SVET, D.Ya.

Radiating property of metals. Issl.po zharopr.splav. 4: 323-328 '59. (MIRA 13:5)
(Metals--Optical properties)

SVET, D.Ya.; NARYSHKIN, S.P.; GRISHIN, V.V.

Modulation reflectometer for molten metals and other substances.
Trudy inst.Kom.stand., mer i izm. prib. no.42:59-68 '59.
(MIRA 14:1)

(Reflectometer)

SOV/20-126-1-20/62

18(7),24(7)

AUTHORS: Samarin, A. M., Corresponding Member, AS USSR, Svet, D. Ya.

TITLE: The Radiation Power of Metals in the Liquid Phase (O lucheispuskatel'noy sposobnosti metallov v zhidkoy faze)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 1, pp 78-80 (USSR)

ABSTRACT: By a method of modulation reflectometry described in a previous paper (Ref 1), the authors determined the radiation power of the surface of a metal tank in the visible and near infrared spectral range. A germanium photocathode served as receiver of the infrared radiation energy. The measurements with this germanium photocathode were carried out in 2 spectral ranges with the effective wave lengths 1.0 and 2.0μ. In the visible range, the measurements were carried out with an antimony-cesium photocathode. The values of the radiation power found for various metals are illustrated in 4 diagrams. All measurements with the modulation spectrometer were carried out near the consolidation (crystallization) temperature. These diagrams also contain the values of the radiation power which were determined from the data on the spectral reflection coefficients

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of the same metals at room temperature (Ref 5). In comparing the results found, the absence of a corresponding difference not only in the character of the spectral distribution but also in the numerical values of the coefficients of radiation power for solid and liquid phases is striking for all metals investigated in the visible spectral range. The increase in radiation power of the metals in the liquid phase as compared with the solid phase in the near ultrared range of the spectrum can apparently be explained by a temperature factor, particularly by the dependence of the electric conductivity on temperature. This is also confirmed by the results obtained by other authors. The temperature-conditioned character of the radiation power of the metals in the liquid phase is also confirmed by the results determined for a melt of NiCu at λ 0.65μ . There are 4 figures and 15 references, 2 of which are Soviet.

SUBMITTED: January 31, 1959

68161

~~24 (4)~~

AUTHOR: ~~Svet, D. Ya.~~ SOV/20-129-6-25/69

TITLE: New Methods of Determining the Emissivity (Reflectivity) and of the True Temperature of a Self-radiating Surface

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 6, pp 1290-1292 (USSR)

ABSTRACT: In four earlier papers the author described the method of modulation reflectometry. With diffuse reflection and at high temperatures difficulties arise in measuring reflected radiation. The present paper describes a method (which, at the same time, forms the basis for measuring the true temperature) for purpose of avoiding these difficulties. This method is based on the fact that the desired values of the spectral emissivity of a self-radiating surface are not determined from the absolute value of the reflection coefficients but from the ratio of the latter for such spectral regions in which, at the same time, the corresponding brightness- or color temperatures of this surface are determined. $T_{col\ i,n}$ and $T_{br\ i}$, $T_{br\ n}$ denote the color temperatures and brightness temperatures respectively, which were determined in the spectral regions with the effective wave-

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New Method of Determining the Emissivity (Reflectivity) and of the True Temperature of a Self-radiating Surface

lengths λ_i and λ_n, and ρ_i, ρ_n, and ε_i, ε_n the reflection coefficients and the emissivity for the same spectral regions.

$$\frac{\rho_2}{\rho_1} = \frac{\varepsilon_1}{1-\varepsilon_2} = a \quad \text{and} \quad \frac{\rho_3}{\rho_2} = \frac{1-\varepsilon_3}{1-\varepsilon_2} = b \text{ etc are}$$

obtained. By means of a pyrometer for a spectral double ratio or by means of two bichromatic color pyrometers one obtains

$$T^{-1}_{col\,1,2} = T^{-1}_{true} - A_{1,2} \ln \frac{\varepsilon_1}{\varepsilon_2}, \quad T^{-1}_{col\,2,3} = T^{-1}_{true} - A_{23} \ln \frac{\varepsilon_2}{\varepsilon_3}$$

where $A_{1,2} = \frac{\lambda_1 \lambda_2}{(\lambda_2 - \lambda_1)C_2}$, $A_{2,3} = \frac{\lambda_2 \lambda_3}{(\lambda_3 - \lambda_2)C_2}$, $C_2 = 14380\ \mu\,\text{deg}$

holds. By simultaneously solving the four last equations it is possible to calculate the desired values of ε_1, ε_2, ε_3,

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New Methods of Determining the Emissivity (Reflectivity) and of the True Temperature of a Self-radiating Surface

and of the true temperature T_{true} of the radiating surface. An explicit expression for ε_1 is written down. Also some combinations of the described variants are of interest, as e. g., the determination of $\varepsilon_1, \varepsilon_2$ and T_{true} from the three quantities ϱ_1/ϱ_2 , $T_{col\ 1,2}$ and T_{br1} or T_{br2}. With $\partial\varepsilon/\partial\lambda$ and a radiation which, within the spectral region under investigation, has the character of a gray radiation (as in the case of most oxides), emissivity must be determined according to the second or third variant of the here described method. For metals the described method was investigated in the near infrared spectral region. The tungsten lamp (LT-1) used for this purpose was calibrated by E. A. Lapina at the laboratory of the VNIIM. Similar results are also obtained by means of the first and second variant of the method investigated here for a not oxidized surface of molten nickel, cobalt, iron, etc. There are 9 referenes, 6 of which are Soviet.

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68161

New Methods of Determining the Emissivity (Reflectivity) and of the True Temperature of a Self-radiating Surface

SOV/20-129-6-25/69

ASSOCIATION: Institut metallurgii im. A. A. Baykova Akademii nauk SSSR (Institute of Metallurgy imeni A. A. Baykov of the Academy of Sciences of the USSR)

PRESENTED: August 14, 1959, by G. V. Kurdyumov, Academician

SUBMITTED: August 1, 1959

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Svet, D. Ya.

PHASE I BOOK EXPLOITATION SOV/4553
SOV/16-6-5

Akademiya nauk SSSR. Institut metallurgii

Metallurgiya, metallovedeniye, fiziko-khimicheskiye metody issledovaniya (Physicochemical Research Methods in Metallurgy and Metal Science) Moscow, Izd-vo AN SSSR, 1960. 251 p. (Series: Its: Trudy, vyp. 5) Errata slip inserted. 2,800 copies printed.

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

Resp. Ed.: I.P. Bardin, Academician (Deceased); Ed. of Publishing House: V.A. Klimov; Tech. Ed.: T.P. Polenova.

PURPOSE: This collection of articles is intended for metallurgists and metal researchers.

COVERAGE: The collection contains articles on metallurgy, metal science, and physicochemical research methods. Separate articles discuss the structure and properties of some metals and alloys. The effect of cold treatment and inclusions on the properties of alloys are analyzed, and instruments and

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80984

S/180/60/000/03/016/030
E193/E383

18.1210

AUTHORS: Poskachey, A.A. and Svet, D.Ya. (Moscow)

TITLE: Investigation of the Radiant Emissivity of Aluminium Alloys in the Near Infrared Region of the Spectrum

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1960, Nr 3, pp 86 - 91 (USSR)

ABSTRACT: When the temperature of a body is determined by measuring the intensity of the radiant energy it emits, it is necessary to know the spectral radiation coefficients. In the case of the spectral ratio method by which so-called "colour" temperature of a body is determined, it is necessary to know the magnitude of the spectral coefficients for two spectral regions, ε_{λ_1} and ε_{λ_2}.

If the body is "grey", i.e. if $\partial\varepsilon/\partial\lambda = 0$, the "colour" pyrometer indicates its true temperature irrespective of the absolute values of ε_{λ_1} and ε_{λ_2}. In general, however, corrections must be applied to the pyrometer readings and in the case of the "colour" pyrometer this requires the knowledge of the variation of the $\varepsilon_{\lambda_2}/\varepsilon_{\lambda_1}$

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Investigation of the Radiant Emissivity of Aluminium Alloys in the Near Infrared Region of the Spectrum

ratio within the measured temperature range. The object of the investigation described in the present paper was to study the temperature dependence of the radiant emissivity of four aluminium alloys (D-16, V-65, AK-4, AK-5) in the near infrared region of the spectrum (λ_1 = 1.60, λ_2 = 1.90 μ). The investigated temperature range was that within which alloys of this type are normally heat-treated, i.e. 350-500 °C. The measurements were carried out on specimens characterized by various surface conditions. The results are reproduced in Figures 3-6, where ε_{λ_1} (Curves a), ε_{λ_2} (Curves b) and $\varepsilon_{\lambda_2}/\varepsilon_{\lambda_1}$ (Curves v) are plotted against temperature (T, °C); numbers allotted to various curves relate to various surface conditions. The analysis of all the experimental curves obtained will show that ε_λ can change in the investigated temperature range between 0.2

Investigation of the Radiant Emissivity of Aluminium Alloys in the Near Infrared Region of the Spectrum

and 0.1. This would explain why various attempts to apply optical and radiation pyrometers for measuring the temperature of the investigated alloys under industrial and laboratory conditions have been unsuccessful. On the other hand, it will be seen that the $\varepsilon_{\lambda_2}/\varepsilon_{\lambda_1}$ ratio does not change in the investigated temperature range by more than $\pm$ 5%; since the experimental error can be assumed to be of the order of about 4% it means that for all the practical purposes $\varepsilon_{\lambda_2}/\varepsilon_{\lambda_1}$ is constant, the implication being that under conditions similar to those employed during the present investigation, the studied alloys can be regarded as "grey" bodies. Consequently, the spectral ratio method is eminently suitable for measuring and automatically controlling the temperature of aluminium alloys during their heat treatment, the accuracy of the measurement being practically unaffected by the surface condition of the material.

