TARASENKO, F.P.

Informational properties of received-signal parameters. Nauch.dokl.
vys.shkoly; radiotekh.i elektron. no.4:3-5 '58.
(MIRA 12:6)

1. Sibirskiy fiziko-tekhnicheskiy nauchno-issledovatel'skiy institut
pri Tomskom gosudarstvennom universtitet im. V.V.Kuybysheva.
(Information theory)

SOV/142-58-6-17/20

1(4)

AUTHOR: Tarasenko, F.P.

TITLE: News in Brief (Kratkiye soobshcheniya)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy – Radiotekh-nika, 1958, Nr 6, pp 740-741 (USSR)

ABSTRACT: On the Question of the Superiority of the Coherent Detector as a Demodulator (K voprosu ob optimal'-nosti kogerentnogo detektora kak demodulyatora). The author reviews very briefly some aspects of the coherent detector, which, he says, give it absolute superiority over any other type, as a device sensi-tive to both amplitude and phase variations, in receiver circuits, producing demodulation without loss of any information contained in the detected signal. This article was recommended by the Kafe-dra radiofiziki Tomskogo gosudarstvennogo univer-siteta imeni V.V. Kuybysheva (Chair of Radio-

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News in Brief   SOV/142-58-6-17/20

Physics of the Tomsk State University imeni V.V. Kuybyshev). There are 2 references, 1 of which is Soviet and i English.

SUBMITTED: June 17, 1958

Card 2/2

05196
SOV/142-2-3-4/27

9(2,3,9)

AUTHOR: Tarasenko, P.P.

TITLE: The Optimum Quantization Threshold of the Received Signal for Binary Detection Systems

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, 1959, Vol 2, Nr 3, pp 292-298 (USSR)

ABSTRACT: The problem of selecting the optimum position of the threshold with binary quantization is solved by means of the maximum criterion of the information amount of the useful signal contained in a quantizised signal. Citing five foreign papers, the author first reviews different approaches to the binary quantization problem. He mentions also the papers of V.A. Garmash (Ref.7) and A.Ye. Basharinov, B.S. Fleyshman (Ref.6). The paper of the latter was presented at a scientific session of the NTORiE in Moscow on Radio Day 1958, whereby the approach of these authors was similar to that of H. Blasbalg (Ref.5). The author states that in most papers different and somewhat arbitrary optimum criterions were used which are not in agreement with each other. He states that the theoretical information approach to this problem produces a

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The Optimum Quantization Threshold of the Received Signal for Binary Detection Systems

very clear formulation of the problem, a natural criterion and a simple solution. The author then discusses quantization as an information conversion, during coherent and incoherent reception. Finally, the author states that the optimum solution of a problem is only realtive: using different optimum criteria will result in different optimum solutions of one and the same problem. It is unessential which of these solutions is better, since each solution is the best in regard to its criterion. These differences are caused primarily because the phenomenon under consideration has not been completely explained as yet. In the papers of A.N. Kolmogorov, N. Viner, V.A. Kotel'nikov, K Shannon, V.I. Siforov, A.A. Kharkevich and others, the informational nature of the communication process was established. These papers should be used for formulating the problem of the degree of agreement between the criteria. The problem of detecting a signal in noises belongs to the class of problems of extracting from the signal received the information of the actual state of the useful signal, i.e. it is

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The Optimum Quantization Threshold of the Received Signal for Binary Detection Systems

typical information problem. Therefore, the information criterion discussed in this paper, is not simply one of the possible criteria, but it is obviously the most logically to be used. The publication of this paper was recommended by the Laboratoriya radiofiziki Sibirskogo fizikotekhnicheskogo instituta pri Tomskom gosudarstvennom universitete imeni V.V. Kuybysheva (Laboratory of Radio Physics of the Siberian Physical Engineering Institute at the Tomsk State University imeni V.V. Kuybyshev). There are 5 graphs and 8 references, 3 of which are Soviet and 5 American.

SUBMITTED: November 22, 1958

Card 3/3

6.9000
16.7010

S/194/62/000/005/093/157
D230/D308

AUTHOR: Tarasenko, F.P.

TITLE: Some general problems of the theory of signal struc-
              ture

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika,
              no. 5, 1962, abstract 5zh63 (Tr. Sibirsk. fiz.-tekhn.
              in-ta pri Tomskom un-te, 1961, no. 40, 3-7)

TEXT: The signal concept is analyzed and a general definition of
signal is formulated. Signals are classified into dynamic and sta-
tic; their parameters are divided into three types: structure para-
meters, sampling parameters and information parameters. [Abstrac-
tor's note: Complete translation].

Card 1/1

S/194/62/000/005/094/157
D230/D308

6.9000
16.7000

AUTHORS: Biryulin, P.P., and Tarasenko, F.P.

TITLE: Information approach to the theory of reception

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 5, 1962, abstract 5zh64 (Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te, 1961, no. 40, 8-14)

TEXT: The process of reception is divided basically into two stages: 1) Signal conversion with the purpose of preparing the solution and, 2) adoption of a solution. As one of the optimum methods of signal pre-treatment, it is possible to use calculation of the differences of the existing amounts of information about the possible states of the transmitted signal. This leads to the calculation of the logarithm of the probability ratio, thus revealing the information sense of the algorithm operations of the theory of verification of statistical hypotheses. The problem of optimum multi-channel reception is briefly discussed. The second stage, adoption of a solution, is considered as a choice of optimum strategy. It is shown that the number of optimum strategies in a discrete n-alterna-

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Information approach to the theory ...   S/194/62/000/005/094/157
                                           D230/D308

tive case exceeds $n^2 - n + 2$. In conclusion, the problem of prefe-
rence of the information approach to a purely statistical approach
is discussed. [Abstractor's note: Complete translation].

Card 2/2

16.6100

S/044/62/000/006/106/127
B166/B112

AUTHOR: Tarasenko, F. P.

TITLE: Transmission of information along a Markov chain

PERIODICAL: Referativnyy zhurnal. Matematika, no. 6, 1962, 53, abstract
            6V272 (Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te,
            no. 40, 1961, 15-17)

TEXT: Using elementary operations the author obtains a formula for
information:

$$I\ (x_1,\ x_n) = I\ (x_{n-1},\ x_n) - MI\ (x_{n-1},\ x_n) \,/\, x_1),$$

where the sequence of random quantities $\{x_1,\ x_2,\ \dots,\ x_n\}$ forms a simple

Markov chain. The following evaluation is obtained in the same simple
manner:

$$I\ (x_1,\ x_n) < H\ (x) - MH\ (x_2,\ \dots,\ x_n\,/\,x_1) + \log\ (n - 2).$$

[Abstracter's note: Complete translation.]

Card 1/1

S/058/62/000/008/098/134
A062/A101

6.9400

AUTHOR: Tarasenko, F. P.

TITLE: On the content of the useful information in the various parameters of a received signal

PERIODICAL: Referativnyy zhurnal, Fizika, no. 8, 1962,. 12, abstract 8Zh84, ("Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te", 1961, no. 40, 18 - 23)

TEXT: The author discusses the question of the criteria which characterize the reception quality of a signal on a noise background. Utilizing the known re- lations for the distribution laws of the envelope and the phase of the signal and noise superposition, the author calculates the quality of information included in various parameters of the high frequency signal and compares, on that basis, ·dif- ferent methods of signal reception. Numerical calculations of information quanti- ties, carried out for different reception methods (amplitude, phase), and different signal/noise ratios lead to the following conclusions: 1) all the information is extracted from the received signal by a coherent detector, if the phase of its het- erodyne coincides with the phase of the useful signal; 2) detection through only

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On the content of the useful information in the...   S/058/62/000/008/098/134
                                                       A062/A101

one of the parameters (amplitude or phase) is connected with unavoidable loss of
information; 3) at low signal/noise ratios the phase of the received signal is more
sensitive than the amplitude to a change in the state of the useful signal; 4) at
low signal/noise ratios the complete information is near to the sum of amplitude
and phase information. The last fact reflects a weak statistical connection between
the amplitude and the phase of the received signal at low signal/noise ratios.

                                                       S. A.

[Abstracter's note: Complete translation]

Card 2/2

S/058/62/000/005/102/119
A061/A101

AUTHOR: Tarasenko, F. P.

TITLE: Entropy characteristics of random processes being continuous in time

PERIODICAL: Referativnyy zhurnal, Fizika, no. 5, 1962, 10, abstract 5Zh66
              ("Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te", 1961, no. 40,
              24 - 28)

TEXT: It is shown that the direct application of the concept of differential entropy to continuous random processes leads to infinite magnitudes. The cause of this is to be found in the incomparable uncertainties of the correlated and the standard process, for which an absolutely uncorrelated process is taken.

