AUTHOR: Korneyev, L.A. SOV/106-58-12-2/13

TITLE: Quartz Oscillators with Neutralisation (Kvartsevyye generatory s neytralizatsiyey)

PERIODICAL: Elektrosvyaz', 1958, Nr 12, pp 10 - 15 (USSR)

ABSTRACT: The shunting effect of the static capacity of a quartz crystal presents a fundamental obstacle to obtaining oscillations at the higher harmonic frequencies. Therefore, when exciting a crystal at high harmonic frequencies, it is necessary either to compensate the capacity by an inductance or to neutralise the capacity (Ref 1). The advantage of the neutralisation method is that it can be achieved over a wide band and it is easier to prevent parasitic oscillations. Pruzhanskiy (Ref 2) proposed two simple circuits with neutralising capacitors. These circuits are further developed in Figs 1 and 2. The operation of these circuits is explained from simple physical considerations and the circuits are compared for "liveliness" and suitability for practical use. Using the circuit

Card 1/2

SOV/106-58-12-2/13

Quartz Oscillators with Neutralisation

given in Fig 2d , stable oscillations at 90, 126 and 162 Mc/s were obtained with a crystal having a basic frequency of 18 Mc/s. Professor S.I. Yevtyanov advised the author in this work.
There are 6 figures and 3 Soviet references.

SUBMITTED: May 30, 1958

Card 2/2

6(4)

AUTHOR: Korneyev, L. A., Regular Member of the Society SOV/108-13-11-8/15

TITLE: Resonance Method of Measuring Equivalent Quartz Parameters (Rezonansnyy sposob izmereniya ekvivalentnykh parametrov kvartsev)

PERIODICAL: Radiotekhnika, 1958, Vol 13, Nr 11, pp 52-59 (USSR)

ABSTRACT: A modified resonance method of measuring the equivalent quartz parameters within the ranges of short and meter-waves (at harmonic oscillations) is described by the author. This method has not the disadvantages of the ordinary resonance method. It is characterized by the fact that as measuring unit in the voltage divider not the angular resistance but a capacity is used. This capacity may be considered to be a pure (in no way shunted) capacity at frequencies up to 100 megacycles and more. By means of the resonance method suggested here it is possible to measure the dynamic quartz parameters both in the case of fundamental frequencies and of harmonic oscillations with a total error of only some percents. The method is more reliable than the

Card 1/2

Resonance Method of Measuring Equivalent Quartz Parameters SOV/108-13-11-8/15

"resonance-counterresonance" method (Ref 1) hitherto known and can be employed at considerably higher frequencies. The upper frequency limit depends essentially on the measuring apparatus used as well as on the activity of the quartz, the parameters of which are measured. The experiments carried out by the author showed that this measuring method can be used up to 50 - 100 megacycles. There are 3 figures, 1 table, and 3 Soviet references.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A.S. Popov (Scientific-technical Society of Radio Engineering and Electro-communications im. A.S. Popov)

SUBMITTED: June 19, 1957 (initially) and February 5, 1958 (after revision)

Card 2/2

S/108/60/015/011/006/012
B019/B063

9,2180 (3203, 1001, 1162)

AUTHOR: Korneyev, L. A., Member of the Society

TITLE: Determination of the Series-resonance Frequency of a Quartz

PERIODICAL: Radiotekhnika, 1960, Vol. 15, No. 11, pp. 45-46

TEXT: The author shows that the series-resonance frequency of a quartz can be determined with a measuring circuit described by him in Ref. 1. The measurement is based on a study of the frequency dependence of the transmission coefficient. The measuring circuit basically consists of a capacitative voltage divider which comprises a quartz and a capacitor. When f_k is the series-resonance frequency of the quartz and f_1 the generator frequency at the maximum transmission coefficient the difference between these frequencies depends on the activity of the quartz. In most cases it will be possible to write $f_1 - f_k \approx f_1 \frac{C_k}{4C_o}$, where C_o and C_k are the static and dynamic capacitances, respectively, of the quartz. The

Card 1/2

85483

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824710018

Determination of the Series-resonance Frequency of a Quartz

S/108/60/015/011/006/012
B019/B063

accuracy of determination of the series-resonance frequency is greatly dependent on the accuracy of measurement of the generator frequency and on the activity of the resonator. There are 2 figures, 1 table, and 1 Soviet reference.

SUBMITTED: March 10, 1959

Card 2/2

KORNEYEV, L. A.

Cand Tech Sci - (diss) "Auto-generators of metric waves stabilized on quartz harmonics." Moscow, 1961. 20 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Order of Lenin Aviation Inst imeni Sergo Ordzhonikidze); 150 copies;free; (KL, 6-61 sup, 219); bibliography on pp 19-20

S/194/62/000/002/084/096
D271/D301

9.2583

AUTHOR: Korneyev, L. A.

TITLE: Shembel type, meter wave range oscillator, with quartz crystal

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 2, 1962, abstract 2-7-159ts (Tr. Mosk. energ. in-ta, 1961, no. 34, 76-99)

TEXT: Operational features of a quartz crystal oscillator, of Shembel type, working in the meter wave range are considered. A method is put forward for the design of such an oscillator when power in the load and permissible frequency instability are prescribed. An example of calculation is given. Theoretical results are confirmed by experiment. 6 references. [Abstracter's note: Complete translation.]

Card 1/1

KORNEYEV, L.A.

Design of a neutralized quartz oscillator. Elektrosviaz' 15 no.7: 12-22 Jl '61. (MIRA 14:6)
(Oscillators, Crystal)

23611
S/108/61/000/006/007/008
D201/D305

9.2583

AUTHOR: Korneyev, L.A., Member of the Society (See Association)

TITLE: The influence of inductances of the tube input leads on the performance of a quartz crystal oscillator with neutralization

PERIODICAL: Radiotekhnika, 16, no. 6, 1961, 51 - 60

TEXT: In overtone crystal oscillators the impedance of the resonant circuit of the crystal diminishes quickly with the increasing order of harmonics and in order to obtain stable oscillations tubes with higher slopes, such as 6Ж9П (6Zh9P), 6Э5П (6E5P), 6С3П (6S3P) should be used. Small metal-ceramic valves have been introduced lately, with leads possessing very small inductances (e.g. ГС-4 (GS-4), 6С17К (6S17K). When in the circuit, however, the wiring inductance of the oscillator remains. In the present article the author analyzes the influence of the cathode, grid and anode lead inductance on the performance of a metric wave generator sta-

Card 1/12

The influence of inductances ...

bilized by an overtone quartz crystal. The analysis is based on a triode oscillator with all parasitic capacitances and inductances of the tube taken into account. The results obtained can be applied to a tetrode or pentode oscillator provided the tube lead inductances are much smaller than that of the wiring. All notation used is that used by the author in his previous works (Ref. 1: НДВШ (NDVSh), Radiotekhnika i elektronika, no. 2, 1958) and (Ref. 2: Elektrosvyaz', no. 12, 1958). Fig. 1 shows the basic crystal oscillator configuration (1n - denoting the circuit with neutralization as shown in Fig. 1). Subsequently, the 2n configuration is also considered, obtained from cct of Fig. 1 (with reversed positions of crystal and neutralizing capacitance C_n). For the purpose of analysis, the circuit of Fig. 1 is replaced by the equivalent cct of Fig. 2. Here z_a, z_g, z_k - impedances of inductances L_a, L_g, L_k; Y_{ag}, Y_{ak}, Y_{gk} - the susceptances of the intelectrode capacitances C_{ag}, C_{ak}, C_{gk}; Y'_{ag}, Y'_{ak}, Y'_{gk} - admittances of the equivalent three point generator, assuming the intelectrode admittances to be zero.

Card 2/12

The influence of inductances ...

Thus to the right of the tube in Fig. 2 a passive three-terminal network is obtained which contains all parasitic capacitances and inductances of the tube. First the driving impedance (i.e. the impedance relating the anode current i_a to the induced by it grid voltage U_g - Fig. 2) Z is considered. Assuming z_a, z_g, z_k and admittances Y_{ag}, Y_{ak}, Y_{gk} to be purely reactive and applying the assumptions of Ref. 1(Op.cit.) [Abstractor's note: The assumptions of Ref. 2 are not given], the driving impedance is given as

$$Z = R'_0 \frac{(1 + i\alpha)(A_1 - iA'_1) + A'_2 + iA_2}{(1 + i\alpha)(B'_2 + iB_2) - D_1 + iD'_1} \qquad (1)$$

where

$$A_1 = A'_1\xi + A''_1;\ A_2 = A'_2\xi + A''_2;\ B_2 = B'_2\xi + B''_2;\ D_1 = D'_1\xi + D''_1 \qquad (2)$$

in which coefficients A'_1, A''_1 .... D''_1 are expressed by the parame-

Card 3/12

The influence of inductances ...

ters of the cct in Fig. 1, analogous to those derived in Ref. 1(Op. cit.) but more cumbersome and therefore not given here. As in Ref. 1(Op.cit.) α = the generalized detuning of crystal with respect to the frequency of series resonance, ξ - the generalized detuning of the anode cct, $R_o' = R_o/M$, where R_o - the driving resistance of an ordinary three-point generator in 1n or 2n connection. The coefficients of the denominator of Eq. (1) are independent of parasitic inductances of the tube. Coefficients A_1' and A_2' in the numerator vanish for zero parasitic inductances. The equations for the frequency and amplitude of oscillations are derived by rewriting Eq. (1) in the form

$$Z = R_o' \frac{P_{re}(\alpha) + i\, P_{im}(\alpha)}{Q_{re}(\alpha) + i\, Q_{im}(\alpha)}$$

where $P_{re}(\alpha)$, $Q_{re}(\alpha)$, $P_{im}(\alpha)$, $Q_{im}(\alpha)$ - are respectively the real and imaginary terms of polynomials in the numerator and denomina-

The influence of inductances ...

tor. Assuming the driving impedance to be real ($Z \equiv R$) then for frequency

$$Q_{re}(\alpha)\, P_{im}(\alpha) - Q_{im}(\alpha)\, P_{re}(\alpha) = 0 \qquad (2)$$

is obtained, so that pencil-type tubes having a high slope can be used up to 200 mc/s since their transit time would be negligible. E.g. in tubes types 6Ж9П (6Zh9P), 6Ж5П (6E5P) the grid to cathode spacing is about 40 microns. This distance at a frequency of 200 mc/s and with 1V at the grid produces a transit angle of about 10^0 which may be considered negligible. If the lead inductances have to be taken into account the following

$$K(\xi)\, \alpha^2 + N(\xi)\, \alpha + T(\xi) = 0 \qquad (3)$$

holds, where $K(\xi)$, $N(\xi)$, $T(\xi)$ - are polynomials of the second order with respect to detuning of the cct ξ. The driving resistances for the stationary state can then be written as

$$R = R_0' \frac{G(\xi)\, \alpha + F(\xi)}{B_2'\, \alpha + H(\xi)}, \qquad (4)$$

where $G(\xi)$, $F(\xi)$, $H(\xi)$ - are linear binomials with respect to de-

Card 5/12

tuning ξ. The influence of inductances on the performance of the oscillator is analyzed both for 1n and 2n connections from graphs R, $\alpha(\xi)$ drawn for various values of parasitic inductances. The driving resistances in both graphs have been drawn in relative units RS_0. Oscillations occur for the regeneration $RS_0 > 1$. A graph of RS_0 is also given here (so-average slope) for the 1n connection. For ideal neutralization of the static capacitance of the crystal and in the absence of parasitic inductances ($x_a = x_g = x_k = 0$), the dependance of both $R(\xi)$ and of $\alpha(\xi)$ is uniquely defined (Ref. 1: Op.cit.). For $x_k \neq 0$, an ambiguity arises and the region of instabilities, in which there is a phase balance, increases with the increase of the ratio

$$\frac{x_k}{/x_{gk}/}$$

so that eventually for a certain value of this ratio the curves of

R and $\alpha(\xi)$ are reduced to single points. The same graph shows also the influence of the grid inductance and anode inductance. The grid inductance helps the oscillations, that of the anode hinders them. As might have been expected from the graphs of R, $\alpha(\xi)$ in the 2 n connections, for which the phase angle of the feedback is positive and, therefore, of opposite sign to that of the tube input cct, the anode circuit can be operated at a smaller detuning. This is shown in Fig. 4, in which graphs of R, $\alpha(\xi)$ have been drawn for the same values of the valve parameters as for the cct connection in n. Fig. 4a shows the positive portions of the driving resistance only; Fig. 4b shows parts of curves $\alpha(\xi)$ which correspond to the positive values of the driving resistance. The theory has been confirmed by an experiment, in which two oscillators built in 1 n and 2 n connections, fully neutralized were working at a frequency of 110 mc/s (7th overtone of a 15.7 mc/s crystal) 653 P triodes were used with a capacitive divider in the feedback path, with inductively tuned anode cct. Since it had been assumed that parasitic inductances have little effect on frequency - only the