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S/180/60/000/03/016/030
E193/E383

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There are 6 figures and 5 references, 3 of which are Soviet, 1 German and 1 French.

SUBMITTED: February 29, 1960

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4

SVET, D.Ya.; TALENSKIY, O.N.

Photoelectric method and testing equipment for the determination of the radiating properties of liquid metals. Trudy Inst.met. no.5: 183-188 '60. (MIRA 13:6)

(Liquid metals--Thermal properties)
(Pyrometry)
(Photoelectric measurements)

S/115/60/000/06/15/031
B007/B014

AUTHOR: Svet, D. Ya.

TITLE: The Automatic Photoelectric Disappearing-filament Optical Pyrometer ЦЭП-3 (TsEP-3)

PERIODICAL: Izmeritel'naya tekhnika, 1960, No. 6, pp. 26-30

TEXT: This is a description of the pyrometer ЦЭП-3 (TsEP-3) which has been developed on the basis of the automatic disappearing-filament optical pyrometer ЦЭП-2М (TsEP-2M). The manufacture and operation of this instrument are simple. It was officially tested, and is recommended for mass production. It has been developed by Chief Designer P. A. Yefimov in collaboration with Ya. S. Lipin, L. V. Vengerovskiy, P. G. Levchuk (Deceased), P. P. Shurgayev, and V. I. Kurochkina according to suggestions of the author of the article under review. This instrument is based on the same principle as the first-mentioned pyrometer. A radioelectronic computer is used to measure the logarithm of the spectral (red-blue) ratio which, according to Wien's law, is in linear connection with the reciprocal values of the temper colors. The pyrometer consists of a transmitter, the

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The Automatic Photoelectric Disappearing-filament Optical Pyrometer ЦЭП-3 (TsEP-3)

S/115/60/000/06/15/031
B007/B014

electronic block, and a secondary instrument of the type ЭПП-09 (EPP-09) with a quick response of 1-3 sec or another ordinary millivoltmeter. It is schematically represented in Fig. 1. Finally, the author gives the principal technical data of this instrument. Temperatures can be measured between 1,400 and 2,800°C, and the instrument has 3-5 sub-bands. It has an accuracy of at least ±0.25% from the upper measuring range of the sub-band used. There are 2 figures and 3 Soviet references.

Card 2/2

S/119/60/000/07/13/017
B019/B063

AUTHORS: Svet, D. Ya., Doctor of Technical Sciences, Professor; Poskachey, A. A., Engineer

TITLE: Some Systems of the Infrared Pyrometry of the Spectral Ratio

PERIODICAL: Priborostroyeniye, 1960, No. 7, pp. 28-29

TEXT: The systems described here, in which photodiodes are used, are based on the scheme suggested by D. Ya. Svet (Fig. 1). Pulsating radiation fluxes are focused onto the photodiode by means of an optical system, and the pulsating diode current is amplified. These pulses are fed into a follow-up system which secures a certain ratio between the individual pulsation amplitudes of the amplified pulses by means of an electric motor adjusting a slide wire. Fig. 2 shows an improved scheme with which the sensitivity of this pyrometer could be considerably improved by means of a synchronous signal detection. The optical system is the same as above. Next, the authors give a detailed description of the highly sensitive pyrometer shown in Fig. 3. It consists of three main parts: the optical part with the photodiode,

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Some Systems of the Infrared Pyrometry of the Spectral Ratio

S/113/60/000/07/13/017
B019/B063

the electronic block, and the a-c bridge. The instrument was developed in cooperation with L. V. Vengerovskiy and P. O. Levchuk (deceased), and it was gauged by V. V. Grishin and I. V. Zatoloka. There are 3 figures and 3 Soviet references.

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18.8100
~~18 (0), 24(4)~~

AUTHOR: Svet, D. Ya.

67943
SOV/20-130-1-16/69

TITLE: Radiation Pyrometry of Metals in the Near Infrared Range of the Spectrum

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 1, pp 61 - 63 (USSR)

ABSTRACT: For metals in the solid and liquid phase in the visible and infrared range the dependence $\varepsilon = f(\lambda)$ has a decreasing character. In the methods of pyrometry of the bright partial radiation which have found wide practical applications, the difference between the brightness temperature T_{br} and the true temperature T_{tr} (which is characterized by $(\lambda / C^2) \ln \varepsilon$ therefore increases in transition to the infrared. In this case λ and also $|\ln \varepsilon|$ increase. λ denotes the wavelength and ε emissivity. For measuring the color temperature T_{col} from the ratio of spectral brightnesses in the spectral ranges with the effective wavelengths λ_1 and λ_2 T_{col}^{-1} can be put equal to

$$T_{tr}^{-1} - \frac{\lambda_1 \lambda_2}{(\lambda_2 - \lambda_1) C_2} \ln \frac{\varepsilon_1}{\varepsilon_2}$$

. Here, $\lambda_1 = f(\lambda_1)$ and $\lambda_2 = f(\lambda_2)$

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denote the coefficients of spectral emissivity. The decrease of ε with increasing λ in the near infrared which is due to dispersion depends on the reduction of $\partial\varepsilon/\partial\lambda$. For some metals radiation in the near infrared is gray. For many metals the assumption that the decrease in $\left|\ln\frac{\varepsilon_1}{\varepsilon_2}\right|$ in approaching the used λ_1 and λ_2 to one another considerably reduces the difference between T_{col} and T_{tr} does not hold. In color pyrometry the quantity $\Lambda = \lambda_1 \lambda_2 (\lambda_2 - \lambda_1)^{-1}$ plays the part of a certain equivalent wavelength and increases with the decrease of $\Delta\lambda = (\lambda_2 - \lambda_1)$, i. e. the stronger the higher is the absolute value of λ_1. For one and the same value of $\Delta\lambda$, Λ is therefore higher in the infrared than in the visible. In most of the metals the dispersion-dependent spectral distribution $\varepsilon = f(\lambda)$ in the infrared is of such a character that in

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Radiation Pyrometry of Metals in the Near Infrared Range of the Spectrum

the divergence of λ_1 and λ_2 $\left|\ln \frac{\varepsilon_1}{\varepsilon_2}\right|$ increases more slowly than $\Delta\lambda$ decreases. These rules were checked with silver, copper etc. The measurements were made by means of a pyrometer for the spectral distribution in a germanium photodiode at crystallization temperature. Results are summarized in table 1 which, among others, contains the brightness temperature and the temperature of total radiation. These measurements were made by S. L. Naryshkin and V. V. Grishin. Their results were obtained by computing the correction ΔT from the data for $\varepsilon = f(\lambda)$. The resultant values of the brightness temperature and black-body temperature are in agreement with the generally assumed values. The measurements made by A. A. Poskachey at the oxidized surface of aluminum and some aluminum alloys indicate the gray character of radiation. This is confirmed also by other papers on the same subject. There are 1 table and 8 references, 6 of which are Soviet.

67943

Radiation Pyrometry of Metals in the Near Infrared Range of the Spectrum SOV/20-130-1-16/69

ASSOCIATION: Institut metallurgii im. A. A. Baykova Akademii nauk SSSR (Institute of Metallurgy imeni A. A. Baykov of the Academy of Sciences of the USSR)

PRESENTED: August 14, 1959, by G. V. Kurdyumov, Academician

SUBMITTED: August 1, 1959

Card 4/4

SVET, D.Ya.

Contribution to the analysis of an exponential-impulse logarithmation method and logometry. Trudy VZEI no.18:3-10 '61. (MIRA 17:1)

KURTEV, N.D.; SVET, D.Ya.

Study of a digital device for measuring a ratio logarithm.
Trudy VZEI no.18:11-31 '61. (MIRA 17:1)

GERASTOVSKIY, P.A.; SVET, D.Ya.

Action of impulse noise on an AM receiver with a hyperbolic detector. Trudy VZEI no.18:42-54 '61. (MIRA 17:1)

20039
S/146/61/004/001/003/016
B104/B215

9.7100

AUTHORS: Kurtev, N. D., Svet, D. Ya.