[Abstracter's note: Complete translation]

Card 1/1

36943
S/142/61/004/006/005/017
E025/E535

6,4700

AUTHOR: Tarasenko, F.P.

TITLE: On the problem of the calculation of the probability
            of the detection of signals from radar stations in
            the case of a random search law

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika,
            v.4, no.6, 1961, 666-670

TEXT: The problem of the detection of radar signals reduces
to the problem of coincidence of pulses belonging to two
different sequences. In the case when both sequences are
periodic and the ratio of the repetition periods is an integer,
coincidence of the two sequences never occurs if it does not
occur after a time $(T_1 - T_2)$/HCF, where HCF is the highest common
factor. For ratios of the periods close to an integer the
period of coincidence is so great that detection is also
practically impossible. In some cases this does not matter but
in others when it is required that the probability of detecting
any radar station should be different from zero it is essential
to use a random search law. The method of calculating the

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On the problem of the calculation ... S/142/61/004/006/005/017
                                        E025/E535

probability of detecting a radar station for a random law of
search is given. The results can be used to calculate the
probability of detection after a single rotation of the antenna or
after any period of time after the beginning of the search. The
pulses from the radar station to be detected are assumed to be
periodic and the detecting pulses to be random. The coincidence
interval is the sum of the lengths of one pulse of each system.
The probability is calculated that a particular pulse of the
random sequence should be within the coincidence interval centred
on a particular pulse of the periodic system. Then, by integra-
tion, the probability that a particular pulse of the random system
should coincide with any pulse of the random system is calculated.
The final stage is the calculation of the probability that after
a given time a coincidence should occur with any pulse of the
first system. The calculations are carried out for the particular
case of a probability density distribution of the random sequence
given by a negative exponential.
ASSOCIATION: Rekomendovana SFTI pri Tomskom gos. universitete
Card 2/2   imeni V.V.Kuybysheva (Recommended by SFTI at Tomsk
               State University imeni V.V.Kuybyshev)
SUBMITTED: March 24, 1960

87129

S/106/61/016/002/002/011
B107/B212

6,9400

AUTHOR: Tarasenko, F. P., Member of the Society of Radio Engineering
              and Communication

TITLE: A method for optimum processing of a received signal if noise
              occurs

PERIODICAL: Radiotekhnika, v. 16, no. 2, 1961, 9-14

TEXT: It is well known that synchronous detecting makes it possible to
preserve all useful information, and, therefore, is the optimum demodulator
for an amplitude modulated signal with a Gaussian noise. So far, it has
not been cleared if there are any other technical methods to process a
received signal, which would be as efficient. The present paper tries to
solve this problem. The circuit developed does not use the knowledge of
the initial phase of the useful signal for phase tuning of the heterodyne,
as it is done by synchronous detecting, but for calculating coefficients
which occur in the weighted sum of the output signals of two coherent
detectors. These detectors are working in "quadrature", i.e., with a
90° phase shift. This circuit is called "quadrature detector". The

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95229

A method for optimum processing...   S/108/61/016/002/002/C·1
                                            B107/B212

algorithm coefficients of operation of a quadrature detector when taken
as a function of a and θ, (a is the vector length of the useful signal,
θ is the phase angle) proved to be proportional to the mathematical
expectations of the weighted stochastic variables. This fact makes it
possible to investigate a self-tuning variation of the quadrature detector
which can be operated with an ergodic input signal. Calculations show
that this variation initially works as a square-law detector, but as the
averaging time of the calculated coefficients increases the detector char-
acteristic is also improving and finally changes over to a synchronous
detector characteristic. Constructing such a quadrature detector has the
important advantage that the parameters a and θ of the useful signal
do not have to be known. There are 3 figures and 6 references: 5 Soviet-
bloc and 1 non-Soviet-bloc.

SUBMITTED: February 25, 1960 (initially)
              July 14, 1960 (after revision)

Card 2/2

39735
S/142/62/005/002/019/019
E192/E382

6,4770

AUTHORS: Tarasenko, F.P. and Zakharov, V.V.

TITLE: Optimum quantization of a received signal at several
              levels

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,
             Radiotekhnika, v. 5, no. 2, 1962, 273 - 280

TEXT: The problem of the optimum method of quantizing a
received signal which is in the form of a useful discrete signal
and continuous noise is analyzed. The signal amplitude can have
values $a_0 = 0$ or $a_1 = a$, their probabilities being $P(a_j)$,
where $j = 0, 1$. The received signal x is mixed with noise
and is, in fact, a continuous waveform which is characterized
by a random probability distribution function $p(x/a_j)$. This
signal x is quantized into n levels in such a way that a
discrete random quantity z, having n possible values,
corresponds to a continuous random quantity x; thus, z
takes a value z_i if $x_i \le x \le x_{i+1}$, where x_i is the

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S/142/62/005/002/019/019
E192/E382

Optimum quantization ....

i-th quantization threshold. The quantity of information I contained in the function z relative to a is therefore dependent on the position of the quantization levels (x_i).

The problem consists of determining the maximum possible information, i.e. finding the solution of the following system of equations:

$$\frac{\partial I}{\partial x_i} = 0, \quad i = 0, 1, \ldots, n \quad (2).$$

It is found that a general analytical solution of this system is hardly possible. However, various practical cases can be solved numerically by means of electronic digital computers. This procedure was followed for the case of a multidimensional quantization of a signal received by the non-coherent-reception method. Some of the results of the calculations are shown in Fig. 3 , which illustrates the change in the ratio of the

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Optimum quantization ....

S/142/62/005/002/019/019
E192/E382

quantity on information preserved in a quantized signal to the total information as a function of the number n of the quantization level for various a . The figure shows that at small a the increase in the number of levels considerably reduces the loss of information. Thus, if a receiving system is required only for the purpose of determining the presence or absence of a useful signal in noise, an increase in the number of the quantization levels is justified only if the signal-to-noise ratio is low. There are 3 figures.

ASSOCIATION: Laboratoriya radiofiziki Sibirskogo fiziko-tekhnicheskogo in-ta pri Tomskom gos. universitete im. V.V. Kuybysheva (Radiophysics Laboratory of the Siberian Physicotechnical Institute of Tomsk State University im. V.V. Kuybyshev)

SUBMITTED: August 28, 1960

Card 3/3

S/0274/64/000/005/A044/A044

ACCESSION NR: AR4042166

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz'. Svodny*y tom, Abs. 5A230

AUTHOR: Tarasenko, F. P.; Lin'kov, Yu. N.

TITLE: Problems of spaced reception from the point of view of the information theory

CITED SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta, vy*p. 42, 1963, 168-180

TOPIC TAGS: information theory, spaced reception, spaced system, optimum process

TRANSLATION: For a system of n-channels, to whose input is fed a useful signal and in each of whose channels there are noises and fluctuations, there is the problem of finding a method of combining signals on the output of n-channels such that the obtained signal retains the most possible share of information on the useful signal. Spaced reception is considered from the point of view of the information

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ACCESSION NR: AR4042166

theory and a formula is given for finding algorithms of optimum methods of reception in the presence of definite a priori data. An ideal spaced system is considered and the quantity of information for both incoherent reception in the presence of a fluctuations is determined. The necessary number of channels is determined with different signal-to-noise ratios. Some methods of combining of signals (quadratic and linear) are considered. Graphs are given for the quantity of information depending upon the number of channels with a fixed signal-to-noise ratio and for the quantity of information depending upon the signal-to-noise ratio for different number of channels. The appendix gives the derivation of the formula of rectangles for the calculation of multiple integrals. Five illustrations. Bibliography: 18 references.

SUB CODE: DP, MA   ENCL: 00

Card 2/2

L 39420-65   EWT(d)/T   IJP(c)

ACCESSION NR: AR5006740   S/0044/64/000/012/B115/B115

SOURCE: Ref. zh. Matematika, Abs. 12B590

AUTHOR: Zakharov, V. V.; Tarasenko, F. P.