The influence of inductances ...

dependence of oscillations amplitude on the anode tuning for various values of parasitic inductances was investigated. The results of the experiment are given in the form of graphs in Fig. 6a (circuit 1n) and Fig. 6b (oct 2n). The following conclusions are made. The performance of a crystal controlled neutralized high frequency oscillator is affected mostly by the cathode lead inductance. Both in oscillators in 1 n and 2 n connections, the driving resistance decreases with the increase of the relative cathode impedance $\frac{x_k}{/x_{gk}/} = \omega_k^2 L_k C_k$. This decrease has a higher rate in the 1 n connection of the oscillator. A noticeable effect of the cathode lead inductance can be observed for as small values of $\omega_k^2 L_k C_k$ as about 5 %, which for pencil-tubes corresponds to frequencies 100 - 150 mc/s. For relative cathode impedances larger than 10 %, oscillations in a crystal controlled oscillator may not occur owing to the phase unbalance and parasitic oscillations. The parasitic inductances affect more the amplitude than the frequency of oscilla-

Card 8/12

The influence ...

tions. Thus great care must be taken in the layout design of crystal controlled oscillators working above 100 mc/s, minimizing as much as possible its cathode lead inductance. There is an appendix, in which the author derives the expression for the driving impedance of the oscillator, based on the three-pole network with poles 1, 2, 3 in Fig. 2. The impedance is expressed using matrices of multi-poles components, according to the method given by E.V. Zelyakh (Ref. 4: Osnovy obshchey teorii lineynykh elektricheskikh schem. Izd. AN SSSR, M., 1951). The author acknowledges the help of Professor S.I. Yevtyanov. There are 6 figures and 5 references: 4 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: E. Hafner, IRE National Convention Record, v. 6, p. 5, 1958.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A.S. Popova (Radio Engineering and Electrical Communications Society im. A.S. Popov). [Abstractor's note: Name of association taken from first page of journal]

SUBMITTED: May 10, 1960

Card 9/12

KORNEYEV, Leonid Konstantinovich; ISLANKINA, T.F., red.; NAZAROVA, A.S., tekhn. red.

[F.A.TSander, the enthusiast of interplanetary flights] Entuziast mezhplanetnykh poletov F.A.TSander. Moskva, Izd-vo "Znanie," 1961. 46 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.4, Tekhnika, no.15) (MIRA 14:9)
(Rocketry) (TSander, Fridrikh Arturovich, 1887-1933)

TSANDER, Fridrich Arturovich, inzh. [1887-1933]; POBEDONOSTSEV, Yu.A., doktor tekhn. nauk, prof., retsenzent; KORNEYEV, L.K., red.; ZAKHAROV, Yu.G., kand. tekhn. nauk, red.; ANIKINA, M.S., red. izd-va; ROZHIN, V.P., tekhn. red.

[Flying in a rocket-propelled vehicle; interplanetary flights] Problema poleta pri pomoshchi reaktivnykh apparatov; mezhplanetnye polety. Sbornik statei. Pod red. L.K.Korneeva. 2. dop. izd. Moskva, Gos. nauchno-tekhn. izd-vo, 1961. 459 p. (MIRA 14:11)
(Space flight) (TSander, Fridrikh Arturovich, 1887-1933)

AUTHOR: Korneyev, L.

S/085/61/000/012/001/003
D047/D112

TITLE: An interplanetary flight enthusiast

PERIODICAL: Kryl'ya rodiny, no. 12, 1961, 17-19

TEXT: This is the second and final part of an article on the life and activities of one of the founders of applied celestial mechanics - Fridrikh Arturovich Tsander - who died on Feb 28, 1933 in Kislovodsk. Tsander was an outstanding specialist in aircraft internal combustion engines and the author of a good many works on this subject. At the same time, he enthusiastically worked on the solution of numerous problems of astronautics. In his series "Teoriya mezhplanetnykh puteshestviy" (The Theory of Interplanetary Travel), he dealt with a great complex of problems involved in space flight and gave an accurate calculation of the trajectory of a flight to Mars. In his "Raschet poleta mezhplanetnogo korablya v atmosfere Zemli" (The Calculation of a Flight of a Spaceship in the Atmosphere of the Earth) he was the first to suggest a gliding descent of the spaceship to the Earth. Many calcu-

Card 1/3

lations given in his "Teplovoy raschet raketnogo dvigatelya na zhidkom toplive" (Thermal Calculation of a Liquid-Fuel Rocket Engine) are valid even now; his calculations of rocket engines from entropy diagrams are an example. Other prominent works of his include: "O temperature kotoruyu primet mezhplanetnyy korabl' pri planiruyushchem spuske na Zemlyu" (On the Temperature of a Spaceship Gliding Down to the Earth); "Ob ispol'zovanii sily davleniya sveta dlya poletov v mezhplanetnom prostranstve" (On the Utilization of the Pressure of Light for Flights in Interplanetary Space); " O primenenii tonchayshikh listov dlya poletov v mezhplanetnom prostranstve" (On the Use of Very Thin Sheets for Flights in Interplanetary Space); " O davlenii sveta na kombinirovannyye zerkala" (On the Pressure of Light Upon Combined Mirrors). It was Tsander who already in 1925 suggested deflecting meteors from spaceships by means of static electricity. It was he who managed to grow peas and cabbage in flower pots filled with ground charcoal to provide food for the cosmonaut and absorb the carbon dioxide. In 1929-32, Tsander worked on what was virtually a prototype of the liquid-fuel rocket engines of to-day, the ОР-1 (OR-1) engine fuelled with gasoline and gaseous air. By the end of

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824710018-

An interplanetary flight enthusiast S/085/61/000/012/001/003
D047/D112

1932, he had completed a modified liquid-fuel rocket engine, the ОР-2 (OR-2). It was fuelled with gasoline, used oxygen for an oxidizer and was designed to power an РП-1 (RP-1) "flying wing" glider designed by B.I. Cheranovskiy. From Jan 1933, Tsander led a group of scientists which designed the ГИРД-Х (GIRD-Kh) liquid-fuel rocket, which was completed after his death and fired in Moscow on Nov 25, 1933 (its technical data are given, and it is shown in the photograph on page 19). From the beginning of 1931, Tsander led the Jet Engine Section at the Central Council of Osoaviakhim, which later became the "Tsentral'naya gruppa po izucheniyu reaktivnogo dvizheniya i raketnogo metoda letaniya" (Central Group for the Study of Jet Propulsion and the Rocket Method of Flying) (TsGIRD) where Tsander became Chairman of the Technical Council. In Apr 1932, he joined the Moscow section of the GIRD (Gruppa po izucheniyu reaktivnogo dvizheniya (Group for the Study of Jet Propulsion) and became its central figure. This organization rendered great service in the development of rocket engineering in the USSR. Tsander was a good friend of Konstantin Eduardovich Tsiolkovskiy and worked in close contact with such Soviet scientists as V.P. Vetchinkin, B.S. Stechkin and V.V. Uvarov. There are 4 figures.

KORNEYEV, L.

Enthusiast of interplanetary flights(to be concluded). Yun. tekh. 12 no.11:14-16 N '62. (MIRA 14:11)
(Tsander, Fridrikh Arturovich, 1887-1933)

KORNEYEV, L., inzhener-mekhanik

Scout of cosmic roads. Av.i kosm. 45 no.8:26-31 '62. (MIRA 15:8)

(Tsander, Fridrikh Arturovich, 1887-1933)

KORNEYEV, L., insh.

The beginning of the space era (continued). Tekh.mol. 30 no.9:28-29 '62. (MIRA 15:9)
(Tsander, Fridrikh Arturovich, 1887-1933)
(Space flight)

KORNEYEV, L., inzh.

The beginning of the space era (conclusion). Tekh. mol. 30 no.12:37-38 '62. (MIRA 16:1)

(Rocketry)

KORNEYEV, M.

Using the starting pump of an electric torch apparatus to test the airtightness of the fuel system of IAAZ-204 engine. Avt. transp.33 no.10:34 O'55. (MLRA 9:1)
(Automobiles--Fuel systems)

SYRYY, N. , kandidat tekhnicheskikh nauk; MOROZOV, I., inzhener;
KORNEYEV, M., inzhener.

Explosion method used for construction of water reservoirs and wells. Posh.delo no.2:8-9 F '57. (MLRA 10:4)
(Water-supply engineering)

KORNEYEV, M.

Welding and building-up of parts with a kerosene burner. Avt.-transp. 40 no.9:53-54 S '62. (MIRA 15:9)
(Welding)

ARINCHENKOV, V.I., kand.tekhn.nauk; KORNEYEV, M.A., kand.tekhn.nauk

Operation of D-357G scrapers. Stroi. i dor. mash. 10 no.2:11 F '65. (MIRA 18:3)

ADONIN, A.N., kand.tekhn.nauk; ALIVERDIZADE, K.S., kand.tekhn.nauk; AMIYAN, V.A., kand.tekhn.nauk; ANISIMOV, Ye.P., inzh.; APRESOV, K.A., dotsent; BELEN'KIY, V.N., inzh.; BOGDANOV, A.A., kand. tekhn.nauk; GORBENKO, L.A., inzh.; DANIELYAN, A.A., inzh.; DAKHNOV, V.N., prof.; IVANKOV, R.A., inzh.; KORNEYEV, M.I., inzh.; LAVRUSHKO, P.N., inzh.; LESIK, N.P., inzh.; LOVLYA, S.A., kand. tekhn.nauk; LOGINOV, B.G., kand.tekhn.nauk; MININZON, G.M., kand. tekhn.nauk; MOLCHANOV, G.V., kand.tekhn.nauk; MURAV'YEV, I.M., prof.; MUSHIN, A.Z., inzh.; OL'SHVANG, D.Ye., inzh.; PODGORNOV, M.I., inzh.; FAYERMAN, I.L., kand.tekhn.nauk; FOKINA, Ye.D., inzh.; KFISHEV, A.M., inzh. [deceased]; YERSHOV, P.R., vedushchiy red.; MUKHINA, E.A., tekhn.red.