TITLE: Digital instrument for measuring the logarithms of ratios

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 4, no. 1, 1961, 23-30

TEXT: The authors investigated variants of circuits allowing the calculation of a logarithm of the ratio between two physical quantities according to D. Ya. Svet's method of logarithmic amplitude-time transformation. An RC-circuit with following amplitude comparator in this method plays the role of a functional and time converter. First it is shown that the error occurring in the reproduction of the ratio between two signals until the functional converter is reached, is lower than the required measuring error of the logarithm of the ratio, when $D < e$. $D = U_1/U_2$ is the actual ratio. Furthermore, the error in a logarithmic amplitude-time conversion is shown to be a constant for a random value of the quantity to be converted. This method therefore is very

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sensitive to changes in the amplitudinal ratio, and can thus be used for the determination of very small, non-linear distortions. It is known that the logarithm of a ratio can be calculated in two ways: in the first method, the logarithm of the ratio is directly calculated from the ratio value; in the second one, the logarithms of the two quantities are determined and subtracted from each other. The first method requires a memory element until the two amplitudes are compared, the second one requires a memory after the logarithmic block. The two methods are discussed in detail with the block diagrams of Figs. 2 and 3. If the first method is used, a memory in the amplitude range is required; in the second method a memory in the range of time, or in the form of a numerical equivalent is necessary. The block diagram of Fig. 3 computes the logarithm of a ratio by the second method, and has a memory in the range of time. The block diagram of Fig. 5 also applies the second method, but has a memory in the form of a numerical equivalent. This second variant is simpler in its structure and easier to be operated. The publication of this article was recommended by the Kafedra radiopriyemnykh i radioperedayushchikh ustroystv (Department of Radio

Digital instrument for measuring ...

Receiver and Transmitter Units). There are 5 figures and 6 references: 2 Soviet-bloc and 3 non-Soviet-bloc.

ASSOCIATION: Vsesoyuznyy zaochnyy energeticheskiy institut (All-Union Correspondence Institute of Power Engineering)

SUBMITTED: June 9, 1960

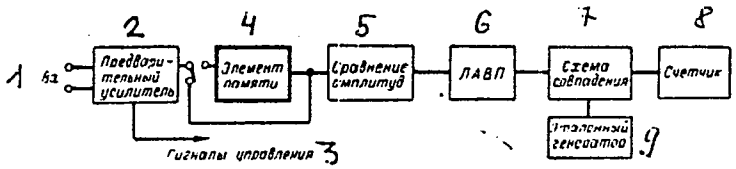

Рис. 2. Блок-схема устройства, использующего первый способ вычисления логарифма отношения

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22554
S/146/61/004/002/004/011
B124/B206

9,7000

AUTHORS: Kurtev, N. D., Svet, D. Ya.

TITLE: Investigation of the errors of a digital ratio-logarithm meter

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye, v. 4, no. 2, 1961, 43-51

TEXT: For the automatic digital ratio-logarithm meter described, a variant of the solution by means of a memory element in the form of a digital equivalent is used. The block diagram of the device and the time diagrams of the individual blocks are given in Figs. 1 and 2. The impulse signals from the pickup D are amplified by means of the pre-amplifier block У and led to the input of block ЛАВП, which consists of the logarithmation device (circuit RC), the amplitude comparator Комп which sends out signals at the moment of reaching the exponential voltage U_o, as well as an input counting key. From the comparator, the input counting signals are led over the phase chain 3, and the output counter signals directly to the impulse generator block БФ, the signals of which are time-modulated, and then further to the input counter key and the matching scheme СС. The phase

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Investigation of the...

chain is used for reaching a counter input synchronous with f_{st} and input impulses of various duration; for the same reason a peak detector not shown in the figure is used between the pre-amplifier block and ЛАВП. The standard frequency impulses of the generator Г serve as counting impulses as well as for the synchronization of the start of every interval read. Periodically consecutive counting impulse series and impulses regulated by the counter (zero projection, summing- and subtracting signal, signal for transmitting the measurement result to the counting device СУ) are led into the reverse counter РС. A variant of the device without input counter key with "a.c." pre-amplification by means of the ЛАВП (without key К and block 3) is also possible. The pre-amplifier, the detector before the key and the amplitude-time converter can be considered as error sources during logarithmation. For subtracting the logarithms, however, the standard-frequency generator and the time lag of the counter output can be considered as error sources, as well as the error caused by the final value of the front of the impulse-chain gradient, which participates in the transmission of the output counter signal, and the instability of block БФ. The measurement errors can be divided into those causing systematic errors and those causing random errors (instability errors). Due to the non-linearity

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of the amplitude characteristic of the pre-amplifier, a systematic error is introduced into the ratio of two signals which are led into the logarithmic amplitude-time converter. The correlation between the error of the ratio of two values and the value of the non-linear distortions is investigated for the case that the amplitude characteristic of the pre-amplifier can be determined accurately enough by means of the first three links of a Taylor series. For the error in measuring the ratio, the correlation $\Delta_\gamma = 2\gamma_1 \cdot (D-1)/(D-2\gamma_1)$ is obtained, where γ_1 is the coefficient of the non-linear distortions of the greater value and $D = U_1/U_2$. The error caused by the non-linearity of the pre-amplifier does not affect the accuracy of measuring the ratio logarithm, in any case not for $\gamma_1 \leqslant \Delta/2$. It is shown by calculations that the error introduced by the pre-amplifier block can practically be neglected, even for $F = 3$ and $\varepsilon_1 = 6$ (F is the impulse gap of the amplified impulses of same duration as the amplitudes of the measured ratio, and ε_1 the duration of the impulses in units of the time constant of the transition circuit). In the given case the peak detector acts as a memory, delaying the amplitude value up to the start of counting; with its aid the start of counting can be synchronized with one

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of the standard-frequency impulses, and measuring impulses of various duration can be used. An error is only possible if the time T_i' between the end of the first impulse and the start of its being counted, and the time T_i'' for the second impulse differ. In this case the relative measuring error of the ratio is $\Delta = \pm \partial T/\tau_{det}$, where $\partial T = T_i'' - T_i'$ and $\tau_{det} = R_s C_{det}$ (R_s is the leakage resistance). The admissible difference between T_i' and T_i'' can be determined; in the given case the error is of arbitrary as well as systematic nature. The "calibration error" can be considered as being a systematic error introduced by the logarithmic amplitude-time converter block; the random errors are instability with respect to time of the comparison level U_0 and the time constant τ. The error for measuring the time proportional to the logarithm of the ratio during the subtraction of logarithms can be composed of the error of determination of the individual times proportional to the logarithms of the compared values, and depends on the instability and inaccuracy of the standard-generator frequency and the delay with respect to time of the end of counting in impulse circuits. The error ε_η introduced into the measurement of the difference with respect to time through the instability and inaccuracy of the standard generator,

Investigation of the...

is given by the correlation $\varepsilon_\eta = \sqrt{2} \cdot \eta$, where the correlation $\eta = f_{st} \cdot \vartheta$ holds for the stability coefficient of the standard generator (ϑ is the deviation from the standard frequency because of inaccuracy or instability). When using d.c. circuits in the ЛАВП, an error is introduced which is connected with the level drift in these circuits. The latter affects the calibration stability of the device for a length of time. The device, the diagram of which is given in Fig. 3, was elaborated for the investigation. In contrast to the device used so far, the block П is used in this device, which passes two adjacent time-modulated impulses and divides them into two matching schemes. The measurement result is obtained by subtraction of the computer readings. Devices of the type "Флокс" ("Floks") were used as computers and the length of every individual impulse was determined. The scheme described permits a measurement accuracy for the logarithm of the minimum ratio $D_{min} = 1.4$ of at least 0.2 % for short time intervals and a reading time of 0.04 sec. The measurement accuracy is of course increased when the same measurements are repeated. The reading accuracy of the device in a longer time interval is determined by the drift of the d.c. circuits, e.g., in the ЛАВП, and that of the peak detector. A system

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SVET, D.Ya.

Some possibilities for pyrometric study of radiation in the blue-violet and ultraviolet spectral regions. Dokl. AN SSSR 140 no.4:805-806 O '61. (MIRA 14:9)

1. Institut metallurgii im. A.A.Baykova AN SSSR. Predstavleno akademikom G.V.Kurdyumovym.
(Pyrometry) (Spectrum analysis)

SVET, D.Ya.

New pyrometric method based on the ratio of two fluxes of total radiation, and the "spectral weight" temperature of a black body and of metals. Dokl. AN SSSR 142 no.2:334-336 Ja '62. (MIRA 15:2)

1. Institut metallurgii im. A.A.Baykova AN SSSR. Predstavleno akademikom G.V.Kurdyumovym.

(Pyrometry)
(Blackbody radiation)
(Metals at high temperatures)

SVET, Dariy Yakovlevich

[Heat radiation from metals and certain substances] Temperaturnoe izluchenie metallov i nekotorykh veshchestv. Moskva, Metallurgiia, 1964. 133 p. (MIRA 17:12)

ACCESSION NR: AP4016584 S/0115/64/000/002/0008/0010

AUTHOR: Svet, D. Ya.; Zavarza, T. N.