TITLE: Approximate formulas and tables of integral generalizations of Raleigh distributions

CITED SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te, vyp. 44, 1964, 164-176

TOPIC TAGS: approximation, distribution function, numerical analysis, Raleigh distribution

TRANSLATION: In problems of the reception of signals accompanied by noise, the problem of integral generalizations of the Raleigh distribution, determined by the formula   (2)

$$F(\alpha, \beta) = \int_0^\beta x\, e^{-\frac{x^2+\alpha^2}{2}} I_0(\alpha x)\, dx$$

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L 39420-65
ACCESSION NR: AR5006740

where $\mathcal{L}$ is the ratio of the signal to the noise, and t is a given value of the random variable x, is frequently encountered. In the article, all of the approximate formulas for computing F (a,t) are systematized, and a few new formulas are introduced with an estimate of their convergence. The region of values of parameters in which each formula is applicable is discussed. Tabulations of the function F(a,t), calculated on the "Ural" computer are presented. For each a and t, one has the expression

$$F(a, t) = 1 - e^{-\frac{a^2+t^2}{2}} \sum_{k=0}^{\infty} \frac{1}{k!}\left(\frac{at}{2}\right)^k \sum_{n=0}^{k} \frac{1}{n!}\left(\frac{at}{2}\right)^n \qquad (3)$$

The authors introduce the new approximate formula

$$F(a, t) = \frac{e^{-\frac{t}{t}}}{1-\frac{a}{t}}\left(1 - e^{-\frac{t}{t}\left[1-\frac{a^2}{t}\right]}\right) - e^{-\frac{a^2}{t}} R(a, t) \qquad (1)$$

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Here, R (a,t) is the remainder term

$$R(a,t) = \sum_{k=0}^{\infty} c_k \int_t^{\infty} x^{a+k-1} e^{-x} dx =$$

$$= \sum_{k=0}^{\infty} c_k \left[1 - e^{-\frac{t}{2}} \sum_{i=0}^{k} \frac{1}{i!} \left(\frac{t}{2}\right)^i \right].$$

(4)

where

$$c_0 = \left(1 - \frac{1}{2t}\right)^{a+k} \frac{a+k}{\cdots}, \quad c_k = \left(1 - \frac{1}{2t}\right)^{a+k} \frac{a+k}{\cdots}.$$

(5)

Formula (1) becomes more accurate, the smaller are a and t. A tabulation of F (a,t) is given to 8 decimal places for a = 0,2 (0,2)4; t = 0(0,1)6. V. Barinova

ENCL: 00

SUB CODE: MA

Card 3/3

L 38598-65   EEC-2/EWT(d)/EEC-4/EED-2   S/0044/64/000/012/V037/V0.7

ACCESSION NR: AR5006744

SOURCE: Ref. zh. Matematika, Abs. 12V199

AUTHOR: Zakrevskiy, A.D.; Tarasenko, F.P.

TITLE: Investigation of an interference-resistant wireless receiver with statistical self-adjustment of the useful signal for the reception of double Markov signals of k-th order in Gaussian noise

CITED SOURCE: Ref. zh. Matematika, Abs. 12V199

TOPIC TAGS: receiver, Markov chain, Markov process, signal reception, noise, Gaussian noise, self adjusting system

TRANSLATION: A receiver of double Markov signals of the k-th order is investigated, when the conditional probability distributions $p(a_n = 0 | a_{n-1}, \ldots a_{n-k})$, determining the statistical properties of the signal sequence, are unknown and are determined in the process of reception; a_n is the n-th double symbol. In this case, for an estimate of the quantity p, the mean frequency of the occurrence of zero among the symbols $a_{n-1}, \ldots$, a_{n-k} in a received sequence is derived. If the symbol 0 is realized, the estimate for the probability p is increased by $\gamma(1-p)$; in the opposite case it is decreased by γp. The

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L 38598-65

ACCESSION NR: AR5006744

quantity δ determines the mobility of the estimate of p. The level of quantization of the received signal appears optimal according to the information possessed at the given moment about the statistics of the received signal. Thus, an inverse loop is created. The characteristics of a system were determined with the aid of the "Ural" computer. The dependence of errors of the first and second orders on the length of the received sequence was calculated for various values of δ, signal to noise ratio and k. The indicated comparison was carried out with respect to perturbation-stabilizing systems connected with a system not depending on a statistical connection between symbols. The problem of the technical realization of such a system is discussed.

ENCL: 00   SUB CODE: MA, EC

Card 2/2

L 63093-65   FBD/EWT(1)/EWG(v)/EEC-4   GW,WS-4

UR/0141/65/008/003/0446/0452

ACCESSION NR: AP5020356

522.1 : 523.164

AUTHOR: Tarasenko, F. P.

TITLE: Some aspects of the problem of determining the true distribution of radio-luminance in the heavens

SOURCE: IVUZ. Radiofizika, v. 8, no. 3, 1965, 446-452

TOPIC TAGS: radio astronomy, spectral distribution, cosmic radio source

12,55

ABSTRACT: The author examines the limitations of the integral equation on which most methods for determining the true radioluminance distribution in the sky are based. The appropriate integration time is evaluated for the output signal of a radio telescope such that radio sources of different intensities are detected. The question of analog vs. discrete scanning is treated. The use of physical analog elements instead of complex processing with electronic computers is discussed. In particular, the problem of analysis is reduced to the use of an inverse linear ril-ter through which a signal proportional to the brightness distribution function is passed. The noise characteristics of this system are examined in some detail.

Card 1/2

L 63093-65

ACCESSION NR: AP5020356   2

Orig. art. has: 22 formulas.

ASSOCIATION: Sibirskiy nauchno-issledovatel'skiy fiziko-tekhnicheskiy institut
(Siberian Scientific Research Physicotechnical Institute)

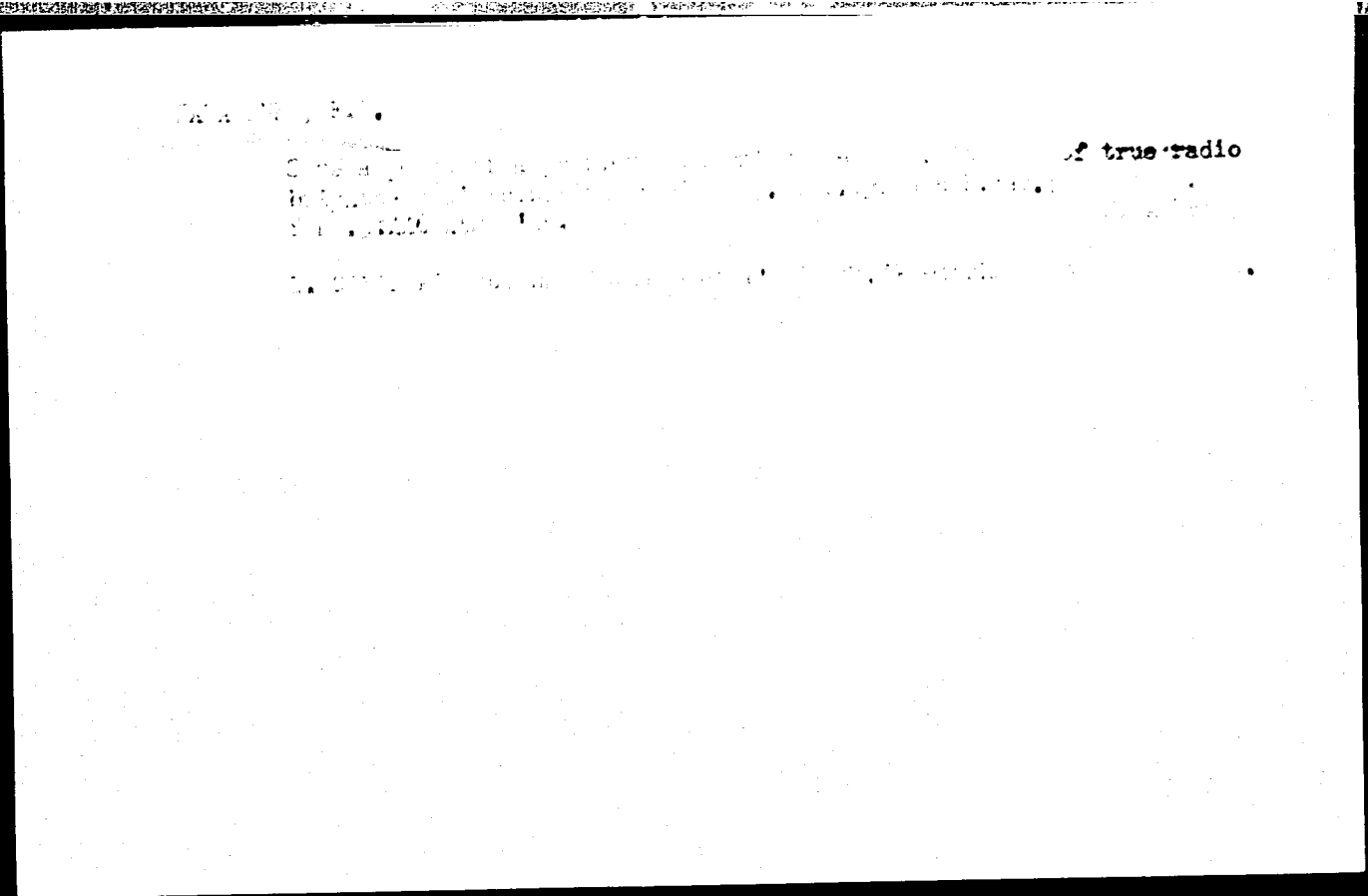   55

SUBMITTED: 18Dec63   ENCL: 00   SUB CODE: AA

NO REF SOV: 004   OTHER: 004

Card 2/2

true radio

TARASENKO, Feliks Petrovich

[Introduction to a course in information theory] Vvede-
nie v kurs teorii informatsii. Tomsk, Izd-vo Tomskogo
univ., 1963. 239 p.   (MIRA 19:1)