[Reference book on petroleum production] Spravochnik po dobyche nefti. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry. Vol.2. 1959. 589 p. (MIRA 13:2)
(Oil fields--Production methods)

ISMAILOV, R.G.; KORNEYEV, M.I.

Combined reforming of straight-run ligroin fractions in combination with light cracking of fuel oil in dual-furnace thermal cracking unit. Izv. vys. ucheb. zav.; neft' i gaz 2 no.7:61-67 '59.
(MIRA 12:12)

1.Azerbaydzhanskiy institut nefti i khimii im. M. Azizbekova i ob"yedineniye "Azneftezavody."
(Cracking process)

AID P - 2036

Subject : USSR/Engineering

Card 1/1 Pub. 110-a - 9/14

Author : Korneyev, M. I., Kand. of Tech. Sci.

Title : Heat transfer of mercury and of amalgams of magnesium at boiling under conditions of free convection.

Periodical : Teploenergetika, 4, 44-48, Ap 1955

Abstract : Results of experiments on heat transfer in boiling mercury and magnesium amalgams from a horizontal tube are discussed. A cross-section of the experimental installation is given and its operation is described. A mathematical analysis of heat transfer from the wall to the boiling mercury and to amalgams of magnesium is presented. The author recommends the use of amalgams of magnesium as heat carriers in power engineering. Nine diagrams. Three Russian references, 1946-1951.

Institution: Central Boiler and Turbine Institute

Submitted : No date

KORNEYEV, M.I.

AID P - 2391

Subject

Card 1/1 Pub. 110-a - 5/15

Author : Korneyev, M. I., Kand. Tech. Sci.

Title : Research on heat transfer in mercury and amalgams of magnesium under natural circulation conditions

Periodical : Teploenergetika, 7, 25-30, Jl 1955

Abstract : A detailed analysis is presented of heat transfer from wall to boiling and not-boiling mercury and amalgams of magnesium and the factors influencing the process, such as pressure, surface finish, velocity of liquid and gas components in vertical and horizontal pipes. The testing installation and method are described in detail with graphic illustrations. Seven diagrams. Three English references, 1942-1954 and two Russian references, 1949 and 1955.

Institution: Central Boiler-Turbine Institute

Submitted : No date

AID P - 4426

K... M.I.

KORNEYEV, M.I.

GEL'TMAN, A.E., kand.tekhn.nauk; KORNEYEV, M.I., kand.tekhn.nauk;
SHERALOV, V.K., inzhener.

Using gas from underground gasification in steam-gas equipment.
Elek.sta. 28 no.9:35-39 S '57. (MIRA 10:11)
(Steam power plants)

KORNEYEV, M.I.

GEL'MAN, L.I., inzh.; KORNEYEV, M.I., kand.tekhn.nauk

High-pressure marine steam generators. Sudostroenie 24 no.4:59-63 Ap '58. (MIRA 11:4)
(Marine engines)

KORNEYEV, M.I., kand.tekhn.nauk; SAZONOV, N.I., kand.tekhn.nauk; LOZHKIN, A.N., doktor tekhn.nauk, red.; GONCHAROV, N.G., tekhn.red.

[Steam-gas power plants and prospects for their adoption into Soviet power engineering] Parogazovye energoustanovki i perspektivy ikh vnedreniia v energetiku SSSR. Pod red. A.N. Lozhkina. Moskva, Gos.nauchno-tekhn.komitet Soveta Ministrov SSSR, 1959. 45 p. (MIRA 12:12)
(Electric power plants)

S/196/61/000/012/007/029
E194/E155

AUTHORS: Korneyev, M.I., and Poryadin, N.I.

TITLE: The construction of, and operating experience with, high-pressure Velox boilers

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.12, 1961, 13-14, abstract 12G 78. (The Problems of Use of Gas in Thermal Power Installations, M. -L., Gosenergoizdat, 1959, 101-113)

TEXT: The boiler of the Buguruslan Power Station (see sketch) with an output of 40 tons per hour, burning natural gas, is of the following parameters and main design characteristics. Saturated and super-heated steam pressures 53 and 40 atm; super-heat temperature 450 °C; feedwater temperature 105 °C; water temperature at outlet from economiser 180 °C. The air pressure at inlet to the combustion chamber is 2.9 atm and the gas temperature beyond the combustion chamber 1700 °C. The furnace diameter is 1500 and the height 3250 mm, giving a combustion-chamber volume of 5.6 m^3 and a thermal loading of 7 million

Card 1/3

The construction of, and operating...

kilocalories/m^3/hour. With an excess-air factor of 1.1, the gas temperature at the inlet to the gas turbine is 500 °C and at the inlet to the economiser 380°; the air temperature at discharge from the compressor is 150 °C. The evaporative elements are designed on the principle of a tube within a tube. There is a system of automatic control of the combustion process, of feed-water delivery, and of super-heated steam temperature. Interlocking devices automatically shut down the boiler when: the water level in the separator rises above +1 m or falls below -1 m; when the pressure across the circulating pump falls below 450 mm Hg; when the circulating-pump speed falls below 910 r.p.m; or in the event of a severe voltage-drop lasting longer than two seconds; also the gas turbine is protected against an explosive gas wave in the event of incorrect firing. The boiler is disconnected by a self-closing valve when the pressure drop across it becomes greater than 2 atm. The boiler is lit by remote or automatic control. Specific thermal loadings of the heating surfaces in thousands of kilocalories/m^2/hour are: superheater 30, economiser 10, evaporator elements 280

Card 2/ 3

KORNEYEV, M.I., kand.tekhn.nauk; MOISEYEV, G.I., inzh.

Effectiveness of steam-gas installations of medium and large capacity with pressure steam generator. Teploenergetika 7 no.5:33-38 My '60. (MIRA 13:8)

1. TSentral'nyy kotloturbinnyy institut.
(Heat engineering) (Turbines)

KOKOSHKIN, A.I. [deceased], kand.tekhn.nauk; KORNEYEV, M.I., kand. tekhn.nauk; KALININ, V.F., kand.tekhn.nauk

Closed-cycle gas turbine plant manufactured by the firm Escher Wyss. Energomashinostroenie 6 no.7:45-48 Jl '60. (MIRA 13:7)

(Gas turbines)

KORNEYEV, M.I., kand.tekhn.nauk

Combined steam-gas power plants for district heating operated on the cycle introduced by the Central Scientific Research Institute for Boilers and Turbines, and their technical and economic indices. Teploenergetika 8 no.9:10-14 S '61. (MIRA 14:8)

1. TSentral'nyy kotloturbinnyy institut.
(Power plants) (Heating from central stations)

KORNEYEV, M.I., kand.tekhn.nauk; DROBOT, V.P., inzh.

Combined steam and gas-turbine plant with a 200 mw. unit.
Teploenergetika 8 no.10:50-54 O '61. (MIRA 14:10)

1. TSentral'nyy kotloturbinnyy institut.
(Power plants)

KORNEYEV, M.I., kand.tekhn.nauk; PRUTKOVSKIY, Ye.N., inzh.

Use of the gas from underground gasification of coal in large steam-gas systems. Elek. sta. 32 no.2:22-27 F '61. (MIRA 16:7)
(Coal gasification, Underground) (Steam power plants)

BULANOV, N.G.; KUPRIYANOVA, L.V.; TSUKERMAN, R.V.; BUDNYATSKIY, D.M.; GEL'TMAN, A.E.; KOSTOVETSKIY, D.L.; PISKAREV, A.A.; TARANIN, A.I.; KORNEYEV, M.I.; MOISEYEV, G.I.; KENDYS, P.N.; KIRPICHEV, Ye.F.; RUBIN, M.M.; SOKOLOV, N.V.; SHCHERBAKOV, V.A.; KOVALEV, N.N.; BELOV, A.A.; SEREBRYAKOV, G.M.; SATANOVSKIY, A.Ye., red.; RODDATIS, K.F., red.; KORKHOVA, V.I., red.; CHEREPENNIKOV, B.A., red.; KOGAN, F.L., tekhn. red.

[Manufacture of power machinery abroad] Energeticheskoe mashinostroenie za rubezhom. Moskva, 1961. 583 p. (MIRA 16:8)

1. Moscow. TSentral'nyy institut nauchno-tekhnicheskoy informatsii mashinostroyeniya.
(Electric power plants--Equipment and supplies)

ISMAILOV, R.G.; KORNEYEV, M.I.; KARAGEDOVA, O.T.

Combined operation of the reforming of ligroine with the light cracking of fuel oils in a double-chamber furnace of thermal cracking processes. Khim.i tekh.topl.i masel 7 no.4:3-5 Ap '62. (MIRA 15:4)

1. Sovet narodnogo khozyaystva Azerbaydzhanskoy SSR.
(Baku—Cracking process) (Ligroine) (Gasoline)

S/152/62/000/011/001/001
B126/B186

AUTHORS: Balakishiyev, G. A., Ismailov, R. G., Korneyev, M. I., Mezhebovskiy, Ye. B.

TITLE: Influence of ultrasonic energy on the cracking process of solar oil distillate

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Neft' i gaz, no. 11, 1962, 59 - 62

TEXT: Ultrasonic experiments were carried out on a pilot plant for continuous thermal cracking with a view to reduct the processing temperature. A standard magnetostriction ПМС-7 (PMS-7) projector of 21 kc/s fundamental oscillation frequency introduced the ultrasonic energy direct into the reaction zone. The projector was fed from a УЗМ-10 (UZM-10) ultrasonic generator manufactured in series production. The analytical data of the distillate used were as follows: specific gravity 0.8952, initial boiling point 284°C, evaporation E°, %, 9 at 300°C, 36 at 325°C, 76 at 350°C. The temperatures applied were 440, 420 and 380°C respectively, the pressure was 30 atm and the cracking period 30 minutes. The experiments showed that the application of ultrasonics intensifies the cracking process and accelerates

Card 1/2

the reaction so that with greater ultrasonic intensity the productivity of the plant increases. The cracking results at 440°C without application of ultrasonic energy were almost the same as those at 420°C with ultrasonic energy. This implies that the use of ultrasonics enables thermal cracking to be carried out at lower temperatures. Moreover, when ultrasonic energy is applied the coke deposits are reduced and the coke is soft and easily removable. There are 4 figures.

ASSOCIATION: Azerbaydzhanskiy institut nefti i khimii im. M. Azizbekova (Azerbaydzhan Institute of Petroleum and Chemistry imeni M. Azizbekov); NIPI "Neftekhimavtomat" (NIPI "Neftekhimavtomat")

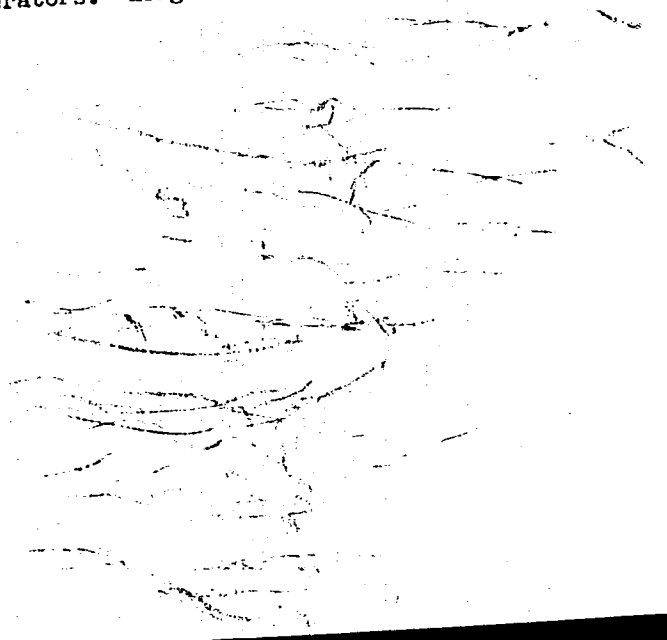
SUBMITTED: July 16, 1962

KORNEYEV, M.I., kand.tekhn.nauk; DROBOT, V.P., inzh.