TITLE: Selection and reasonable use of spectral sensitivity of phototubes in bichromatic pyrometry

SOURCE: Izmeritel'naya tekhnika, no. 2, 1964, 8-10

TOPIC TAGS: pyrometry, bichromatic pyrometry, phototube, phototube spectral sensitivity, blue/red ratio, antimony cesium phototube, TsEP-3 pyrometer

ABSTRACT: The characteristics of new "multi-alkaline" (Sb-K-Na-Cs) phototubes developed by T. N. Rabotnova, L. V. Kononchuk, and L. A. Shchekina for use in bichromatic pyrometry are reported. Manufactured in both semitransparent and mass variants, these phototubes have a higher red-wave sensitivity, a higher temperature stability (within +20+50C), and a wider spectral-sensitivity range (up to 900 mmicrons) than the conventional Sb-Cs tubes. The

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ACCESSION NR: AP4016584

latter characteristic permits obtaining a sufficient blue-red ratio without approaching the unstable range near the "red border." A pyrometer calibrating curve exhibited high stability over a test period of about 80 days in measuring a color temperature of 1,600C in the case where the long-wave range was excluded. The blue-red ratio varied by 1-2% in the +20+50C range. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 00	DATE ACQ: 12Mar64	ENCL: 00
SUB CODE: IE, GE	NO REF SOV: 009	OTHER: 001

Card 2/2

L 8526-65 EWT(1) AFWL/SSD/ASD(t)/RAEM(t) S/0294/64/002/005/0797/0801

ACCESSION NR: AP4047385

AUTHOR: Svet, D. Ya.

TITLE: Relationship between brightness temperature and total radiation

SOURCE: Teplofizika vysokikh temperatur, v. 2, no. 5, 1964, 797-801

TOPIC TAGS: radiation pyrometer, brightness temperature, monochromatic light, transmission

ABSTRACT: The relationship between brightness temperature and total radiation is investigated analytically in the use of pyrometers for temperature determination. An expression is given for the effective wavelength in terms of Planck's function $b_0(\lambda, T)$, transmission coefficient τ, and spectral sensitivity P, in common use for pyrometer calibrations. This expression is shown to be invalid in the Wien limit ($\lambda T > 3000$). A modified expression is introduced for

$$\lambda_e = \int_0^\infty \lambda b_0(\lambda, T_1)\varphi(\lambda)\,d\lambda \Big/ \int_0^\infty b_0(\lambda, T_1)\varphi(\lambda)\,d\lambda,$$

where $\varphi = P(\lambda)\tau(\lambda)$. The limit $\delta\lambda$ within which departures from T_1 are con-

Card 1/2

SVET, D.Ya.

Comparison of the classical methods of pyrometry for real bodies with continuous emission spectrum. Teplofiz. vys. temp. 3 no.3:452-456 My-Je '65. (MIRA 18:8)

1. Institut metallurgii imeni A.A. Baykova AN SSSR, Moskva.

ACC NR: AT7004204 (A) SOURCE CODE: UR/0000/66/000/000/0003/0009

AUTHORS: Svet, D. Ya.; Afon'kin, V. G.; Grishin, V. V.; Naryshkin, S. P.; Yezhova, T. N.; Parfinovich, A. F.

ORG: none

TITLE: Photoelectronic pyrometry of metals in the near infrared, visible, and ultraviolet spectral regions

SOURCE: AN SSSR. Institut metallurgii. Eksperimental'naya tekhnika i methody vysokotemperaturnykh izmereniy (Experimental techniques and methods of high temperature measurement). Moscow, Izd-vo Nauka, 1966, 3-9

TOPIC TAGS: ir pyrometer, optic pyrometer, radiation pyrometer, photoelectric pyrometer, pyrometry / PIRED-5 pyrometer

ABSTRACT: A discussion of using radiation pyrometry in determining the temperature of molten metals is presented. The discussion, an extension of the work of D. Ya. Svet (Dokl. AN SSSR, 1961, 140, No. 4), is concerned mainly with estimating the difference between the luminous and true temperature of molten metals in the near infrared, visible, and ultraviolet spectral regions. Experimental results for molten iron, nickel, and cobalt respectively are tabulated. It is concluded that, to insure accurate automatic temperature recording of molten metals by radiation pyrometry, is is essential to know

Card 1/2

L 29601-66 WW

ACC NR: AP6014226 SOURCE CODE: UR/0115/66/000/003/0042/0044

AUTHOR: Svet, D. Ya.; Naryshkin, S. P.; Khmelevskaya, Ye. A.

18
B

ORG: none

TITLE: Using relative spectroreflectrometry to measure true temperatures

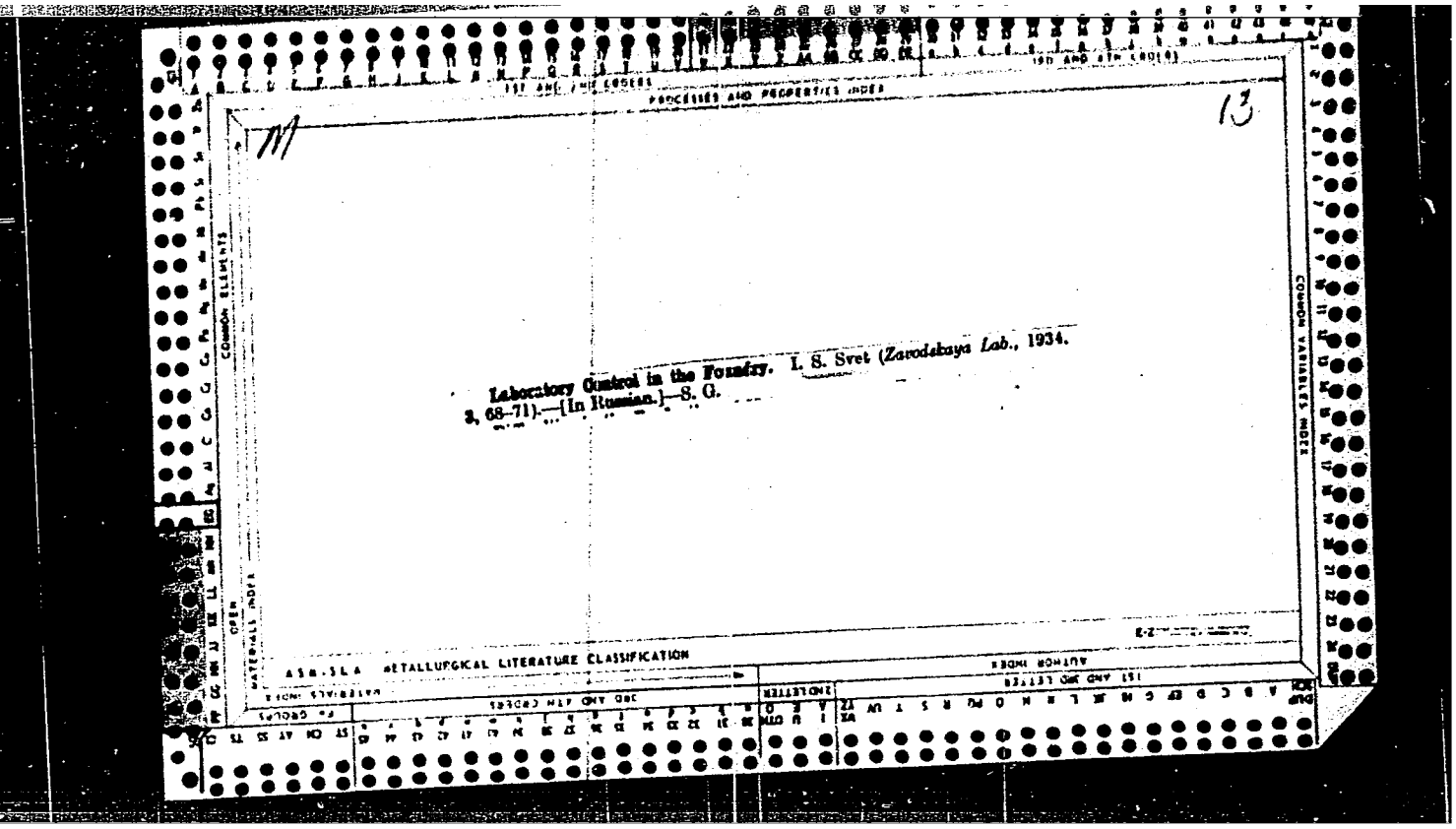
SOURCE: Izmeritel'naya tekhnika, no. 3, 1966, 42-44