ACC NR: AR6029332   SOURCE CODE: UR/0274/66/000/005/A007/A007

AUTHOR: Medvedev, G. A.; Tarasenko, F. P.

TITLE: Some criteria for optimal quantization of cw signals

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 5A37

REF SOURCE: Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te, vyp. 47, 1965, 155-162

TOPIC TAGS: signal quantization, signal reception, signal noise separation, signal detection

ABSTRACT: Two classes of optimality criteria of the quantization threshold of a received signal, in a detection system, are compared: (a) cost criteria connected with mean-risk minimization and (b) information criteria. The cost approach with the mean-risk minimization solves the problem of optimal threshold in a broader sense; however, this approach comes close to the informational at the decision-making phase. The cost approach may be given an information interpretation; however, from the viewpoint of obtaining maximum information, the equation for optimal quantization threshold differs from the corresponding equation for minimum mean loss. The case of binary quantization of a signal mixed with additive Gaussian noise is analyzed in detail. It is proven that, despite different optimality criteria, the optimal thresholds are close to each other. Two figures. Bibliography of 8 titles. L. S. [Translation of abstract]

Card 1/1   SUB CODE: 09, 17   UDC: 621.391.134

ACC NR: AR7004281   SOURCE CODE: UR/0274/66/000/011/A005/A005

AUTHOR: Konev, V. V.; Tarasenko, F. P.

TITLE: Theory of Gaussian channels with fading of propagation ratio

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz', Abs. 11A42

REF SOURCE: Sb. 2-ya Vses. konferentsiya po teorii kodir. i yeye prilozh. Sekts. 2. Ch. 1. M., b, g., 62-68

TOPIC TAGS: ~~radio~~ communication~~Y~~ channel, signal noise separation, channel capacity, signal propagation, frequency band, radio transmitter, signal to noise ratio

ABSTRACT: The possibility is explored of enhancing the traffic carrying capacity of a Gaussian channel with propagation-ratio fading by means of controlling the transmitter power and channel frequency band; practical physical limitations are allowed for. Within a signal-to-noise ratio of 1--30, the power control can reduce the fading-caused traffic-capacity loss from 17 to 12%; in a lower signal-to-noise ratio range ($\ll$ 1), the traffic capacity increases thanks to fading. Also, a case of controlling the coder and channel band, with a constant transmitter power and a specified mean frequency band, is considered. N. S. [Translation of abstract]

SUB CODE: 17, 09

Card 1/1   UDC: 621.391.1;519.2

TARASENKO, G.

For irrigation farming. Prof.-tekh. obr. 21 no.2:7 F '64.   (MIRA 17:9)

1. Nachal'nik otdela Gosudarstvennogo komiteta Soveta Ministrov Kazakhskoy SSR po professional'no-tekhnicheskomu obrazovaniyu.

TARASENKO, G.

Practice in the school farm fields.   Prof.-tekh. obr. 18
no.8:13 Ag '61.   (MIRA 14:9)

1. Nachal'nik otdela sel'skikh proftekhuchilishch Glavnogo
upravleniya professional'no-tekhnicheskogo obrazovaniya pri
Sovete Ministrov Kazakhskoy SSR.
                    (Farm mechanization--Study and teaching)

TARASENKO, G. D., Cand Phys-Math Sci -- (diss) "Study of
effects ~~influences~~ of the process *is* of dyeing and *discoloring* ~~discoloration~~ upon

the electrical conductivity of the crystals of certain

alkali-haloid salts." [Rostov-on-Don], 1957. 14 pp (Min

of Higher Education USSR, Rostov State Univ, Chair of Ex-

perimental and Theoretical Physics), 110 copies (KL, 2-58,

111)

-10-

TARASENKO, G. D.

Docent Ya. N. Pershits (Pskov Institute of Pedagogics) and G. D. Tarasenko (North
Ossetian Institute of Pedagogics, Ordzhonikidze)

"The character of the propagation of the F-center cloudlet and that of its mobility
is changed in consequence of the primary coloration of the NaCl-, KCL-, KBr- and KJ
crystals, whereas the electric conductivity of the ions of the samples is reduced
irreversibly"

Report presented at a Conference on Solid dielectrics and Semiconductors,
Tomsk Polytechnical Inst., 3-8 Feb. 58.
(Elektrichestvo, '58, No. 7, 83-86)

SOV/139-58-5-25/35

AUTHORS: Pershits, Ya. N., Tarasenko, G. D.

TITLE: Influence of Additive Coloration on Electrical Properties of
Alkali-Halide Crystals (Vliyaniye additivnogo okrashivaniya
na elektricheskiye svoystva shchelochno-galoidnykh kristallov)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, fizika, 1958,
Nr 5, pp 121-126 (USSR)

ABSTRACT: An alkali-halide crystal lattice is postulated in which the
density of 'natural' impurities (F-centres, lattice imperfect-
ions) is constant, and into which is introduced an additional
type of impurity whose concentration varies in a known manner
with time. The added impurity atoms are (or become) ionised
and contribute to the electrical properties of the lattice.
One may associate for example an ionic conductivity σ_1^i with

the added impurity, which is distinguishable from the ionic
conductivity σ_1 associated with the F-centres. When a

potential difference P is applied across such a crystal the
following relations hold:

$$\frac{dx}{dt} = -\frac{\sigma_1 P}{\sigma_1^i + \sigma_2 - \sigma_1} \cdot \frac{1}{E^2} \cdot \frac{dE}{dt} = uE \quad . \quad (1)$$

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SOV/139-58-5-26/35

Influence of Additive Coloration on Ele   . Properties of Alkali-
Halide Crystals

Here E is the field associated with P , σ_2 is the
electronic conductivity, deriving fro. the electrons of the
added impurity atoms, x is a measure of the concentration
of impurity atoms, and u is the mobility of the F-centres.
The σ's and u are related, via the mean free path, to the
lattice temperature, and this leads to t'·e following expression
for the total current at time t and temperature T :

$$I = I_0 I_1 \left[I_1^2 + (I_0^2 - I_1^2) \frac{t}{T} \right]^{-\frac{1}{2}} \tag{3}$$

where I_0, I_1 are respectively the current contributions from
the added impurity atoms and the F-centres. If one further
denotes the ionic part of I_0 by I_{0i} (and hence the electron-
ic part by $I_0 - I_{0i}$) then the F-centre concentration may be

Card 2/4

SOV/139-58-5-26/35

Influence of Additive Coloration on Electrical Properties of Alkali-Halide Crystals

expressed in terms of the I's thus:

$$N = \frac{2TI_1}{e\ v} \cdot \frac{J_0 - J_{01}}{I_0 + I_1} \tag{4}$$

where e denotes the electronic charge and v the crystal volume. Hence measurements of the impurity current enable the F-centre concentration to be deduced. Further, measurements of σ at various temperatures and known impurity concentrations enable the F-centre mobility to be determined: log σ plotted against T^{-1} gives a straight line whose slope is the mobility. Such curves were plotted from measurements on crystals of KCl, KBr and NaCl, to which impurities had been added, at various temperatures. The effect of the added impurity was to increase the F-centre mobility by a factor varying from about 3 at 600°C to 5 at 450°C. The work was first reported at the Conference of Higher Education Establishments on Dielectrics and Semiconductors at Tomsk, in

Card 3/4

SOV/139-58-5-26/35

Influence of Additive Coloration on Electrical Properties of Alkali-Halide Crystals

February, 1958. The paper contains 1 table, 4 figures and 9 references (5 Soviet, 4 German).