Block-type steam-gas system with 200 Mw. rating. Energomashinostroenie 9 no.6:26 Je '63. (MIRA 16:9)

KORNEYEV, M.I., kand.tekhn.nauk; PRUTKOVSKIY, Ye.N., inzh.

Effect of the operating process on the design considerations of equipment of steam and gas systems with high-pressure steam generators. Energomashinostroenie 9 no.11:3-7 N '63. (MIRA 17:2)



BALAKISHIYEV, G.A.; ISMAILOV, R.G.; KORNEYEV, M.I.; MEZHEBOVSKIY, Ye.B.

Effect of ultrasonic energy on the cracking of solar oil distillate. Izv. vys. ucheb. zav.; neft' i gaz 5 no.11: 59-62 '62. (MIRA 17:6)

1. Azerbaydzhanskiy institut nefti i khimii imeni Azizbekova i Nauchno-issledovatel'skiy i proyektnyy institut po kompleksnoy avtomatizatsii proizvodstvennykh protsessov v neftyanoy i khimicheskoy promyshlennosti.

ISMAILOV, R.G.; KORNEYEV, M.I.; KAGRAMANOVA, A.S.; VAYNER, L.Z.; BLYUVSHTEYN, S.S.

High-temperature reformed ligroine as a raw material for big chemistry. Izv. vys. ucheb. zav.; neft' i gaz 6 no.7: 49-55 '63. (MIRA 17:8)

1. Azerbaydzhanskiy institut nefti i khimii imeni Azizbekova i Bakinskiy neftepererabatyvayushchiy zavod imeni XXII s"yezda Kommunisticheskoy partii Sovetskogo Soyuza.

AP5006156

...ev, M. I. (Candidate of technical ... Ye. N. 14 B

Vasil'yeva, I. F. (Engineer)

Characteristics of the starting conditions for a steam-gas installation ... pressure steam generator of 120 ... gas

...mashinostroyeniye, no. 11, ...

... turbine engine, steam auxiliary equipment, high pressure, ... plant, thermal ...

The first high pressure steam-gas installation in the SSSR with ... steam generator having a ... is ...mental operation at Leningrad State ... In April ... installation developed a total ... following are ... calculated parameters and ... the first

L 33541-65

ACCESSION NR: AP5009156	Calculated	Actual
Ambient Temperature, °C	+15	-2
Heat value of the natural gas, kcal/norm. m^3	8500	7540
[illegible] after the high pressure steam		
[illegible]		
[illegible] superheated steam, °C		
[illegible] high pressure [illegible]		
[illegible] air		
[illegible] the outgoing gas °C		
[illegible] after high pressure		
[illegible] the high speed [illegible]		
[illegible] the gas before the gas [illegible]		
[illegible] the generator		
[illegible] steam generator		
[illegible] steam generator		
[illegible] for internal necessities		
[illegible]		34327
[illegible]ency of the installation, %		72.2

L 33241-65
ACCESSION NR: AP5009156

... of the first tests on the installation show that the equipment ... There is an increase in starting ... characteristics of the gas turbine ... has a greater flexibility than steam ... power ... steam parameters and ... it is advisable to use ... which assure maximum starting ... special engines should be ... starters and is determined by the necessary starting time. Steam- ... which are made up of ... shaft ... gas turbine should have ... a reliable start and ... conditions. If there ... the gas temperature ... This type of control ... generator. Orig. art. ...

... none

SUBMITTED: 00 ENCL: 00 SUB CODE: IE

NO REF SOV: 008 OTHER: 000 JPRS

Card 3/3

KYAZIMOV, A.A.; KORNEYEV, M.I.; YUZASHEV, V.N.

Gentle method for the air-steam cleaning of pipestills.
Khim. i tekh. topl. i masel 9 no.9:47-49 S '64.
(MIRA 17:10)

ISMAILOV, R.G.; MAMEDOV, M.A.; SPEKTOR, Sh.Sh.; IVANOVA, L.V.; KORNEYEV, M.I.; SULTANOV, Z.A.; SHCHELKONOGOV, I.A.

Petroleum refining industry of Azerbaijan on the threshold of a glorious jubilee. Khim. i tekh. topl. i masel 9 no.11:15-19 N '64 (MIRA 18:1)

KORNEYEV, M.I., kand. tekhn. nauk; PRUTKOVSKIY, Ye.N., inzh.; VASIL'YEVA, T.F., inzh.

Characteristics of the start conditions of a steam gas system with a high-pressure 120 t/hr steam generator and GT-700-4-1 gas turbine. Energomashinostroenie 10 no.11:1-6 N '64 (MIRA 18:2)

KORNEYEV, M.I., VASIL'YEV, I.V., kand. tekh. nauk; BERNATOV, M.A., inzh.

Block of a 150 Mw. central heating steam-gas power unit. Teploenergetika 12 no.2:12-15 F '65. (MIRA 18:3)

1. TSentral'nyy kotloturbinnyy institut.

KORNEYEV, M.I., kand. tekhn. nauk; PRUTKOVSKIY, Ye.N., inzh.; ROMANOV, A.A., inzh.

First results of the adjustment and experimental runs of a steam and gas system with a high-pressure steam generator with a 120 t/hr. evaporative capacity. Teploenergetika 11 no.9:7-11 S '64. (MIRA 18:8)

1. TSentral'nyy nauchno-issledovatel'skiy kotloturbinnyy institut imeni I.I.Polzunova i Gidroelektricheskaya stantsiya No.1 Leningradskogo rayonnogo upravleniya energeticheskogo khozyaystva.

KORNEYEV, M.I., kand. tekhn. nauk; TATARINOV, N.G., inzh.; ZHIGUNOVA, G.V., inzh.

Special features of the joint operation of the GT-700-4-1 gas turbine and a gas and steam system. Energomashinostroenie 11 no.6:1-4 Je '65. (MIRA 18:7)

L 00371-66 EWT(d)/EED-2/EWP(i) IJP(c) BB/GG/GS

ACCESSION NR: AT5013567 UR/0000/64/000/000/0203/0209

AUTHOR: Korneyev, M. I.

TITLE: A series connected digital integrator made of ferrite-transistor components

SOURCE: AN SSSR. Institut elektromekhaniki. Avtomatika, telemekhanika i priborostroyeniye (Automatic control, remote control, and instrument manufacture). Moscow, Izd-vo Nauka, 1964, 203-209

TOPIC TAGS: digital integrator, algorithm, transistorized circuit, coding, ferrite

ABSTRACT: The article describes a series-connected, ferrite transistor integrator in which the integration is carried out according to the rectangle method. The integrator uses the ternary increment coding system (+1, 0, -1). Its operation is restricted by two limitations originating in the interpolator operation: a) the independent variable increments can be only positive and, b) during one iteration the integrator input is capable of accepting only one code pulse of the integrand increment. The article presents all the pertinent block diagrams of this four-stroke integrator operating in real time. Orig. art. has: 6 figures and 1 table.

ASSOCIATION: None

Card 1/2

L 00371-66
ACCESSION NR: AT5013567

SUBMITTED: 24Oct64 ENCL: 00 SUB CODE: DP

NO REF SOV: 002 OTHER: 000

Card 2/2

KORNEYEV, M.I., kand.tekhn.nauk; ABUGOV, Ya.M., inzh.

Principal trends and prospects for the development of steam and gas power systems. Energomashinostroenie 11 no.11:3-5 N '65. (MIRA 18:11)

L 33663-66 EWT(m)/EWP(f)/T WW/WE

ACC NR: AP6012264 (N) SOURCE CODE: UR/0114/65/000/011/0003/0005

AUTHOR: Korneyev, M. I. (Candidate of technical sciences); Abugov, Ya. M. (Engineer)

70

ORG: None

B

TITLE: Trends and prospects in the development of gas-steam power installations

SOURCE: Energomashinostroyeniye, no. 11, 1965, 3-5

TOPIC TAGS: thermoelectric power, gas turbine, steam turbine, steam boiler, thermoelectric generator, electric power engineering, electric power plant

ABSTRACT: The authors discuss developments and application of combined gas-steam power installations with high-pressure steam generators where gas turbine exhaust gases are used for heating boilers. Basic trends in the development of combined steam turbine installations in the Soviet Union are considered. Existing electric power stations with average steam parameters will be brought up to date by the addition of a gas-steam cycle. Pilot gas-steam units with high pressure steam generators will be installed in liquid and gas fuel electric power stations under reconstruction. Gas-steam installations using exhaust gases for heating boilers, working on solid fuels and heavy petroleum residue must be developed. Assembly line production of various types of high-pressure steam generators and gas turbines must be organized for gas-

Card 1/2 UDC: 62-175.001.8

GRITSENKO, M.N., inzhener; KORNEYEV, M.P., inzhener.

Extracting piles by pneumatic hydraulic methods. Mekh.stroi 11 no.6: 13-14 Je '54. (MLRA 7:6)
(Pile driving)

KORNEYEV, M.P.

SHEVKUN, P.A., inzhener; KORNEYEV, M.P.

Construction of bridge supports on high pile grillage. Transp. stroi. 5 no.5:8-10 Jl'55. (MLRA 8:12)
(Bridges--Foundations and piers)

KAZAKOV, Anatoliy Pavlovich; YEL'MEYEV, V.Ya., otv.red.; KORNEYEV, M.Ya., red.; VODOLAGINA, S.D., tekhn.red.

[Production of material wealth is the basic source of social development] Material'noe proizvodstvo - osnova obshchestvennogo razvitiia. Sost. A.P.Kazakov. Leningrad, 1957. 25 p. (MIRA 12:8)

1. Leningrad. Universitet. Otdel zaochnogo obucheniya. Kafedra dialekticheskogo materializma.
(Economics)

KORNEYEV, Mikhail Yakovlevich, DENISOV, N.N., red.; VODOLAGINA, S.D., tekhn. red.

[Science and superstructure] Nauka i nadstroika. [Leningrad] Izd-vo Leningr.univ., 1958. 81 p. (MIRA 11:9)
(Science)

YEL'MEYEV, V.Ya., prepodavatel'; IVANOV-OMSKIY, I.I., prepodavatel'; KAZAKOV, A.P., prepodavatel'; NOVOZHILOVA, L.I., prepodavatel'; DROZDOV, A.V., prepodavatel'; KORNEYEV, M.Ya., prepodavatel'; BELYKH, A.K., prepodavatel'; YADOV, V.A., prepodavatel'; ROZHIN, V.P., prof., otv. red.; MIKHLIN, Ye.I., red.; VODOLAGINA, S.D., tekhn. red.

[Base and superstructure of a socialist society] Bazis i nadstroika sotsialisticheskogo obshchestva. Leningrad, Izd-vo Leningr. univ., 1961. 168 p. (MIRA 14:9)

1. Leningrad. Universitet. 2. Filosovskiy fakul'tet Leningradskogo gosudarstvennogo universiteta (for all except Rozhin, Mikhlin, Vodolagina)

(Economics)

YEL'MEYEV, Vasiliy Yakovlevich; KORNEYEV, Mikhail Yakovlevich; LAMAGINA, G.K., red.; KISELEVA, L.I., tekhn.red.