TOPIC TAGS: temperature measurement, reflectometer

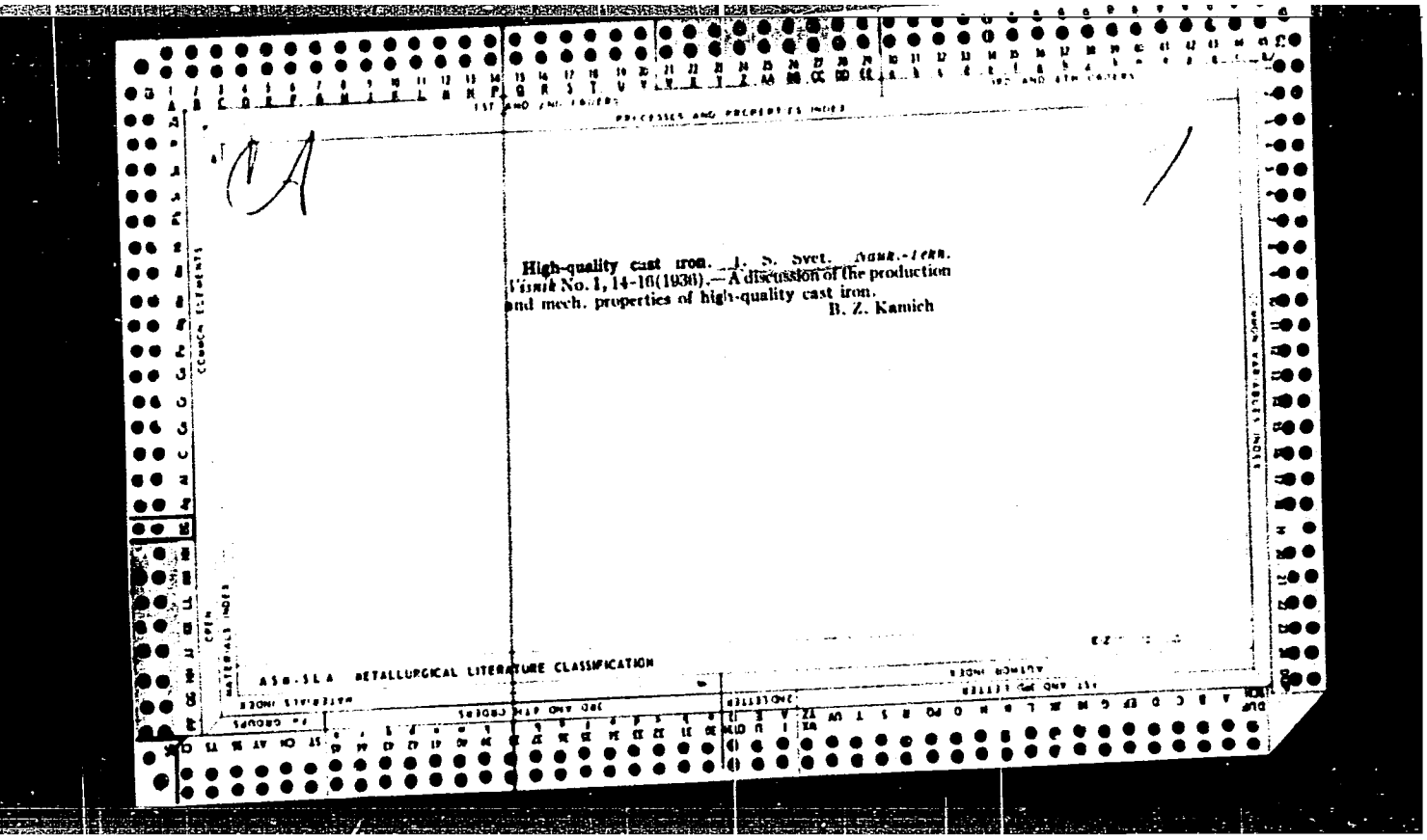
ABSTRACT: A method is proposed for using relative modulation reflectometry for measuring true temperature and simultaneously determining the radiating (reflecting) power of the emitting surface. The spectral radiance of the surface is determined from the coefficient of reflection for spectral sections in which the corresponding brightness or color temperatures for the surface are simultaneously measured. A specially designed reflectometric installation was used for application of this method to determining the true temperatures and coefficients of spectral radiating power for pure metal in the molten and solid state. Diagrams of the experimental setup are given and the method used for calibrating the instrument is discussed.

Card 1/2 UDC: 535.853:536.5

Card 2/2



Laboratory Control in the Foundry. L. S. Svet (*Zavodskaya Lab.*, 1934, 3, 68–71).—[In Russian.]—S. G.



SVET, I. S., and KAZARNOVSKII, D. S.

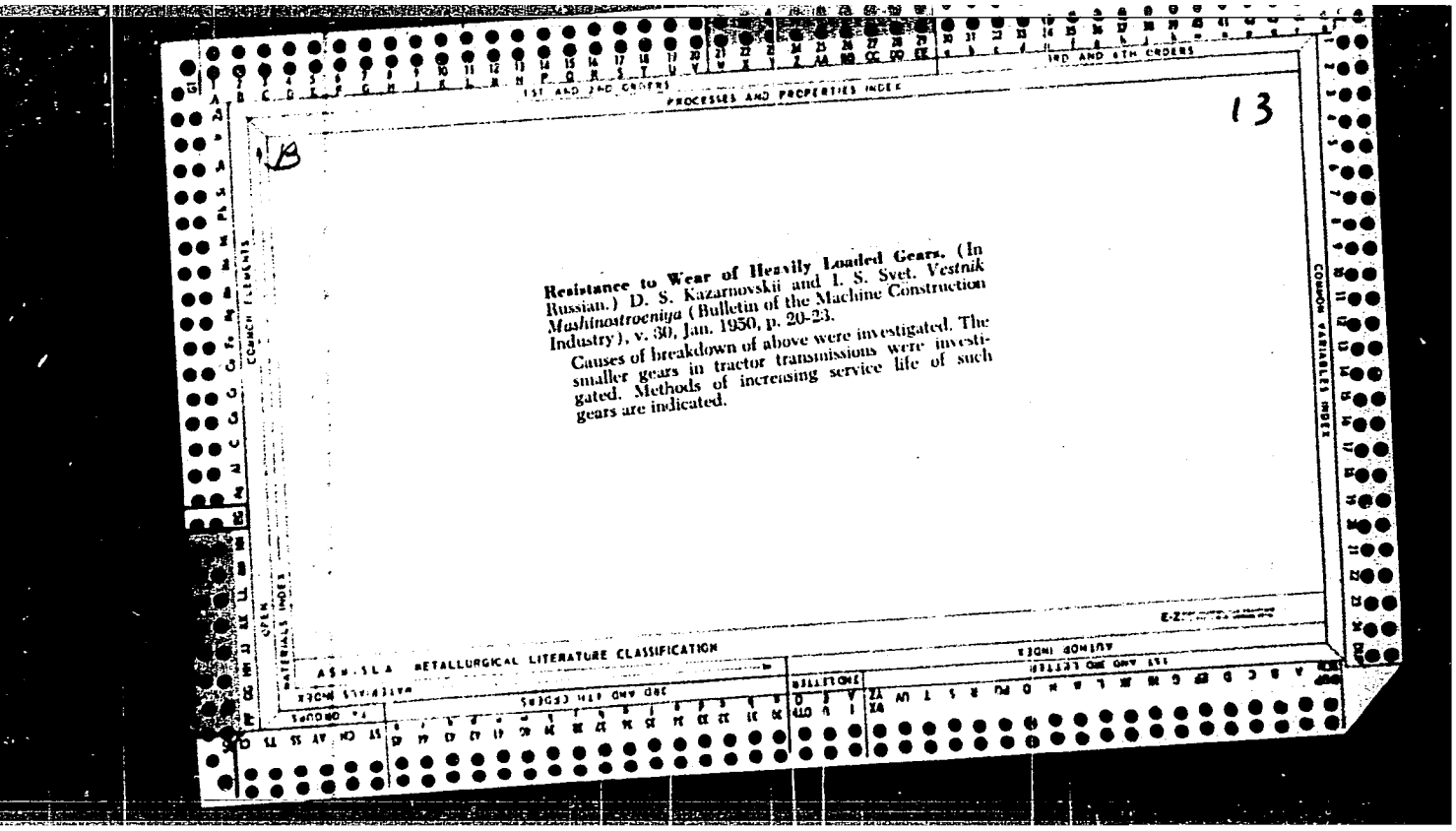
Khimiko-termicheskaia obrabotka detalei mashin. Kiev, Mashgiz, 1950. 155 p. illus.

Bibliography: p. 153-[154].

Chemical heat treatment of machine elements.

DLC: TS227.K35

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



Resistance to Wear of Heavily Loaded Gears. (In Russian.) D. S. Kazarnovskii and I. S. Svet. *Vestnik Mashinostroeniya* (Bulletin of the Machine Construction Industry), v. 30, Jan. 1950, p. 20-23.

Causes of breakdown of above were investigated. The smaller gears in tractor transmissions were investigated. Methods of increasing service life of such gears are indicated.

SVET, I. S.