ASSOCIATION: Pskovskiy pedinstitut;Severo-osetinskiy pedinstitut
(Pskov Pedagogical Institute; North Osetian Pedagogical Institute)

SUBMITTED: April 7, 1958.

Card 4/4

67192

SOV/58-59-7-15679

On the Effect of Coloration Processes on the Electrical Conductivity of Crystals of Alkali Halide Salts

studied in the 250° to 650°C range. Measurements showed that the magnitude of σ , which drops as a result of coloration and subsequent decoloration, is maintained at various temperatures. In a field range of 100 to 1,500 v/cm Ohm's law is satisfied in decolored and control crystals in the case of rising temperatures. Under certain conditions of the experiment (unidirectional currents, a diverse number of values of the applied voltage) a deviation from Ohm's law can be observed in any sample in the case of falling temperatures. This fact is not connected with characteristics of the decolored condition; it is explained by the effect of high-resistance layers developing near the electrodes in dielectrics that are being formed (RZhFiz, 1956, Nr 1, 1112).

L.K.

Card 2/2

S/058/62/000/006/076/136
A061/A101

AUTHOR: Tarasenko, G. D.

TITLE: A study of the space charge arising with the motion of F centers
in alkali halide crystals

PERIODICAL: Referativnyy zhurnal, Fizika, no. 6, 1962, 24, abstract 6E204
("Uch. zap. Kabardino-Balkarsk. un-t", 1961, no. 13, 87-92)

TEXT: The specific conductivities σ_1 and σ_2, relating to the decolored
zone (existing in the process of the color boundary shift) of a partially colored
KCl crystal, and to a completely decolored crystal, respectively, have been con-
fronted experimentally. They do not coicide, and σ_1 undergoes considerable varia-
tions with the motion of the color boundary, smoothly approaching σ_2 at the end
of decoloration. Results are explained by the effect of the colored on the non-
colored part of the crystal, i.e., by the formation of a space charge at the
boundary.

V. Yuzhakov
[Abstracter's note: Complete translation]

Card 1/1

42274

S/058/62/000/011/049/061

A160/A101

AUTHOR: Tarasenko, G. D.

TITLE: The electric properties of alkaline-haloid crystals subjected to coloring from a sharp cathode

PERIODICAL: Referativnyy zhurnal, Fizika, no. 11, 1962, 4, abstract 11-4-7a ("Uch. zap. Leningr. gos. ped. in-ta im. A. I. Gertsena", 1961, 207, 163 - 175)

TEXT: KCl and NaCl samples, grown from a smelt, were used for studying the relation between the currents and the time when introducing in the samples a cloud of color from a sharp cathode, and subsequently eliminating it. Observations were carried out of the velocity and the character of the fore front of the small spreading cloud of the F-centers. The measurings were conducted at temperatures of 450 - 700°C and at voltages of 100 - 1,200 v. Later on, the electric conductivity of the colored and then decolorized crystals was compared to the conductivity of untreated crystals at various temperatures. The investigations revealed that, as a result of coloring, the ionic conductivity of the

Card 1/2

The electric properties of...

S/058/62/000/011/049/0

A160/A101

crystals irreversibly decreases, the intensity of the cloud diminishes, and that its motion velocity increases. It is assumed that the conductivity of the colored crystal is caused by the interaction of two types of current carriers, the ions and the electrons, and that it does not represent a plain total of an invariable electrolytic and induced electron conductivity. There are 15 references.

I. A.

[Abstracter's note: Complete translation]

Card 2/2

ACCESSION NR: AR4032179   S/0058/64/000/002/E052/E052

SOURCE: Ref. zh. Fiz., Abs. 2E405

AUTHOR: Tarasenko, G. D.

TITLE: . Effect of metallic cadmium impurity on the electric conduc-
tivity of KCl crystals

CITED SOURCE: Uch. zap. Kabardino - Balkarsk. un-t, vy*p. 16,
1962, 267-272

TOPIC TAGS: potassium chloride crystal, electric conductivity, ef-
fect of cadmium impurity, electrolytic coloring, thermal coloring,
color cloud

TRANSLATION: A comparison investigation is made of the electric
conductivity σ and of the electrolytic coloring of KCl-Cd crystals
and pure specimens at temperatures (T) above 300°C. The low tem-

Card 1/2

ACCESSION NR: AR4032179

perature conductivity in KCl-Cd is much lower than in the pure speci-
mens. From the $\ln\sigma - T^{-1}$ relation it follows that the mechanism of
conductivity at high and low temperatures is the same. At room tem-
perature $\sigma = 10^{-25}$ ohm^{-1} cm^{-1}. Thermal coloring in KCl-Cd in con-
tact with sodium begins at higher temperatures than in pure speci-
mens, and proceeds much more slowly. The color cloud in mixed
crystals has a high intensity which depends little on T, and is
practically stationary in the electric field. The "current-time"
curves plotted as the color cloud moves in KCl-Cd are not monotonic.
It is assumed that the colored cloud is colloidal sodium. Sugges-
tions are advanced with respect to the mechanism of the processes.
V. S.

DATE ACQ: 31Mar64   SUB CODE:. PH   ENCL: 00

Card   2/2

L 16189-63   EWT(1)/EWP(q)/EWT(m)/BDS   AFFTC/ASD/ESD-3/IJP(C)   JD

ACCESSION NR: AR3005165   S/0058/63/000/006/E081/E081   6/

SOURCE: RZh. Fizika, Abs. 6 E544

AUTHORS: Tarasenko, G. D.; Okazova, F. N.

TITLE: Some data on the electric conductivity of KCl crystal irradiated by light of an aluminum spark at high temperatures

CITED SOURCE: Uch. zap. Kabardino-Balkarsk. un-t, vy*p. 16, 1962, 272-278

TOPIC TAGS: Potassium chloride crystal, electric conductivity, aluminum arc irradiation

TRANSLATION: The electric conductivity of single-crystal KCl with Pt electrodes was measured prior to irradiation, during the course of irradiation with a condensed Al-spark, and after cessation of the irradiation, in fields of 50--100 V/cm at temperatures 270--540°C. Freshly grown crystals, additively colored and discolored, were investigated. Depending on the intensity of the irradiation, the conductivity was either increased or decreased by the radiation, and when the air layer between the spark and the crystal was 1.5--2 cm thick, only weakly pulsating

Card 1/2

L 16189-63

ACCESSION NR: AR3005165   O

currents were observed. The decrease in the conductivity is a process that is
reversible in time, and the conductivity increase obtained during the irradiation
is conserved to a considerable degree after the cessation of the irradiation.
Curves are presented for the time variation of the current flowing through the
crystal, before and after the irradiation. It is assumed that when the crystal is
irradiated two processes occur simultaneously: 1) the anion vacancies capture the
electrons released as a result of irradiation, causing an increase in the number
of free cation vacancies and a decrease in the crystal conductivity, and 2) the
metastable levels of the electrons released by the radiation and by the thermal
motion from the regular anions and negative ions of the impurity become attached
to the positive ions of the impurities; this leads to a decrease in the number of
the ordinary current carriers in the crystal and a drop in its conductivity. The
first or second process may predominate, depending on the experimental conditions.
A. Poletayev.

DATE ACQ: 15Jul63   SUB CODE: PH   ENCL: 00

Card 2/2

TARASENKO, G. G.

25844

Meshvidovye skreshchivaniya u yabloni, Trudy po prikl. Botanke, genetike i
selektsii (Vsesoyuz, in-t rastenievodstva) T. XXVIII, vyp. 2, 1949, s. 151-60.
Bibliogr: 9 naz.

    ZH. Lesovodstvo
       (Lesozagotovki - sm. XVI, II)

SO: Letopis' No. 34

BORISOVA, Ye.A., GLAZUNOV, S.G., TARASENKO, G.N.

Hight strength titanium alloys for the manufacture of sheet.
Titan i ego splavy no.3:94-98 '60.   (MIRA 13:7)
(Titanium alloys--Testing)   (Sheet metal)

TARASENKO, G.N.; GLAZUNOV, S.G.

New thermally hardenable BT15 alloy. Metalloved. i term. obr.
met. no.2:41-45 F '63.   (MIRA 16:3)
                        (Titanium-chromium-molybdenum alloys--Hardening)

L 14320-65   EPF(n)-2/EWT(m)/EWP(b)/EWP(t)   Pu-4   ASD(m)-3/AFTC(p)/IJP(c)
JD/JG/MLK
ACCESSION NR: AT4048053   S/0000/64/000/000/0058/0073

AUTHOR: Ageyev, N. V.; Glazunov, S. G.; Petrova, L. A.; Tarasenko, G. N.;
Grankova, L. P.