[Increased role of science in the building of communism] Vozrastanie roli nauki v stroitel'stve kommunizma. Leningrad, Izd-vo Leningr.univ., 1962. 82 p.

(MIRA 15:4)

(Technology) (Research, Industrial)

KORNEYEV, N., kand. sel'skokhozyaystvennykh nauk

Semisurface silos. Nauka i pered. op. v sel'khoz. 8 no. 7:52-53 Jl '58. (MIRA 11:8)

(Ensilage)

KORNEYEV, N.

Example set by young builders. Sel'. stroi 14 no.11:8 N '59 (MIRA 13:3)

1. Zamestitel' zaveduyushchego otdelom komsomol'skikh organizatsiy Tul'skogo obkoma Vsesoyuznogo Leninskogo kommunisticheskogo soyuza molodezhi.

(Tula Province--Construction industry)

KORNEYEV, N.A., inzh.

Vertical planning of an area with zero ground by means of balancing cuts and fills. Prom. stroi. 42 no.3:29-31 '65. (MIRA 18:7)

1. TSentral'nyy nauchno-issledovatel'skiy i proyektno-eksperimental'nyy institut promyshlennykh zdaniy i sooruzheniy.

KORNEYEV, N.A., inzh.

Vertical leveling with zero balance of cuts and fills. Gor.khoz. Mosk. 32 no.12:31-33 D '58. (MIRA 11:12)
(Earthwork)

KORNEYEV, N.A., kand. sel'skokhozyaystvennykh nauk.

Ways to increase the production of hay and pastures on arid steppes. Zemledelie 6 no.5:67-70 My '58. (MIRA 11:6)
(Pastures and meadows)

KORNEYEV, N.A., kand. sel'skokhozyaystvennykh nauk

Improving inferior pastures and meadows. Zemledelie 8 no.2: 85-87 F '60. (MIRA 13:5)

1. Vladimirskaya gosudarstvennaya sel'skokhozyaystvennaya opytnaya stantsiya.
(Pastures and meadows)

RYAZANOV, V.S.; BUTUZOVA, V.P.; SIMONOV, G.V.; GOL'DSHTEYN, A.M.; KORNEYEV, N.A.; SAMOYLOV, Ya.M.; LYSYKH, I.V.; KHMEL'NITSKIY, G.S.; KRUTIKOV, Ye.B.; ANTONOV, M.F.; DOBROSEL'SKAYA, T.M.

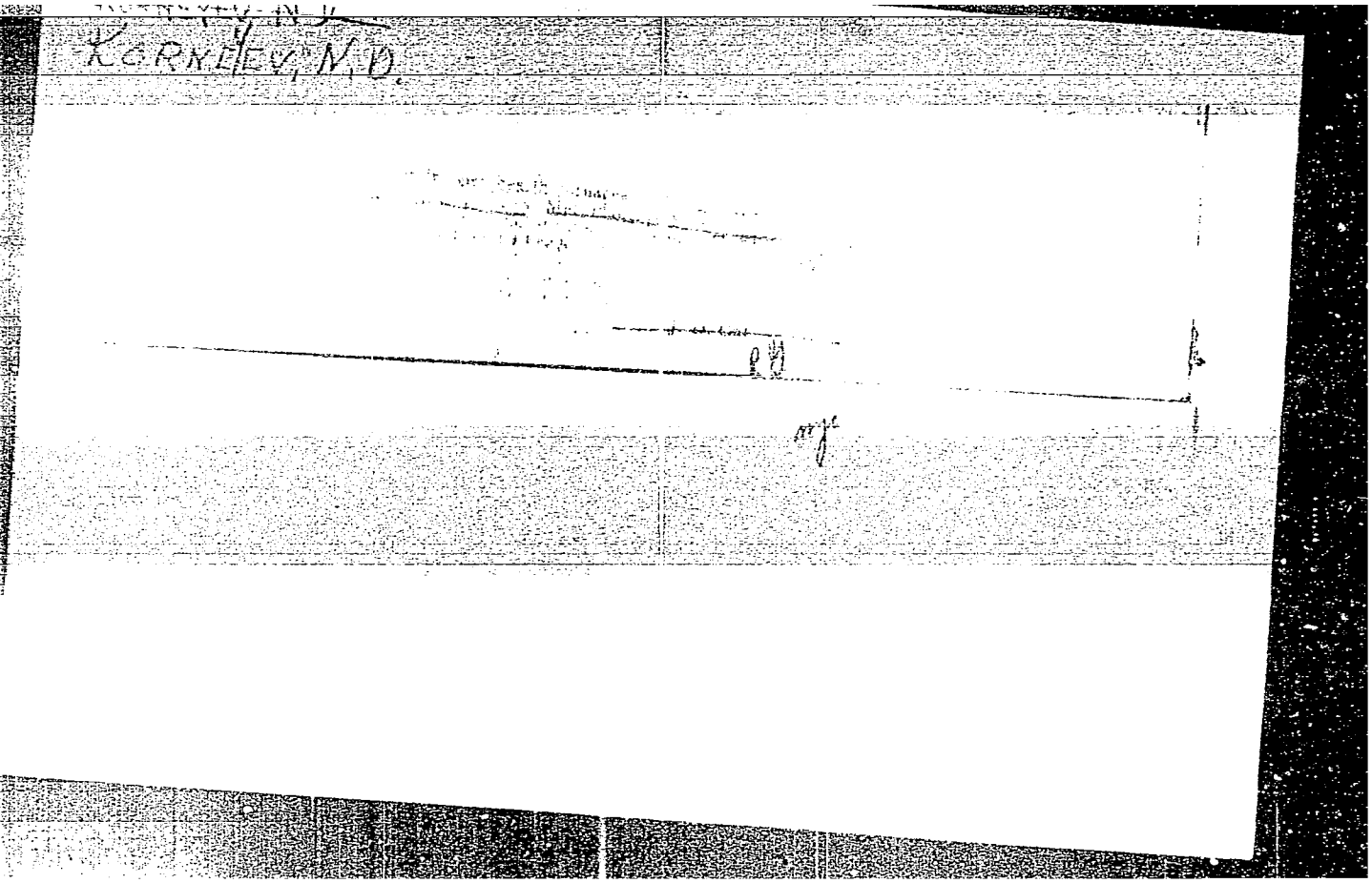
[Recommendations for the establishment of schemes for planning farming areas] Rekomendatsii po sostavleniiu skhem planirovki sel'skokhoziaistvennykh raionov. Moskva, Stroiizdat, 1965. 151 p. (MIRA 18:7)

1. Moscow. TSentral'nyy nauchno-issledovatel'skiy i proyektnyy institut po gradostroitel'stvu. 2. TSentral'nyy nauchno-issledovatel'skiy i proyektnyy institut po gradostroitel'stvu, Moskva.

KOZLOVSKIY, L.I.; TUSHNYAKOV, M.D.; STEPANOV, A.I.; KORNEYEV, N.A.; SMETANSKIY, F.V.; SHEPET'YEV, A.I., red.; SPIVAK, S.V., nauchnyy red.; LOGINOVA, R.A., red.; KOGAN, F.L., tekhn. red.

[Hoisting, conveying, and special machinery for building and repair work] Pod"emno-transportnye i spetsial'nye mashiny dlia stroitel'nykh i montazhnykh rabot; katalog spravochnik. Pod red.A.I.Shepet'eva. Moskva, No.2.[Crauler cranes] Krany na gusenichnom khodu. 1963. 226 p. (MIRA 16:8)

1. TSentral'nyy institut nauchno-tekhnicheskoy informatsii po avtomatizatsii i mashinostroyeniyu.
(Cranes, derricks, etc.)



SMIRNOV, L.A.; TIMONINA, V.M.; KORNEYEV, N.D.

Structure of rimmed steel section ingots capped with alumimum.
Stal' 25 no.8:798-802 S '65. (MIRA 18:9)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov i Nizhne-Tagil'skiy metallurgicheskiy kombinat.

SMIRNOV, L.A.; TIMONINA, V.M.; KORNEYEV, N.D.; LOSHKINA, N.A.

Investigating the quality and mechanical properties of St. 3ps plate steel. Stal' 25 no.6:511-516 Je '65.

(MIRA 18:6)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallow i Nizhne-Tagil'skiy metallurgicheskiy kombinat.

Kornyev, N.D.

AUTHORS: Vecher, H.A., Lebedev, A.A. and Kornyev, N.D. (Engineers)

TITLE: Use of sinter in open-hearth furnace smelting. (Primeneniye aglomerata v martenovskoy plavke). 130 - 6 - 8/27

PERIODICAL: "Metallurg" (Metallurgist), 1957, No.6, pp.17-19 (USSR).

ABSTRACT: Open-hearth ore has been partly or completely replaced by sinter at the Nizhne-Tagil'sk metallurgical combine since early in 1956. From experimental heats and the statistical treatment of operating data the following main conclusions are drawn: under otherwise similar conditions more sinter is charged than ore (e.g. 8% more for rail steel); more slag is run with sinter than with ore; because of its lower melting point the duration of melting is reduced with sinter to 12-15 min. per heat; the melt-down slag contains more ferrous oxide; the phosphorus content at melt-down is 0.002-0.012% less; the consumption of ore for refining is less because of the more oxidized melt-down slag obtained with sinter; and lime and bauxite consumptions are also less; the rate of carbon removal during the ore boil is less and the duration of finishing is reduced. The reasons for these effects of sinter are discussed and the corresponding quantitative data tabulated. The composition of the sinter was: 58.6% Fe, 19.2% FeO, 62.6% Fe_2O_3,

Card 1/2

SMIRNOV, L.A.; KORNEYEV, N.D.

Mechanical and chemical capping of rimmed steel ingots in top casting. Stal' 23 no.10:894-903 O '63. (MIRA 16:11)

1. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov i Nizhne-Tagil'skiy metallurgicheskiy kombinat.

L 12848-63 EWP(k)/EWP(q)/EWT(m)/BDS AFFTC/ASD Pf-4 JD/HW 67
ACCESSION NR: AP3001469 S/0133/63/000/005/0432/0432 66

AUTHOR: Smirnov, L. A.; Timonina, V. M.; Kompaniyets, G. M.; Korneyev, N. D.; Vinogradov, V. I.