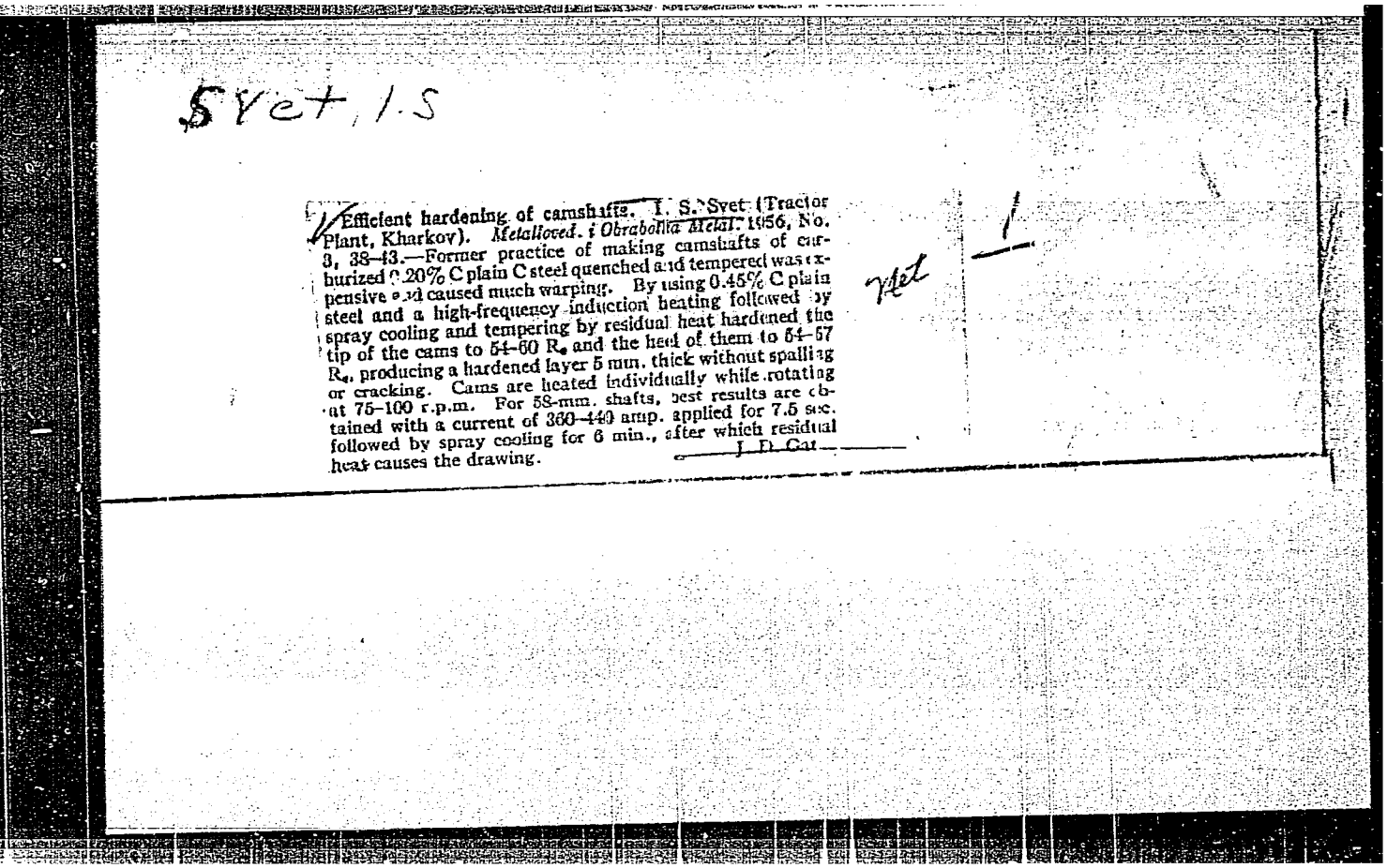
7855. SVET, I. S. Novaya Vysokoproizvoditelnaya tekhnologiya massovogo proizvodstva chugunnykh gil'z dvigateley vnutrennego sgoraniya. (Izopyta khar'k. trakt. zavoda im. S. Ordzhonikidze). M., 1954 16s. sill. 22sm. (m-vo avtomob., trakt. FS.- Kh. Mashinostroyeniya sssr. Gos. Vsesoyuz. in-t avtomob. tekhnologii(Orgavtoprom). 500 ekz. B. TS. --Sozt. ukazan V Vyp. Dan.--(55-4031) P

621.431.73-222/621.785.45

SO: Knizhnaya Letopis', Vol. 7, 1955

GAPON, Ivan Ivanovich; SVET,I.Sh., redaktor; SIRENKO,S.M., redaktor; ANDREYEV,S.P., tekhnicheskiy redaktor

[Organization of plant chemical laboratories in the metallurgical industry] Organizatsiia zavodskikh khimicheskikh laboratorii v metallurgicheskoi promyshlennosti. Khar'kov, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1955. 169 p. (MLRA 9:4)
(Metallurgical laboratories)



Svet, I. S.

Efficient hardening of camshafts. I. S. Svet (Tractor Plant, Kharkov). *Metalloved. i Obrabotka Metal.* 1956, No. 3, 38–43.—Former practice of making camshafts of carburized 0.20% C plain C steel quenched and tempered was expensive and caused much warping. By using 0.45% C plain steel and a high-frequency induction heating followed by spray cooling and tempering by residual heat hardened the tip of the cams to 54–60 R_c and the heel of them to 54–57 R_c, producing a hardened layer 5 mm. thick without spalling or cracking. Cams are heated individually while rotating at 75–100 r.p.m. For 58-mm. shafts, best results are obtained with a current of 360–440 amp. applied for 7.5 sec. followed by spray cooling for 6 min., after which residual heat causes the drawing.

J. D. Cat

SOV/137-59-1-1567

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 208 (USSR)

AUTHORS: Svet, I. S., Yefimenko, L. Ye.

TITLE: A Method of Combined Hot and Cold Forming of Gears by Means of Special Rollers (Kombinirovannaya goryache-kholodnaya nakatka shesteren)

PERIODICAL: Byul. tekhn.-ekonom. inform. sov. nar. kh-va Khar'kovskogo ekonom. adm. r-na, 1958, Nr 1, pp 31-36

ABSTRACT: After numerous experiments special rolling stands were designed for hot and cold forming of gears (G) (with an accuracy consistent with Technical Specifications), having a module (reciprocal of pitch diameter) of 5. A general view of a stand for hot forming of G's is given, and the kinematics of its operation are described. G blanks are heated by means of HF currents supplied by a 500-kw generator, through a transformer with a winding ratio of 1:18, to an induction heater of the sectorial-faceplate type. The technology of the process consists of the following steps: 1) Machining of the blank on a metal lathe; 2) hot forming of the G by special rollers; 3) pickling; 4) broaching of the hole; 5) turning down the G to specified outer

Card 1/2

A Method of Combined Hot and Cold Forming of Gears (cont.)

diameter; and 6) cold working of the G. The process of hot forming of a G requires 50 seconds and that of machining of the hole 15 seconds; operations of gear milling and shaving to standard specifications consume 420 seconds. Compared with milling of G's, the employment of the method of hot-and-cold forming of G's increases the productivity by a factor of 5; the cost of labor constitutes 20 kopecks per G, instead of one ruble, and the over-all saving achieved on each article amounts to ~6 rubles. After completion of the first five of the above steps on G's with a module of 5, fifteen milling and shaving machines at the plant are freed for some other operations. G's obtained by this method are characterized by greater strength and wear resistance.

P. G.

SVET, I.Sh., inzh.

Experience of the Kharkov Tractor Plant in the technology of combined hot and cold rolling of gears. Trakt. i sel'khozmash. no.2:40 F '58. (MIRA 12:3)

(Gear cutting)

117-58-7-12/25

AUTHOR: Svet, I.Sh., Engineer

TITLE: Inductive Heating of Blanks for Stamping (Induktsionnyy nagrev zagotovok dlya shtampovki)

PERIODICAL: Mashinostroitel', 1958, Nr 7, pp 36-38 (USSR)

ABSTRACT: Attempts to stamp blanks, heated in flame furnaces, gave poor results in the forge of Khar'kovskiy traktornyy zavod (Khar'kov Tractor Plant) because of the blowholes and oxidization of metal in the furnace. Unlike the forging process on forging hammers where the scale is being blown off the work between the several hammer strokes, the one-stroke 2000 t stamping press appeared unsuitable. The article gives detailed information on the design and operation of an induction heater, eliminating the oxidization of metal in heating and so making stamping presses applicable for the job. The heater was built at the plant from drawings made at NIITVCh. It is fully automatic. The temperature of forgings reaches 1,250°C at its output end. It heats several blanks at a time. There is no scale on the heated metal, and the cost of heating is 30-40% lower than in flame furnaces on mazout or gas. The parameters of the heater, shown in the drawing (p 37), and its technologic

Card 1/2

Inductive Heating of Blanks for Stamping 117-58-7-12/25

data are given. There is 1 drawing and 2 tables.

1. Blanks--Induction heating 2. Stamping--Operations

Card 2/2

AUTHOR: Svet, I.S., Engineer SOV/117-58-11-26/36

TITLE: The Application of High-Frequency Induction Heating (Primeneniye induktsionnogo nagreva t. v. ch.)

PERIODICAL: Mashinostroitel', 1958, Nr 11, pp 36 - 38 (USSR)

ABSTRACT: At the Khar'kovskiy traktornyy zavod (Khar'kov Tractor Plant), induction heating is used on a broad scale. In precision casting the time needed for smelting is 3 hours in electric arc furnaces, but only 1.5 hours if induction heating is used. The heating of 1 kg for drop forging costs 3.6 kopecks compared to 60.3 kopecks in the gas furnace. At the present time, 150 different parts are treated by induction heating, i.e. 60% of all parts produced by the plant. The consumption of electric energy amounts to 4.5 kwh in electric furnaces, but only to 2.5 kwh in automatic machines for induction heating. In the plant, a semi-automatic tempering machine type NIITVCh is used. Most of the parts of the tractor DT-54 are treated by induction heating. The method is also used in the repair of equipment. The induction tempering of conveyer rolls increased their resistance 7-8 times.