TITLE: Stability of Beta alloys of the Ti-Mo-Cr-Fe-Al system

SOURCE: Soveshchaniye po metallurgii, metallovedeniyu i primeneniyu titana i yego
splavov. 5th, Moscow, 1963. Metallovedeniye titana (Metallography of titanium);
trudy* soveshchaniya. Moscow, Izd-vo Nauka, 1964, 58-73

TOPIC TAGS: alloy structure, Beta alloy, alloy phase transformation, titanium
alloy, molybdenum alloy, chromium alloy, iron alloy, aluminum alloy

ABSTRACT: Previous studies have shown the critical concentration for the β-solid
solution of another element in titanium to be between 6 and 9%, and that the most
stable of these combinations are formed by rhenium, nickel, molybdenum, and tung-
sten. Recently, there has been much interest in multicomponent alloys with the
metastable β-structure, which have high technological versatility when hardened.
For these and other reasons the authors decided to study the Ti-Mo-Fe-Cr-Al sys-
tem, both in its β-phase and with an eye to choosing alloys for more detailed
experimentation. The samples chosen for experimentation had molybdenum in con-
centrations of wt. 2-8%, chromium from 4-9%, iron from 3-8%, titanium from 81-83%,
Card 1/2

L 14320-65
ACCESSION NR: AT4048053

and aluminum constant at 3%. All samples but one were held at 200C for 100 hours, and that one was held at 200C for 9 hours. Two samples were also held at 300C for 100 hours; all the remaining samples disintegrated. Four of them disintegrated with the precipitation of the W-phase, which lasted 100 hours longer; the others disintegrated with the precipitation of the α-phase. Samples which had 2 and 5% Mo did not depend, for the stability of their properties, on the corresponding amounts of chromium and iron within the limits studied. The samples with 2% Mo had amounts of chromium decreasing from 9.07 to 3.76% while the iron increased from 2.8 to 7.3%; the amount of chromium in samples with 5% Mo decreased from 9.40 to 4.08% while the amount of iron increased from 3.04 to 5%. In samples containing up to 5% each of iron and chromium, 1 or 2% more than 5% Mo did not significantly increase the stability of the β-alloy, and the delay in the process of disintegration is hardly worth the cost. Orig. art. has: 2 tables, 23 graphs, 11 photomicrographs, and 4 roentgenograms.

ASSOCIATION: none

SUBMITTED: 15Jul64   ENCL: 00   SUB CODE: MM

NO REF SOV: 005   OTHER: 000

Card   2/2

ACCESSION NR: AP4041145 ·   S/0020/64/156/004/0789/0791

AUTHOR: Ageyev, N. V.; Glazunov, S. G.; Petrova, L. A.; Tarasenko, G. N.;
Grankova, L. P.

TITLE: Dislocations in the titanium - molybdenum - iron - aluminum alloys

SOURCE: AN SSSR. Doklady*, v. 156, no. 4, 1964, 789-791, and insert facing p. 790

TOPIC TAGS: alloy dislocation, Ti Mo Fe Al, alloy, chilled alloy microstructure,
etching, electronicroscopic study

ABSTRACT: By analyzing the structure of a quenched β - alloy of Ti - Mo - Fe - Al,
the authors have found precipitations having the appearance of "sticks". Similar
"sticks" were found earlier in quickly chilled Ti - 10% Mo alloys by T. H. Scho-
field et al. (Acta Metallurgica 7, no. 6, 403, 1959) who described them as regular
arrays of etch holes caused by unstable groups of dislocations which are changed
during cooling into a stabler net of subgrains. X-ray diffraction patterns obtained
by the present authors show no presence of a new phase such as titanium hydride.
It is pointed out that dislocations which are present in all metals, become appar-
ent only under favorable conditions of etching. Electronicroscopic study of the
"sticks" has actually demonstrated that they are formed by a series of little

Card 1/2

ACCESSION NR: AP4041145

holes. Orig. art. has: 4 figures.

ASSOCIATION: Institut metallurgii im A. A. Baykova (Institute of Metallurgy)

SUBMITTED: 02Feb64   ENCL: 00

SUB CODE: MM   NO REF SOV: 005   OTHER: 002

Card2/2

L 45429-65   EWT(m)/EWP(w)/EPF(n)-2/EWA(d)/T/EWP(t)/LWP(z)/EWP(b)/EWA(o)

Pu-4   IJP(c)   MJW/JD/JG/GS

ACCESSION NR: AT5011354   UR/0000/65/000/000/0211/0215

AUTHOR: Vinogradova, Ye. A.; Lashko, N. F.; Tarasenko, G. N.

TITLE: Phase composition of a transition-class aging titanium alloy

SOURCE: Fazovyy sostav, struktura i svoystva legirovannykh staley i splavov (Phase composition, structure, and properties of alloy steels and alloys). Moscow, Izd-vo Mashinostroyeniye, 1965, 211-215

TOPIC TAGS: titanium alloy, alloy aging, transitional alloy, alloy phase composition, alloy heat treatment, alloy mechanical property, chromium containing alloy, molybdenum containing alloy, aluminum containing alloy

ABSTRACT: Alloy VT15 of the system Ti-Al-Cr-Mo, containing 3% Al, 11.5% Cr, and 7% Mo, was quenched from 800C and aged under various conditions, then subjected to x-ray powder analysis. Aging was found to be associated with (1) a marked change in the chemical composition of the β phase, (2) distortion of its crystal lattice, and (3) precipitation of the α phase. The aging process occurred at the same rate after quenching in water and after quenching in air. The precipitation of the α phase causes an increase in ultimate strength and a corresponding decrease in plasticity. Alloy VT15

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L 45429-65

ACCESSION NR: AT5011354

O

has high mechanical characteristics after quenching from 760-800C in air and aging at 450-480C for 25-50 hrs. This is due to the two-phase structure of this alloy. In the course of aging, the alloy matrix (β phase) becomes enriched with the alloying elements (chromium and molybdenum), and thus its thermal stability improves. Hardening of the β phase is increased by the distortion of its crystal lattice when the disperse particles of the $\sim$ phase precipitate. These particles have an inhibiting effect on the development of plastic deformation. Orig. art. has: 1 figure and 2 tables.

ASSOCIATION: none

SUBMITTED: 17Dec64   ENCL: 00   SUB CODE: MM,SS

NO REF SOV: 002   OTHER: 002

Card 2/2

L 55852-65   EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EPF(n)-2/EWP(b)   Pu-4   IJP(c)   JD/JG

ACCESSION NR: AP5013117

UR/0370/65/000/002/0141/0146
669.295

AUTHOR: Ageyev, N. V. (Moscow); Glazunov, S. G. (Moscow); Petrova, L. A. (Moscow); Tarasenko, G. N. (Moscow); Grankova, L. P. (Moscow)

TITLE: Hot hardness in β alloys of the Ti-Mo-Cr-Fe-Al system

SOURCE: AN SSSR. Izvestiya. Metally, no. 2, 1965, 141-146

TOPIC TAGS: titanium alloy, molybdenum alloy, chromium alloy, aluminum alloy, iron alloy, metal mechanical property

ABSTRACT: Hot hardness measurements on six Ti-Mo-Cr-Fe-Al alloys gave a preliminary idea of the over-all high temperature strength properties. Measurements were in the 20-1000°C range (after holding for one minute) and hardness versus time plots (1, 5, 15, 30 minutes) were also obtained at 20, 500, and 800°C under a load of 1 Kg. Differences in positions of maximum hardness for the forged at 1000°C but not reheated to 700°C specimens is said to be caused by the different amounts of α segregations. Alloy compositions used had somewhat varying compositions. Non heat-treated (forged) alloys maintained a higher hot hardness than heat treated al-

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L 55852-65

ACCESSION NR: AP5013117

loys, i.e. hardness at 600°C was about the same as room temperature. A sharp drop
is noticed after 700°C. The 700°C reheat does not provide enough time for the at-
tainment of equilibrium conditions. A truer picture of β precipitation would be
attained with longer annealing time under vacuum. Hardness versus time curves some-
times show slight rises with increasing time due to precipitation of β. High tem-
perature hardness in the 20-600°C range indicated effectual high temperature
strengthening. Orig. art. has: 2 figures, 1 table.