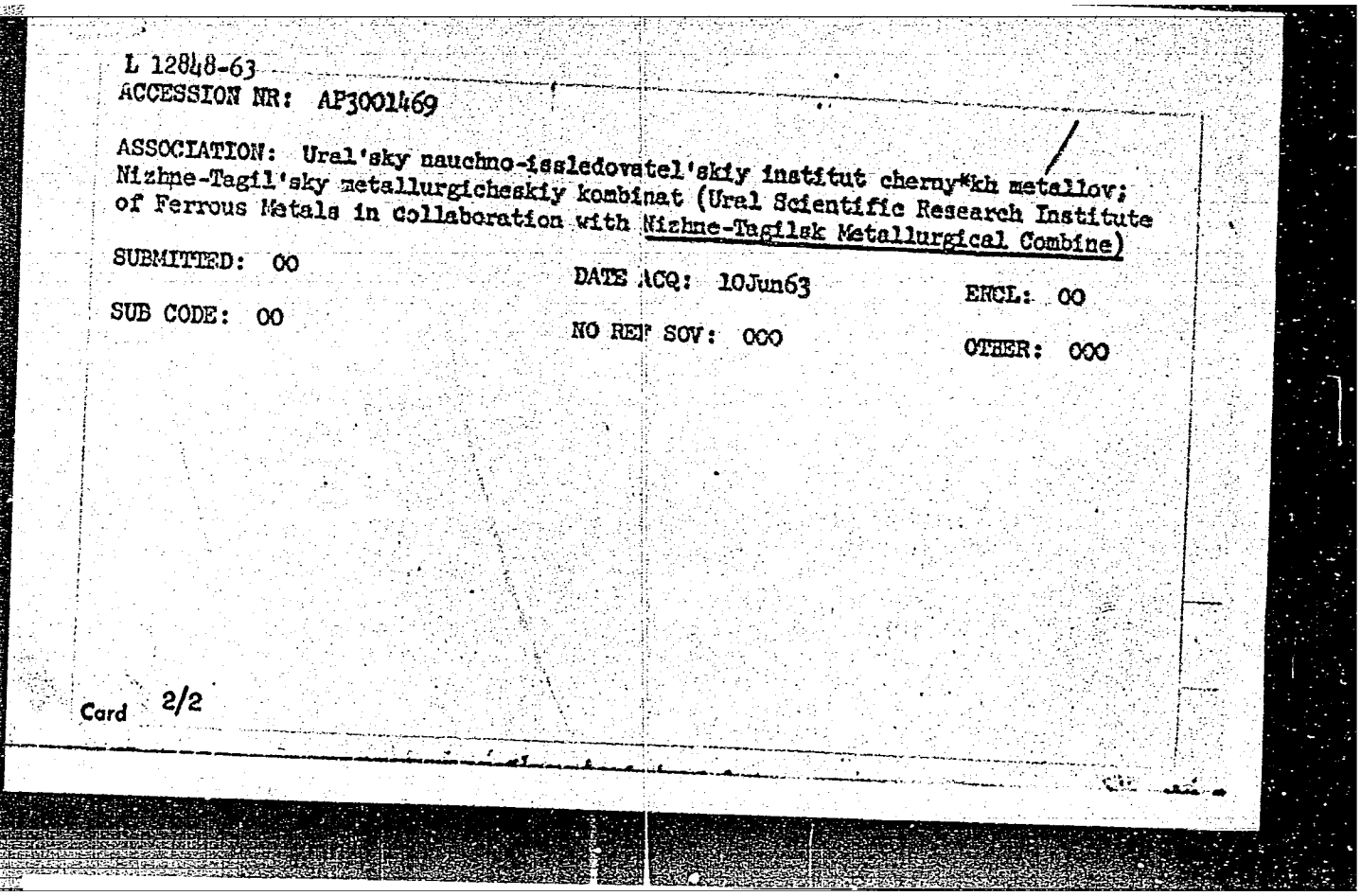
TITLE: In the Ural Scientific Research Institute of Ferrous Metallurgy

SOURCE: Stal', no. 5, 1963, 432

TOPIC TAGS: steel top casting, chemical sealing, aluminum powder, rimmed steel

ABSTRACT: Aluminum powder was used as an aftercharge for the chemical sealing of 7-ton square ingots. It was added under the metal flow in the top casting process, 5-6 seconds before closing of the stopper. Steels 0.8, 10, 15, St. 2 and St. 3Khz were used in the experiment to determine the consumption of aluminum powder. The amount of powder varied from 80 to 300 grams per ton depending on the carbon content; the best sealing was achieved in ingots with over 0.12% carbon. The rolling of chemically sealed steel gave better results than rolling rimmed steel of the same profile. A lower percentage of bloom trimmings, a higher production of first-grade steel, and a lower amount of rejected products were observed in the former type. Moreover, the chemical sealing improved working conditions in the pouring bay. Orig. art. has: 3 tables.

Card 1/2



L 12848-63
ACCESSION NR: AP3001469

ASSOCIATION: Ural'sky nauchno-issledovatel'skiy institut chernykh metallov; Nizhne-Tagil'sky metallurgicheskiy kombinat (Ural Scientific Research Institute of Ferrous Metals in Collaboration with Nizhne-Tagilsk Metallurgical Combine)

SUBMITTED: 00 DATE ACQ: 10Jun63 ENCL: 00

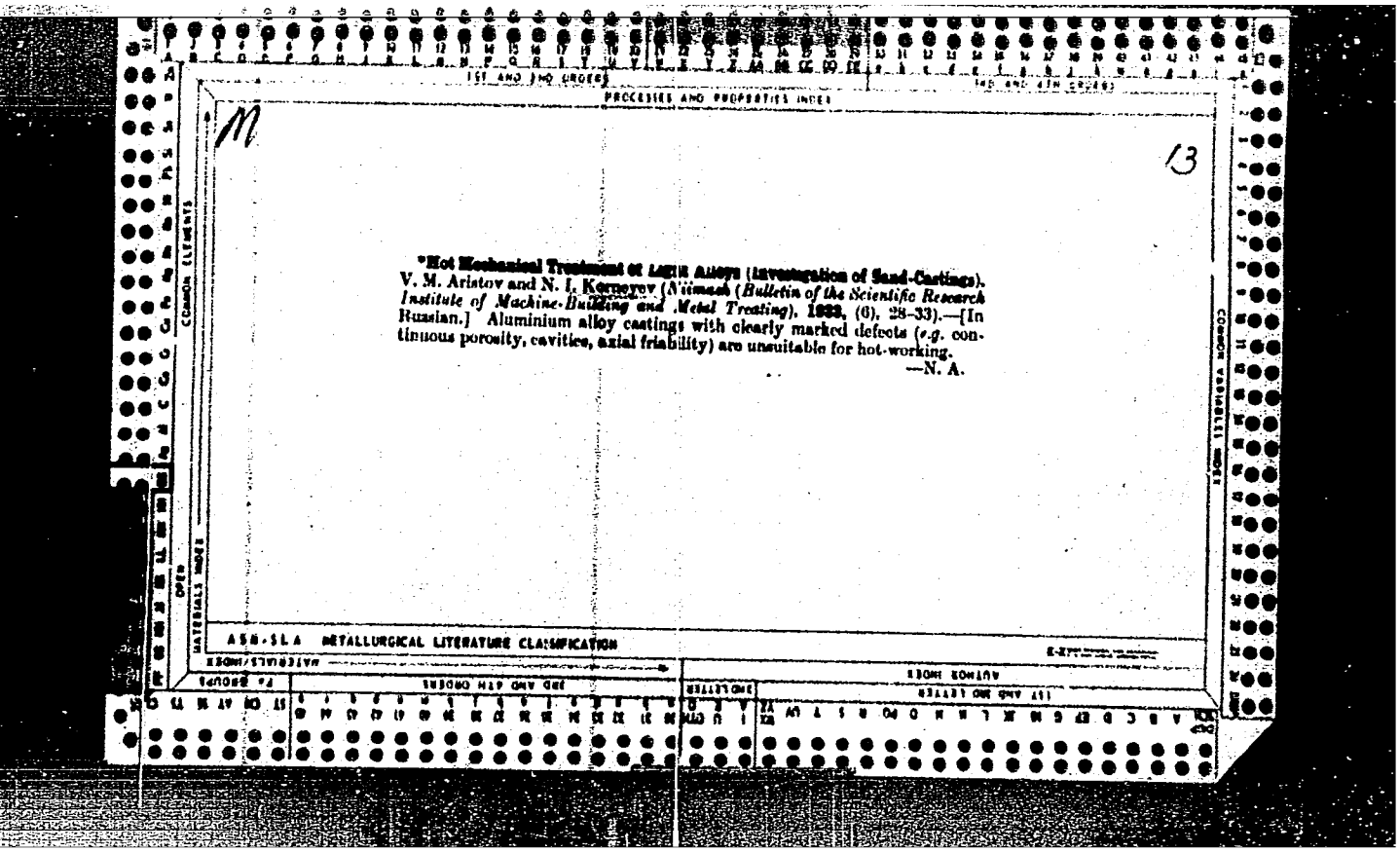
SUB CODE: 00 NO REF SOV: 000 OTHER: 000

Card 2/2

KORNEYEV, N.E., ZHULENKO, V.N.,(Assistant Professors, Moscow Technological Institute ofMeat and Milk Industry)

"Ditiline for weakening the musculature in swine."

Veterinariya, Vol 39, no 1, Jan 1962. pp 60



PROCESSES AND PROPERTIES INDEX

13

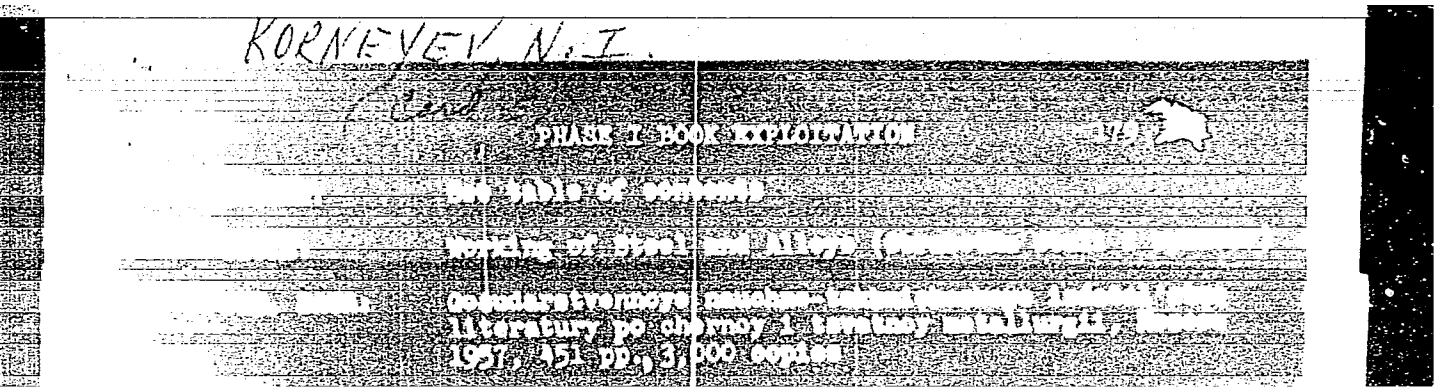
"Hot Mechanical Treatment of Light Alloys (Investigation of Sand-Castings). V. M. Aristov and N. I. Kornoyev (*Nitmash* (*Bulletin of the Scientific Research Institute of Machine-Building and Metal Treating*), **1952**, (6), 28–33).—[In Russian.] Aluminium alloy castings with clearly marked defects (*e.g.* continuous porosity, cavities, axial friability) are unsuitable for hot-working.