1. Induction heating--Applications 2. Induction heating--Costs

Card 1/1

28(3); 25(1) SOV/28-59-4-8/19

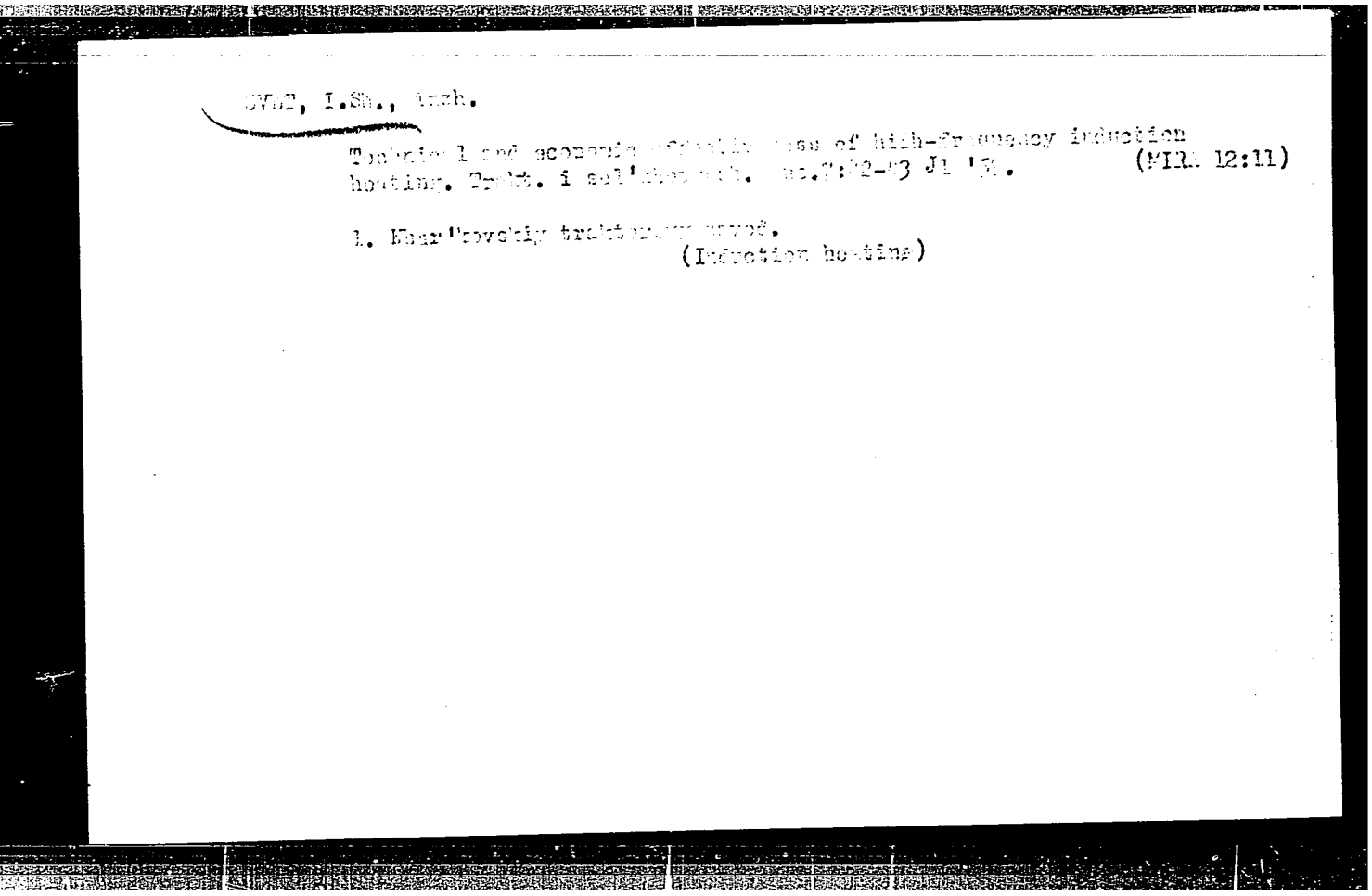
AUTHOR: Svet, I.Sh., Engineer

TITLE: Economy of Means and Longer Life of Machine Parts (Ekonomiya sredstv i povysheniye sroka sluzhby detaley)

PERIODICAL: Standartizatsiya, 1959, Nr 4, pp 22-23 (USSR)

ABSTRACT: The article illustrates the effect of standardization of the heat treatment technology at the Khar'kov Tractor Plant, in accordance with the requirements of the "GOST" standards of 1955 to 1958 and 1952. The plant installed electrical high-frequency heat-treatment automats in a mechanical production line; one automatic, for crankshaft necks, was designed by the Nauchno-issledovatel'skiy institut tokov vysokoy chastoty (Scientific Research Institute of High-Frequency Currents). The new technology drastically improved the wear resistance of tractor parts

Card 1/2



[illegible], I.Sh., [illegible].

[illegible] of high-frequency induction heating. Trakt. i sel'khozmash. no.7:32-33 Jl '56. (MIRA 12:11)

1. Kaz'kovskiy traktornyy zavod.
(Induction heating)

SVET, I.Sh., inzh.

Stamping engine valves by the extrusion method with high-frequency induction heating. Trakt. i sel'khozmash. no.11:44-45 N '59(MIRA 13:3)

1. Khar'kovskiy traktornyy zavoda (KhTZ).
(Tractors--Engines--Valves) (Induction heating)

SVET, I.Sh., inzh.

Making track pins on an automatic machine of new design. Trakt. i sel'khozmash. 30 no.6:38-39 Je '60. (MIRA 13:11)
(Crawler tractors--Maintenance and repair)

SVET, I.Sh., inzh.

Use of high-frequency induction heating for surface tempering of gears. Trakt. i sel'khozmash. 31 no.12:31-32 D '61. (MIRA 15:1)

1. Khar'kovskiy traktornyy zavod.
(Tempering) (Gearing)

SVET, I.Sh., inzh.

Using induction heating for heat treatment of metals. Mashinostroenie no.6:24-26 N-D '62. (MIRA 16:2)

1. Khar'kovskiy traktornyy zavod.
(Metals--Heat treatment) (Induction heating)

SVET, I.Sh., inzh.

Heat treatment of parts of the fuel system. Mashinostroenie no.6: 16-18 N-D '63. (MIRA 16:12)

SVET, I. Sh.

Heat treatment of fuel equipment precision parts by induction heating with high frequency currents. Metalloved. i term. obr. met. no.7:29-31 Jl '63. (MIRA 16:7)

(Induction hardening) (Fuel pumps)

SVET, I.Sh., inzh.

Method for thermal mass processing of camshafts. Trakt. i sel'-khozmash. 33 no.4:40-42 Ap '63. (MIRA 16:10)

1. Khar'kovskiy traktornyy zavod.
(Tractors—Fuel systems)

SVET, I.Sh., inzh.

Increasing the strength and durability of splined shafts.
Trakt. i sel'khozmash. 33 no.7:36-39 Jl '63. (MIRA 16:11)

1. Khar'kovskiy traktornyy zavod.

SVET, I.Sh., inzh.

Improving the technology of the heat treatment of rollers for tractor running gears. Mashinostroenie no.1:88-89 Ja-F '64. (MIRA 17:7)

SVET, I.Sh.

Improving the wearability of the support rollers of a tractor. Trakt. i sel'khozmash. no.7:46 Jl '65. (MIRA 18:7)

1. Khar'kovskiy traktornyy zavod.

L 8447-66

ACC NR: AP5025732 SOURCE CODE: UR/0286/65/000/018/0084/0084

AUTHORS: Birenberg, I. E.; Chubukov, M. P.; Karpov, Ye. F.; Svet, I. S.; Dovadov, A. N.; Gavril'chenko, L. I.; Razgulyayev, Ye. P.

57
B

ORG: none

TITLE: An instrument for measuring methane concentration, the resistance of the detonation circuit, and the ignition of electrodetonators. Class 42, No. 174819

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 1965, 84

TOPIC TAGS: methane, resistance bridge, electric resistance, electric transformer, transistor, detonation, electric detonator

ABSTRACT: This Author Certificate presents an instrument for measuring the methane concentration, resistance of detonation circuit, and the ignition of electrodetonators. It contains a methane meter (see Fig. 1) in the form of a bridge circuit, one arm of which is the methane-combustion element. The second arm is a balancing element. The other two arms have constant resistances. This device also contains a resistance meter for the detonation circuit and a detonation device in the form of a contactless transistor-transformer converter. The latter converts

UDC: 622.817.9.002.56

Card 1/3

2

ACC NR: AP5025732

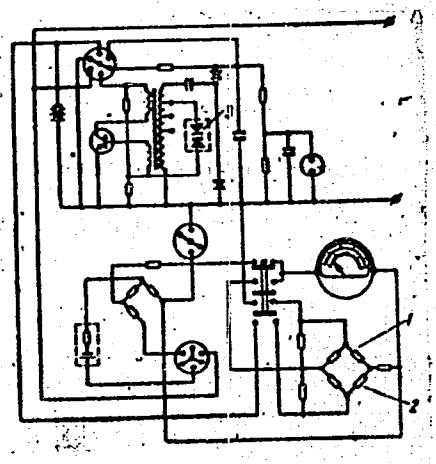


Fig. 1. 1 - A catalytic element;
2 - comparison element;
3 - Zener diode.

low voltage from an independent source to high-voltage alternating current. There is a feedback loop between the secondary winding of the transformer and the base of the transistor. In order to increase the safety of detonation work, to ensure reliability of the device, and to increase its life under difficult mine

L 8447-66

ACC NR: AP5025732

conditions, the catalytic and comparison elements of the methane meter (which have a working temperature of up to 450C) are installed in a single reaction chamber. The chamber has one-way natural admission of the analyzed gas. The detonation device has a Zener diode connected in opposition to the feedback loop. Orig. art. has: 1 figure.