ASSOCIATION: none

SUBMITTED: 24Feb64   ENCL: 00   SUB CODE: MM

NO REF SOV: 005   OTHER: 000

Card 2/2

L 57509-65   EWT(m)/EWP(w)/EPF(n)-2/EWA(d)/EPR/T/EWP(t)/EWP(b)/EWA(c)   Ps-4/Pu-4
IJP(c)   JD/JG
ACCESSION NR: AP5013155   UR/0129/65/000/005/0033/0035
                                            669.295'71'26'28:621.785.74

AUTHOR: Ageyev, N. V.; Glazunov, S. G.; Petrova, L. A.; Tarasenko, G. N.;
Grankova, L. P.

TITLE: Aging of β-alloys in the Ti-Mo-Cr-Fe-Al system

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 5, 1965, 33-35,
and insert facing p. 24

TOPIC TAGS: titanium alloy, chromium alloy, molybdenum alloy, aluminum alloy,
metal physical property, metal hardness, metal aging

ABSTRACT: An attempt was made to find an aging treatment which gives maximum hard-
ness and strength. A series of β-alloys were selected for studying structure and
hardness as a function of aging temperature from 300 to 1000°C. The Ti alloys in-
vestigated varied in composition: Mo (1.6-7.9%), Cr (3.4-7.7%), Fe (3.1-6.1%) and
Al (3.2-3.6%). After due processing and heat treatment, the alloys were examined
by x-ray analysis, and Vickers hardnesses were measured. Both metallographic and
x-ray techniques showed β-solid solutions. All of the hardness data are given in

Card 1/4

L 57509-65

ACCESSION NR: AP5013155   0

fig. 1 of the Enclosure. The alloys were aged, after prior annealing and treatment, for one hour at temperatures ranging from 300 to 1000°C. The hardness shows a maximum around 500-550°C depending on the alloy. From 600-800°C the hardness gradually diminishes, and after 800°C an insignificant increase is noted in some alloys. All of the alloys have β-solid solution structures when aged at 300 and 400°C. A mixture of α+β is noted after aging above 450°C, paralleling the increase in hardness. The maximum in hardness coincides with the greatest quantity of α-phase, and upon further aging the quantity of α-phase diminishes as does the hardness. At 800°C, all alloys revert to a β-solid solution.

ASSOCIATION: none

SUBMITTED: 00   ENCL: 02   SUB CODE: KM, AS

NO REF SOV: 001   OTHER: 000

Card 2/4

L 27511-66   EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/ETT   IJP(c)   JD/JG/GS/JH

ACC NR: AT6012374   SOURCE CODE: UR/0000/65/000/000/0089/0091

AUTHORS: Ageyev, N. V.; Glazunov, S. J.; Petrova, L. A.; Tarasenko, G. N.; Grankova, L. P.

ORG: none

TITLE: Investigation of alloys of the system Ti--Mo--Cr--Fe--Al

SOURCE: Soveshchaniye po metallokhimii, metallovedeniyu i primeneniyu titana i yego splavov, 6th. Novyye issledovaniya titanovykh splavov (New research on titanium alloys); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1965, 89-91

TOPIC TAGS: titanium, iron, chromium, molybdenum, aluminum, titanium alloy, metal aging, annealing, hardness, x ray spectrum

ABSTRACT: The effect of annealing and aging on the hardness and x-ray spectra of alloys derived from the system Ti--Mo--Cr--Fe--Al was studied. The experimental procedure was described earlier by N. V. Ageyev, and L. A. Petrova (Dokl. AN SSSR, 1961, 138, No. 2, 359). Five different alloy compositions were studied, and the experimental results are presented graphically (see Fig. 1). Photographs of polished sections of the alloys annealed at different temperatures and aged for different periods of time are presented. The presence of satellite lines in the x-ray spectrograms are noted, but the authors refrain from giving an explanation for their presence. It is concluded that the alloys may prove interesting as low-alloy β-stabilizing high-strength titanium alloys.

Card 1/2

L 27511-66

ACC NR: AT6012374
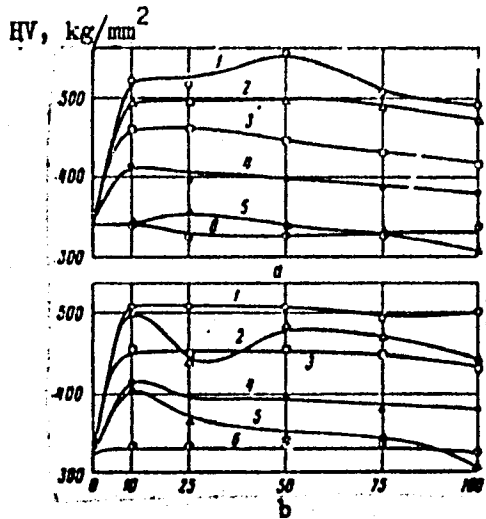
Fig. 1. Hardness of alloys as a function of the temperature and duration of aging. Aging temperature in C: 1 - 350; 2 - 400; 3 - 450; 4 - 500; 5 - 550; 6 - 600. (a) alloy 1T (2.9% Fe; 5.35 Cr; 1.47 Mo, 2.53 Al; 0.020 C; and 0.025 N); (b) alloy 5T (3.01% Fe; 7.7 Cr; 0.7 Mo; 1.2 Al; 0.016 C; and 0.021 N).

Orig. art. has: 1 table and 5 figures.

Card 2/2 BLG SUB CODE: 11/ SUBM DATE: 02Dec65/ ORIG REF: 004

L 29192-66   EWT(m)/EWP(w)/T/EWP(t)/ETI/EWP(k)   IJP(c)   JD/HW/JG

ACC NR: AP6016583   (A)   SOURCE CODE: UR/0129/65/000/005/0012/0014

AUTHOR: Ageyev, N. V.; Glazunov, S. G.; Petrova, L. A.; Tarasenko, G. N.; Grankova, L. P.; Shelest, A. Ye.

ORG: none

TITLE: High-temperature thermomechanical treatment of β-alloy of the Ti-Mo-Cr-Fe-Al system

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 5, 1966, 12-14

TOPIC TAGS: thermomechanical treatment, titanium alloy, titanium beta alloy, molybdenum containing alloy, iron containing alloy, aluminum containing alloy, alloy thermomechanical treatment, alloy mechanical property, alloy structure

ABSTRACT: Forged specimens of complex titanium-base alloy containing 7%Mo, 5.5%Cr, 3%Fe, and 3%Al were subjected to high-temperature thermomechanical treatment (HTMT), rolled at 850, 950, and 1050C with a 20, 40, and 60% reduction in one pass and 80% in two passes, immediately water quenched, and then aged at 450C for 15 and 25 hr, at 500C for 5 and 10 hr, or at 525C for 5 hr. HTMT increased alloy strength without affecting ductility. For example, prior to aging the tensile strength of alloy hot rolled at 950C with a reduction of 20, 40, 60, and 80% was 96.5, 105.0, 96.7, and 99.5 kg/mm^2, respectively, compared with 77.3 kg/mm^2 for alloy quenched from the same temperature without deformation. The corresponding figures for elongation were

Card 1/2   UDC: 295:621.771:621.735.61'74

L 29192-66

ACC NR:	AP6016583	2

16.6, 18.4, 17.7, and 18%, respectively, compared with 16.9%. The increased strength of the alloy after HTMT is explained by strain hardening and fragmentation of the β-alloy grains. Aging produced a further significant increase of strength. The best combination of strength and ductility was obtained after HTMT with 60—80% reduction at 850C and aging at 500C for 10 hr or 525C for 5 hr, after which the alloy had a tensile strength of 164—177 kg/mm^2, an elongation of 4.5—9.0%, and a reduction of area of 8—15%. This effect of aging was found to result from the precipitation of the finely dispersed α-phase. Orig. art. has: 3 figures and 1 table.   [MS]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 008/ ATD PRESS: 5604

Card 2/2 BLG

L 29192-66   EWT(m)/EWP(w)/T/EWP(t)/ETI/EWP(k)   IJP(c)   JD/HW/JG

ACC NR: AP6016583   (A)   SOURCE CODE: UR/0129/65/000/005/0012/0014

AUTHOR: Ageyev, N. V.; Glazunov, S. G.; Petrova, L. A.; Tarasenko, G. N.; Grankova, L. P.; Shelest, A. Ye.