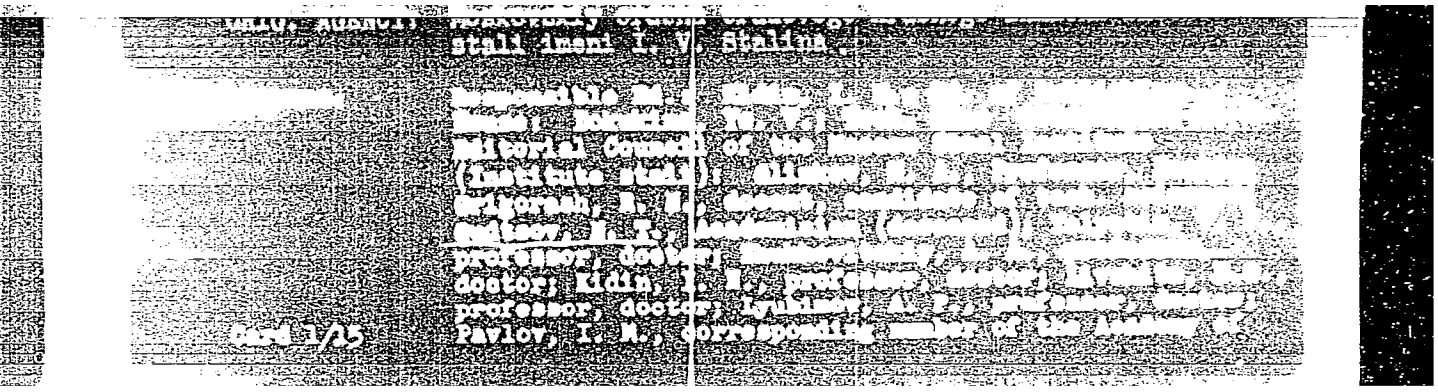
—N. A.

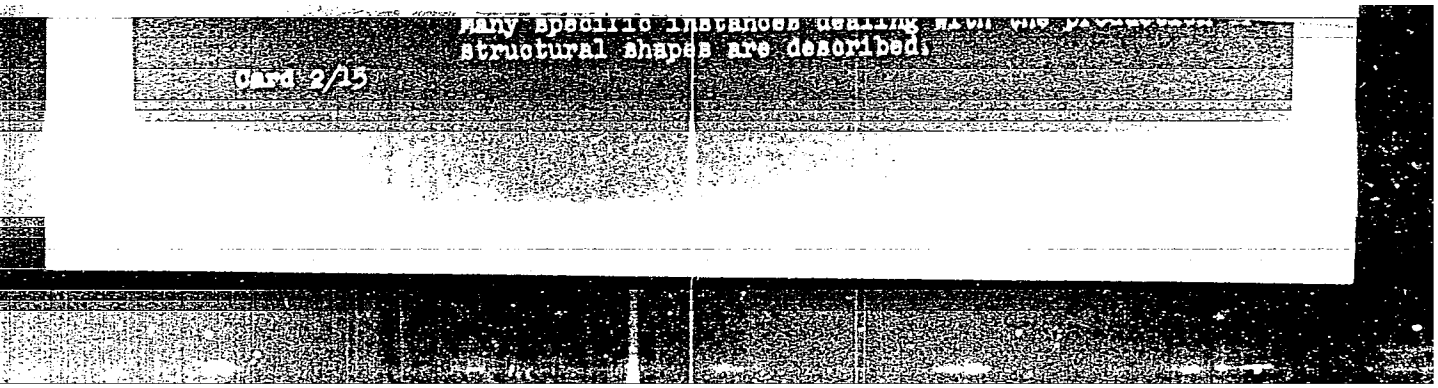
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1343*. (Russian.) Studying Rolling Conditions of Titanium Alloys. Issledovanie uslovii prokatki titanovykh splavov. V. K. Belosevich, V. F. Kalugin, N. I. Kornéev, I. M. Pavlov, I. G. Skucharev, and A. E. Shelest. *Izvestiia Akademii Nauk SSSR, Otdelenie Tekhnicheskikh Nauk*, no. 10, Oct. 1956, p. 15-27.

Studies made on TiAl alloys rolled into sheet. Determination of microstructure, gas saturation, plasticity, deformation resistance in rolling, and other properties. Changes in properties as a function of rolling temperature.







... of Steel and Alloys

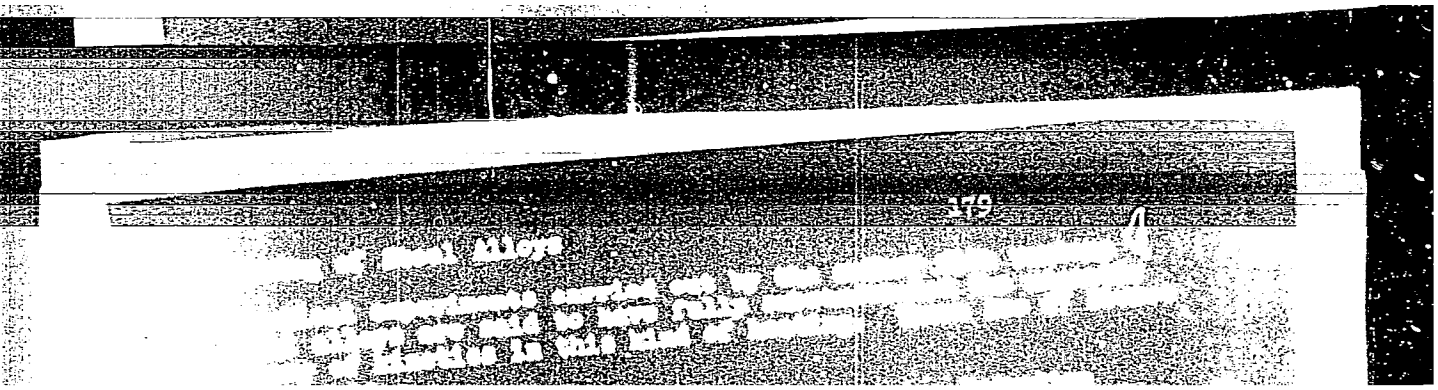
Gudtsov, N. T., (Deceased), Panchenko, I. F. Titanium-tungsten Alloys 3

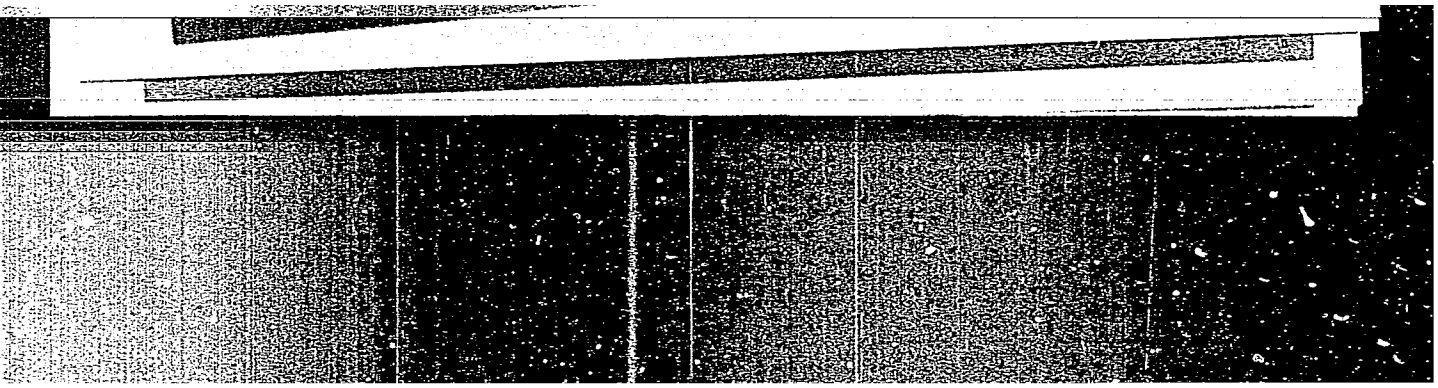
It is shown that the microstructural hardness and durability of titanium-tungsten alloys increases with the amount of tungsten in the alloy. There are 2 Soviet references, 1 in English.

Gudtsov, N. T. (Deceased), Chadek, I. The Effect of Alloying Elements on Eutectoid Changes in Steel 13

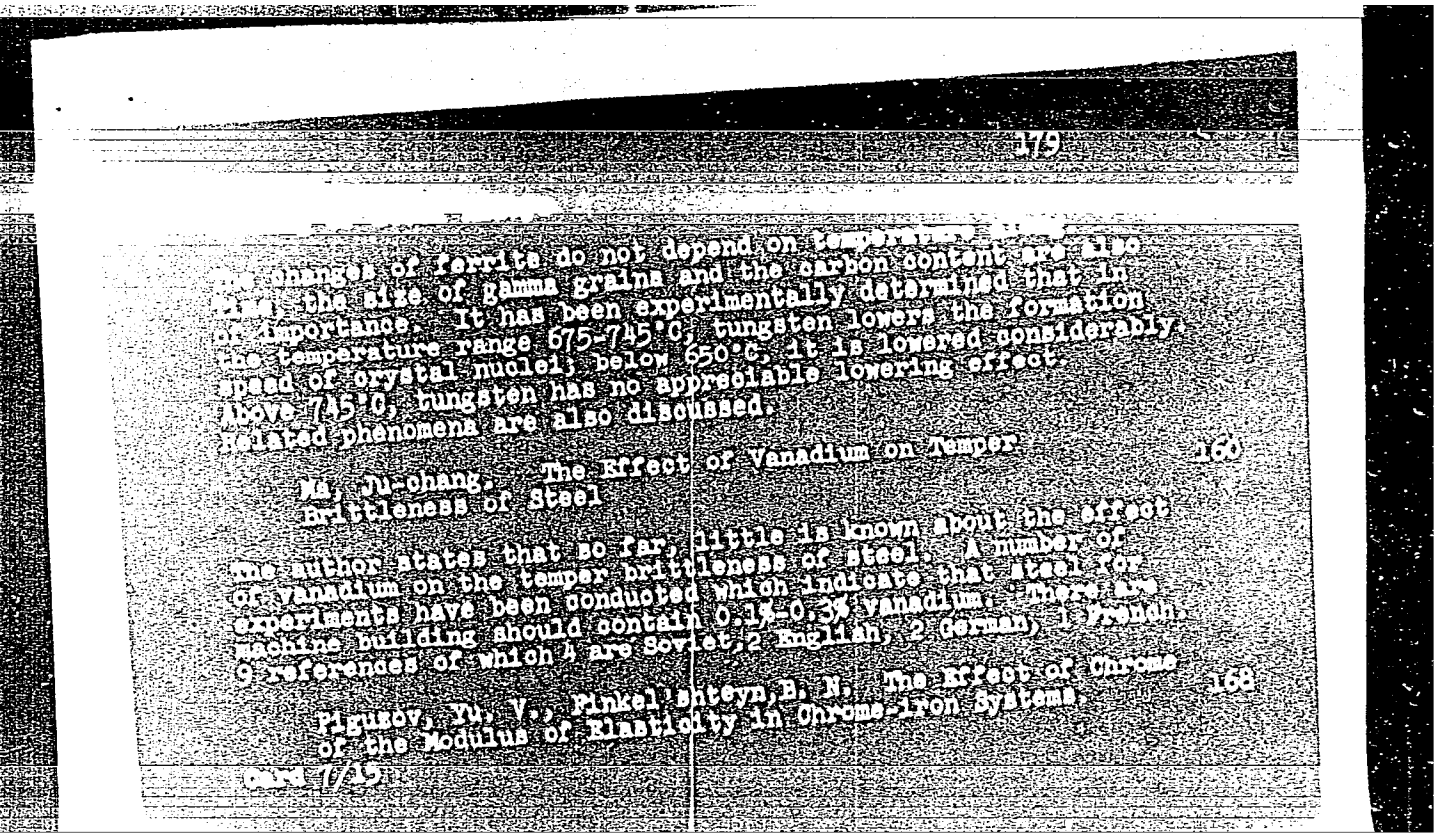
The author investigates the effects of structure and chemical composition of the active crystal nucleus in eutectoid changes of steel alloys. The carbide phase in the eutectoid change and in tempering was chosen as a specific example. There are 2 Soviet references, 2 English, 1 Scandinavian.

