim. Materialy* 24, [illegible] (1956).

Water sample contg. <0.4 mg./l. B was acidified, [illegible] and the pH adjusted to 7.6 with phenol red, 5 ml. [illegible]% mannitol added and the soln. titrated in a CO_2-free O_2 atm. with 0.01 *N* $Ba(OH)_2$ to pH 7.6. Most ions in natural waters do not interfere, and the error is 5%. Another (colorimetric) method used was as follows: the sample (contg. <0.004 mg. B) was evapd., treated with KOH, baked to remove nitrates and org. compds., 0.30 *N* H_2SO_4 is added, 1 ml. of clear soln. is placed in a colorimetric tube with 9 ml. fuming (68.5%) H_2SO_4, cooled, a 0.01% soln. of quinalizarin in 92.5% H_2SO_4 added, and the blue color compared with standards. Fuming H_2SO_4 can be replaced with [illegible] H_2SO_4 if the final H_2SO_4 concn. is 92.5%; the error is [illegible]. The above are lab. methods; for field detns. a 100-ml. sample was acidified, aerated, adjusted to pH 7.6 with bromothymol blue, 10 ml. 15% mannitol was added, and the soln. compared in a colorimetric tube with standard solns. of 0.0[illegible] mg. B/l. (pH 7.6–7.2); the error was 0.003 mg.

KONOVALOV, G.S.

Determination of boron in natural waters by means of direct titration. Gidrokhim.mat.25:224-236 '55. (MLRA 9:6)

1.Gidrokhimicheskiy institut Akademii nauk SSSR, Novocherkassk.
(Water--Analysis) (Boron)