SUB CODE: 09/ SUBM DATE: 12Mar64

BVK

Card 3/3

PASTIU,V.; SVET,M.; GHERMAN,A.; MALITCHI,E.; MIHAILESCU,V.

Cardiac insufficiency in mitral stenosis. Probl. card.,Bucur. 4:301-312 '59.
(MITRAL STENOSIS, complications)
(HEART FAILURE CONGESTIVE, etiology)

ILIESCU, M., dr.; PASTIU, V., dr.; SVET, M., dr.; DOMOCOS, G., dr.; HAGI-PARASCHIV, L., dr.; ILIESCU, C.C., prof.

Abdominal angina. Med. intern. 15 no.9:115-122 S '63.

1. Lucrare efectuata la ASCAR, Bucuresti.
(MESENTERIC VASCULAR OCCLUSION)
(THROMBOANGIITIS OBLITERANS)
(INTESTINAL DISEASES) (INFARCTION)

SVET, MARK GRIGOR'YEVICH

KULIYEV, Gadzhi-Bala Ali-Nagi ogly; SVET, Mark Grigor'yevich; SULTANOV, D.K. redaktor; AL'TMAN, T.B. redaktor izdatel'stva.

[Spravochnik po tekhnike bezopasnosti v neftedobyvaiushchei promyshlennosti. Baku, Azerbaidzhanskoe gos.izd-vo neft.i nauchno-tekhn.lit-ry. Pt.1. 1957. 365 p. (MLRA 10:6)
(Petroleum industry--Safety measures)

SVET, N. M.

Svet, N. M. "On the migration and spontaneous departure of fragments in cases of fire-arm wounds to the lungs," Vracheb. delo, 1949, No. 3, paragraphs 217-20.

SO: U-3736, 21 May 53, (Letopis 'Zhurnal 'nykh Statey, No. 18, 1949).

KOLGANOV, [illegible]; SMET, V.A.

Stoppers last longer. Metallurg 10 no.7:28-29 Jl '65. (MIRA 18:7)

SVET, VALENTIN

RUMANIA/Chemical Technology. Chemical Products and Their Application. H-11
Production of Catalysts and Sorbents.

Abs Jour: Referat Zhur-Khimiya, No 5, 1958, 15139.

Author : Svet Valentin
Inst :
Title : Regeneration of Nickel Catalyst at the "Biruita" Oil Plant.

Orig Pub: Rev. ind. aliment. prod. vegetale, 1956, No 10, 11-13

Abstract: At the "Biruinta" plant the following method is used for defatting and regeneration of Ni-catalyst (C): 300 kg of spent C containing 9-9.6% Ni and 45-52% fat, are charged into an autoclave together with a preheated, to 60-70°, mixture of 400 liters 5% solution of Na_2CO_3 and 200 liters 20% NaCl solution; thereafter the pressure is raised to 1.5 atmosphere, by heating, and boiling is continued for 4 hours, after which the pressure is lowered to atmospheric and the solution is allowed

Card : 1/3

Card : 3/3

SVET, Ya.

On the routes of Malayan mariners. Znan.sila no.7:11-16 Jl '54.
(East Indies--Discovery and exploration) (MLRA 7:7)

SVET, Yakov Mikhaylovich; KUMKES, S. M. redaktor; KOSHELEVA, S.M., tekhnicheskiy redaktor

[In the footsteps of explorers and mariners of the East; sketches] Po sledam puteshestvennikov i moreplavatelei Vostoka; ocherki. Moskva, Gos.izd-vo geogr. lit-ry, 1955. 183 p. (MLRA 8:9)
(Asia--Voyages and travels)

SVET, Yakov Mikhaylovich; KUMKES, S.N., redaktor; KOSHELEVA, S.M., tekhnicheskiy redaktor

[Ferdinand Magellan] Fernando Magellan. Moskva, Gos. izd-vo geogr. lit-ry, 1956. 37 p. (MLRA 9:11)
(Magalhães, Fernão, d.1521)

SVET, Ya.M.

First discoverer of the New World; on the 450th anniversary of Christopher Columbus' death. Priroda 45 no.10:69-79 O '56. (Columbus, Christopher, 1451-1506) (MLRA 9:11)

SVET, Ya.M.

SVET, Ya.M.

Long voyages of Chinese seafarers in the first half of the 15th century. Vop. ist. est. i tekh. no.3:91-102 '57. (MIRA 11:1)
(China--Voyages and travels)

SVET, Yakov Mikhaylovich; KUMKES, S.N., red.; ZORKINA, G.P., mlad. red.; GOLITSYN, A.V., red. kart; KOSHELEVA, S.M., tekhn. red.

[A hundred thousand li before the mast] Za kormoi sto tysiach li. Moskva, Gos. izd-vo geogr. lit-ry, 1960. 188 p. (MIRA 14:7)
(Voyages and travels)

SVET, Ya.M., kand.geol.-mineral.nauk (Moskva)

Geology abroad. Priroda 50 no.5:120-121 My '61. (MIRA 14:5)
(Geology--Book reviews)

SVET, Ya.M., kand.geol.-mineral.nauk (Moskva)

Geology abroad. Priroda 51 no.5:40 My '62. (MIRA 15:5)
(Bibliography--Geology)

SVET, Yakov Mikhaylovich; MALKES, B.N., red.; BELICHENKO, R.K., mladshiy red.

[Navigator from foggy Albion (James Cook)] Moreplavatel' tumannogo Al'biona (Dzhems Kuk). Moskva, Geografgiz, 1963. 78 p. (MIRA 17:6)

SVET, Ya.M., kand. geol.-mineral. nauk (Moskva)

An anniversary of the Pacific Ocean. Priroda 52 no.9:72-79 '63.
(MIRA 16:11)

SVET, Ya.M., kand. geol.-mineral. nauk (Moskva)

Meeting with Lapérouse. Priroda 54 no.5:92-93 My '65.
(MIRA 18:5)

MURATOV, M.V., red.; SVET, Ya.M., red.

[Tectonics of the Alpine area] Tektonika Al'piiskoi oblasti; sbornik statei. Moskva, Mir, 1965. 341 p.
(MIRA 18:7)

KOZHEUROV, Petr Il'ich; KUZNETSOV, Stepan Petrovich; CHERNOBROVKIN, V.P., kand. tekhn.nauk, nauchn. red.; SVET Ye.B., red.; KOLBYCHEV, V.I., tekhn. red.

[Cupola furnaces of the Southern Urals; from work practices of plants in Chelyabinsk Province] Vagranki IUzhnogo Urala; iz opyta raboty zavodov Cheliabinskoi oblasti. Cheliabinsk, Cheliabinskoe knizhnoe izd-vo, 1960. 73 p. (MIRA 17:3)

TKACHENKO, Sergey Dmitriyevich; KURCHATOV, Vladimir Ivanovich; KOLOTUSHKIN, Nikolay Mikhaylovich; SVET, Ye.B., red.; KOLBICHEV, V.I., tekhn. red.

[Automatic machine for drilling piston pins]Avtomat dlia sverleniia porshnevykh pal'tsev. Cheliabinsk, Cheliabinskoe knizhnoe izd-vo, 1961. 12 p. (MIRA 15:12)
(Drilling and boring machinery)

NECHAYEV, Avenir Sergeyevich; DEGTYAREV, Lev Mikhaylovich; IVANOV, Vasiliy Alekseyevich; CHUMAKOV, Yuriy Viktorovich; SVET, Ye.B., red.; KOLBICHEV, V.I., tekhn. red.

[Mill for the production of spirally welded tubes]Stan dlia proizvodstva spiral'no-svarnykh trub. Cheliabinsk, Cheliabinskoe knizhnoe izd-vo, 1961. 50 p. (MIRA 15:12)
(Tubes—Welding) (Welding—Equipment and supplies)

KOLOSOV, Mikhail Ivanovich; SMIRNOV, Juriy Dmitriyevich; STROGANOV, Anatoliy Il'ich; TSIPUNOV, Aleksey Georgiyevich; BOREVSKIY, Vladimir Moiseyevich; SVET, Ye.B., red.; KOLBICHEV, V.I., tekhn. red.

[Interchangeable equipment for the pouring of steel] Smennoe oborudovanie dlia razlivki stali. Cheliabinsk, Cheliabinskoe knizhnoe izd-vo, 1961. 55 p. (MIRA 17:3)

DUMLER, Sergey Avgustovich; SVET, Ye.B., red.

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(MIRA 17:3)

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