Kidin, I. N. Kinetics of Induction Heating of Steel Alloys 35





APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R000824710018-0"



-79-

changes of ferrite do not depend on temperature [illegible]
the size of gamma grains and the carbon content are also
of importance. It has been experimentally determined that in
the temperature range 675-745°C, tungsten lowers the formation
rate of crystal nuclei; below 650°C it is lowered considerably,
above 745°C, tungsten has no appreciable lowering effect.
Related phenomena are also discussed.

160 Ma, Ju-chang, The Effect of Vanadium on Temper Brittleness of Steel

The author states that so far, little is known about the effect of vanadium on the temper brittleness of steel. A number of experiments have been conducted which indicate that a small (or machine building should contain 0.1%-0.3% vanadium. There are 9 references of which 4 are Soviet, 2 English, 2 (German) [illegible]

168 Pigusov, Yu. V., Pinkel'shteyn, B. N., The Effect of Chrome on the Modulus of Elasticity in Chrome-Iron Systems.

[illegible]

KORNEYEV, N.F.

USSR/Solid State Physics - Structure of Deformable Materials E-8

Abs Jour : Ref Zhur - Fizika, No 1, 1958, 1066

Author : Gorelik, S.S., Gracheva, Yu.V., ~~Korneyev, N.F.,~~ Skugarev, I.G., Spektor, E.N.

Inst :

Title : Relaxation and Recrystallization of Single-Phase and Aging Alloys With a Nickel Base.

Orig Pub : Sb. Mosk. in-t stali, 1957, 36, 103-130

Abstract : An investigation was made of the influence of the content of chromium from one to 20% on the temperature of the start of recrystallization of nichrome. It was established that, compared with nickel, nichrome has a considerable higher recrystallization temperature. It was found that introducing into the nichrome alternately boron, molybdenum, and tungsten while retaining the single-phase nature of the alloy, has little effect on the temperature of the start of recrystallization of the nichrome, but shifts the

Card 1/4 Chair Roentgenography, Moscow Inst. Steel im. Stalin & Lab. #13 A-U. Sci Res Inst. Aviation Materials

Correct. initials from NLRA card.

USSR/Solid State Physics - Structure of Deformable Materials E-8

Abs Jour : Ref Zhur - Fizika, No 1, 1958, 1066

temperature of the end of recrystallization upward. Introducing into the nichrome elements that cause aging leads to a considerable increase in the recrystallization temperature, with the strongest effect being exhibited by introducing into the nichrome aluminum, titanium, aluminium plus titanium, aluminum plus titanium plus molybdenum, aluminum plus titanium plus molybdenum plus tungsten. A dependence of the temperature of the start of recrystallization of the investigated alloys on the degree of deformation has been established. It depends most pronouncedly on the degree of deformation for nichrome. In single-phase alloys with a nichrome base, alloyed with tungsten, molybdenum, and boron, this dependence is somewhat less pronounced, and in aging alloys the temperature of start of recrystallization is reduced slightly with increasing degree of deformation. In all the investigated alloys, with the exception of the alloy with Ni + 13% Cr, the

Card 2/4

USSR/Solid State Physics - Structure of Deformable Materials. E-8

Abs Jour : Ref Zhur - Fizika, No 1, 1958, 1066

this distortion is eliminated already during the course of recrystallization.

Card 4/4

25(1) p.3 PHASE I BOOK EXPLOITATION SOV/1302

Obrabotka splavov davleniyem; sbornik statey (Pressure Treatment of Alloys; Collection of Articles) Moscow, Oborongiz, 1958. 141 p. 4,500 copies printed.

Eds.: (Title page): Korneyev, N.I., Doctor of Technical Sciences, Professor, and Skugarev, I.G., Candidate of Technical Sciences, Docent; Ed. (Inside Book): Samokhodskiy, A.I., Engineer: Ed. of Publishing House: Morozova, P.B.; Tech. Ed.: Rozhin, V.P.; Managing Ed.: Zaymovskaya, A.S., Engineer.

PURPOSE: This book is intended for engineers, technicans, and research workers in scientific research institutes. It may also be used by design engineers and other personnel interested in the shaping and working of various metals and alloys.

COVERAGE: This collection of articles deals with modern methods of forming nickel alloys, structural steels, heat resistant alloys, titanium alloys, and also aluminum and magnesium alloys. A description is given of the methods of measuring resistance of these metals to deformation. It is stated that during the last years great emphasis has been put in the USSR and abroad on production

Card 1/4

Pressure Treatment of Alloys (Cont.) SOV/1302

forged parts which can be finished by polishing and lapping only. Such methods have led to substantial savings in metal and man hours in the production of turbine blades. The 20th Congress of the Communist Party indicated the necessity of using periodically rolled stock in forging for the sake of greater economy and efficiency. Large-sized aluminum alloy extruded structural members with complex cross sections are said to have wide application in airplanes, helicopters, and diesel locomotives. Research and experimental work in this field is reported to have resulted in improved production methods and higher mechanical properties of large-sized aluminum alloy structural parts. The results of these developments, together with some experimental work in sheet metal forming, are presented and graphed in this book. A part of the book deals with the study of plasticity and resistance to deformation of the new heat-resistant titanium, molybdenum, and aluminum alloys, and their suitability for forging and press forming. The authors mention the names of senior technicians P.I. Potanov, R.N. Yakovleva, and laboratory technicians V.B. Emelyanov, and A.V. Sokolov, who assisted in the experimental work.

Card 2/4

AVAILABLE: Library of Congress

Card 4/4

GO/hcr
3-23-59

FRIDLYANDER, I.N., kand.tekhn.nauk, otvetstvennyy red.; PETROV, D.A., doktor tekhn.nauk, prof., red.; BELOV, A.F., red.; DRITS, M.Ye., kand. tekhn.nauk, red.; LIVANOV, V.A., kand.tekhn.nauk, red.; SHAROV, M.V., kand.tekhn.nauk, red.; KORNEYEV, N.I., doktor tekhn.nauk, prof., red.; RZHEZNIKOV, V.S., red. izd-va; CHERNOV, A.N., red. izd-va.

[Light alloys] Legkie splavy. Moskva, Izd-vo Akad. nauk SSSR. No.1. [Physical metallurgy, heat treatment, founding, and use of pressure] Metallovedenie, termicheskaia obrabotka, lit'e i obrabotka davleniem. 1958. 497 p. (MIRA 11:6)

1. Vsesoyuznaya konferentsiya po legkim splavam, 2d, 1955. (Alloys)

SOV/137-58-9-19043

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 129 (USSR)

AUTHOR: Korneyev, N.I.

TITLE: Improvement in Light-alloy Pressworking Technology (Usovershenstvovaniye tekhnologii obrabotki davleniyem legkikh splavov)

PERIODICAL: V sb.: Legkiye splavy. Nr 1, Moscow, 1958, pp 39-48

ABSTRACT: The trends in advancement of the procedure for pressworking Al and Mg alloys so as to improve rate of output and quality and to reduce physical effort, are presented. In the field of extrusion, the question of the need to develop and introduce extrusion with counterpressure in the case of alloys that are brittle or of low ductility, to increase the precision to which shapes are extruded, to expand the list of shapes of varying cross section, and to make sure that large shapes have the required mechanical properties, has been posed. In the field of rolling (R), there is the problem of developing and introducing the R of corrugated sheet (S), improvement in the R of S on continuous mills, reduction in S warpage, improvement in the procedure for R of S of varying cross section, expansion of the

Card 1/2

SOV/137-58-9-19043

Improvement in Light-alloy Pressworking Technology

list of types of tubing and shapes that are R instead of extruded, development and improvement of the production of large-size light-alloy annular products and disks on tire and wheel rolling mills. In the field of forging and hot forming (F), there is a need for the most rapid introduction of precision hot F, flashless F, liquid F, F from rolled stock of variable cross section, improvement in the procedure for F of large forgings with high mechanical properties, and F with counterpressure for alloys of low ductility. Particular attention is given to the development of the theoretical foundations of the technology of pressworking.

Ye.M.

1. Aluminum alloys--Processing 2. Magnesium alloys--Processing 3. Rolling mills --Applications 4. Materials--Extrusion

Card 2/2

KORNEYEV, N. I., AMERIK, B. K., BOTNIKOV, Y. A., LAVROVSKIY, K. P., SKOBLO, A. I., ALIYEV, A. S., BRODSKY, A. M., KAMINER, B. B., OVSYANNIKOV, P. V., SUKHANOV, V. P., RUNYANTSEV, A. N.

"Processes of Continuous Thermocontact Transformations of Crude Oil on Coke."

Report submitted at the Fifth World Petroleum Congress, 30 May - 5 June 1959. New York.

KORNEYEV, N.I.

PHASE I BOOK EXPLOITATION SOV/3559

Akademiya nauk SSSR. Institut metallurgii. Nauchnyy sovet po probleme zharoprochnykh splavov

Issledovaniya po zharoprochnym splavam, t. 5 (Investigations of Heat-Resistant Alloys, Vol 5) Moscow, Izd-vo AN SSSR, 1959. 425 p. Errata slip inserted. 2,000 copies printed.

Ed. of Publishing House: V.A. Klimov; Tech. Ed.: I.F. Kuz'min; Editorial Board: I.P. Bardin, Academician, G.V. Kurdyumov, Academician, N.V. Ageyev, Corresponding Member, USSR Academy of Sciences (Resp. Ed.), I.A. Oding, I.M. Pavlov, and I.F. Zudin, Candidate of Technical Sciences.

PURPOSE: This book is intended for metallurgical engineers, research workers in metallurgy, and may also be of interest to students of advanced courses in metallurgy.

COVERAGE: This book, consisting of a number of papers, deals with the properties of heat-resisting metals and alloys. Each of the papers is devoted to the study of the factors which affect the properties and behavior of metals. The effects of various elements such as Cr, Mo, and W on the heat-resisting properties of various alloys are studied. Deformability and workability of certain metals as related to the thermal conditions are the object of another study described. The problems of hydrogen embrittlement, diffusion and the deposition of ceramic coatings on metal surfaces by means of electrophoresis are examined. One paper describes the apparatus and methods used for growing monocrystals of metals. Boron-base metals are critically examined and evaluated. Results are given of studies of interatomic bonds and the behavior of atoms in metal. Tests of turbine and compressor blades are described. No personalities are mentioned. References accompany most of the articles.

22(1) SOV/3-59-3-9/48

AUTHORS: Korneyev, N.I., Professor; Pobedonostsev, Yu.A.; Yurgens, V.F. - all Doctors of Technical Sciences; Kobzarev, A.A.; Levin, V.R. and Urmin, Ye.V. - all Professors; Abiants, V.Kh. and Merkulov, I.A. - both Candidates of Technical Sciences

TITLE: Our Readers Suggest (Nashi chitateli predlagayut)

PERIODICAL: Vestnik vysshey shkoly, 1959, Nr 3, pp 24-25 (USSR)

ABSTRACT: Industrial academies existed in the USSR until 1956. Their principal task was to raise the qualifications of the leading engineers of industry. Because of serious shortcomings they were liquidated and the Ministry of Higher Education was instructed to work out another, better system of training leading engineers. As no steps have been made in this direction so far, the authors believe that industrial academies should be reestablished. The term of training must not exceed 1 year, and for some categories of students it may even be reduced to 3 or 4 months.

Card 1/2