ORG: none

TITLE: High-temperature thermomechanical treatment of β-alloy of the Ti-Mo-Cr-Fe-Al system

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 5, 1966, 12-14

TOPIC TAGS: thermomechanical treatment, titanium alloy, titanium beta alloy, molybdenum containing alloy, iron containing alloy, aluminum containing alloy, alloy thermomechanical treatment, alloy mechanical property, alloy structure

ABSTRACT: Forged specimens of complex titanium-base alloy containing 7%Mo, 5.5%Cr, 3%Fe, and 3%Al were subjected to high-temperature thermomechanical treatment (HTMT), rolled at 850, 950, and 1050C with a 20, 40, and 60% reduction in one pass and 80% in two passes, immediately water quenched, and then aged at 450C for 15 and 25 hr, at 500C for 5 and 10 hr, or at 525C for 5 hr. HTMT increased alloy strength without affecting ductility. For example, prior to aging the tensile strength of alloy hot rolled at 950C with a reduction of 20, 40, 60, and 80% was 96.5, 105.0, 96.7, and 99.5 kg/mm^2, respectively, compared with 77.3 kg/mm^2 for alloy quenched from the same temperature without deformation. The corresponding figures for elongation were

Card 1/2   UDC: 295:621.771:621.735.61'74

L 29192-66

ACC NR: AP6016583

2

16.6, 18.4, 17.7, and 18%, respectively, compared with 16.9%. The increased strength of the alloy after HTMT is explained by strain hardening and fragmentation of the β-alloy grains. Aging produced a further significant increase of strength. The best combination of strength and ductility was obtained after HTMT with 60—80% reduction at 850C and aging at 500C for 10 hr or 325C for 5 hr, after which the alloy had a tensile strength of 164—177 kg/mm², an elongation of 4.5—9.0%, and a reduction of area of 8—15%. This effect of aging was found to result from the precipitation of the finely dispersed α-phase. Orig. art. has: 3 figures and 1 table.   [MS]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 008/ ATD PRESS: 5004

Card 2/2   BLG

L 44354-66   EWT(m)/EWP(t)/ETI/EWP(k)   IJP(c)   JD/HW/JG

AUTHOR: Ageye·, N. V. (Moscow); Glazunov, S. G. (Moscow); Petrova, L. A. (Moscow); Tarasenko, G. ... (Moscow); Grankova, L. P. (Moscow)

ORG: none

TITLE: Investigation of metastable β-alloys of the Ti-Mo-Fe-Al system

SOURCE: AN SSSR. Izvestiya. Metally, no. 1, 1966, 139-148

TOPIC TAGS: phase analysis, quaternary alloy, titanium base alloy, molybdenum, iron, aluminum, metal aging, mechanical property

ABSTRACT: This is a continuation of previous investigations (Ageyev, N. V., Rogachevskaya, Z. M. Zh. neorgan. khimii, 1959, IV, vyp. 10, 2323-2328; Ageyev, N. V., Grankova, L. P., Novik, P. K. Dokl. AN SSSR, 1962, 146, no. 2, 351-354) with the difference that it deals with Ti-Mo-Fe-Al alloys which quench to the β-solid solution, i.e. have an electron concentration of more than 4.20 el/at, but contain not more than 8.5% Fe and 8% Mo as well as 2.3 and 4% Al, and hence are of greater practical interest. Ingots of these alloys were melted by using a mixture of titanium sponge, Al-Mo master alloy, pure Al and armco iron. The ingots,

Card 1/2   UDC: 669.295

L 44354-66

ACC NR: AP6019834

weighing 400 g, were lathe-turned and subsequently hot-forged in an electric furnace at 1000-1100°C into rods of 15 mm diameter and squares measuring 15x15 mm. The forged alloys were annealed at 750 and 800°C for 1 hr and water-quenched. All the alloys quenched from 750°C had the β + α phase structures, and all those quenched from 800°C, the structure of the β-solid solution, as was to be expected from their electron concentration. The forgings were milled in a milling machine and cut up into specimens for microstructural and radiographic examination as well as for tests of hardness and tensile strength. Measurements of the Vickers hardness of these alloys as a function of aging temperature (200-600°C) and time (1-100 hr) revealed that for most of the alloys hardness reaches its maximum (~500 kg/mm) after 10-25 hr at any aging temperature within the limits considered and thereafter remains virtually constant for 100 hr. β-alloys containing 2% Al, when heated to 400-500°C, undergo decomposition with segregation of ω-phase which gets transformed into α-phase after 10 hr. β-alloys containing 3 and 4% Al undergo decomposition with segregation of α-phase. Of the alloys of Ti + 7% Mo + 6% Fe + 2,3 and 4% Al the best mechanical properties (tensile strength 160 kg/mm^2, plasticity 7.0%) were displayed by the alloy with 3% Al aged at 525°C for 20 hr and subsequently cooled in air. Orig. art. has: 7 figures, 3 tables.

SUB CODE: 11, 🔺 13/ SUBM DATE: 02Mar65/ ORIG REF: 005/

Card 2/2   blg

ACC NR: AT6012373   SOURCE CODE: UR/000C/65/000/000/0082/0088

AUTHORS: Kishkin, S. T.; Polyak, E. V.; Solonina, O. P.; Moiseyev, V. N.; Tarasenko,
G. N.; Kurayeva, V. P.

ORG: none

TITLE: Structural transformations in titanium alloys

SOURCE: Soveshchaniye po metallokhimii, metallovedeniyu i primeneniyu titana i yego
splavov, 6th. Novyye issledovaniya titanovykh splavov (New research on titanium
alloys); trudy soveshchaniya, Moscow, Izd-vo Nauka, 1965, 82-88

TOPIC TAGS: titanium, titanium alloy, annealing, phase composition, alloy, electron microscopy/ VT3-1 alloy, VT14 alloy,
VT16 alloy, VT15 alloy, VT10 alloy

ABSTRACT: The structural transformations induced by annealing in $(\alpha + \beta)$ alloys of
the types VT3-1, VT14, and VT16, in β alloy of VT15 and in α alloy of VT10, con-
taining an intermetalloidal strengthening agent, were studied. The study was carried
out by means of electron microscopy. Electron microscope photographs of specimens
annealed at different temperatures are presented. Annealing alloys under different
conditions leads to a phase transformation in the alloys. The optimum phase composi-
tion that possesses maximum strength and plasticity was found to consist of single α-
phase regions and highly dispersed heterogeneous $(\alpha + \beta)$ phase regions resulting
from the decomposition of the metastable β-phase. Thermal stability of alloys may be
increased by the addition of aluminum to the alloy. Orig. art. has: 2 figures.

Card 1/1   SUB CODE: 11/ SUBM DATE: 02Dec65

TARASENKO, G.T. [Tarasenko, H.T.], kand.med.nauk; MAKARENKO, V.A., nauchnyy
sotrudnik; LEVITSKIY, G.M. [Levyts'kyi, H.M.], nauchnyy sotrudnik

Case of perforation of an ovarian cyst in a woman in the eighth
month of pregnancy. Ped., akush. i gin. 23 no.4:3 of cover '61.
(MIRA 17:1)

1. Akushersko-ginekologicheskoye otdeleniye (zav. - prof.S.P.Vino-
gradova [Vynohradova, S.P.] Ukrainskogo nauchno-issledovatel'skogo
instituta okhrany materinstva i detstva im. Geroya Sovetskogo So-
yuza prof.P.M.Buyka (direktor - kand.med.nauk A.G.Pap [Pap, A.H.]).

S/032/60/026/008/034/046/XX
B020/B052

AUTHOR: Tarasenko, I. I.

TITLE: Method for the Determination of Yield Points During Torsion

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol. 26, No. 8,
              pp. 1006 - 1008

TEXT: The author suggests a new method for determining the yield points
during torsion, which is based upon the hypothesis of similarity be-
tween torsion and tension diagrams and which corresponds to the modern
plasticity theory. According to this hypothesis, the tangential stresses
τ and the displacements γ during torsion, interact with the normal
stresses σ and the corresponding elongation ε such that

$$\tau = \lambda\sigma \qquad\qquad \gamma = \psi\varepsilon \qquad\qquad (1)$$

with λ denoting the tension coefficient and ψ the deformation coeffici-
ent. The values of the coefficients depend on the theory of strength.
For the determination of the yield point by the method suggested, the
sample is gradually loaded by a torsion moment. The torsion angle of
each stage is then measured by a tensometer, and the test diagram is

Card 1/2

Method for the Determination of Yield   S/032/60/026/008/034/046/XX
Points During Torsion   B020/B052

plotted in the coordinates M - γ_r (γ_r = θr). From this diagram, the tor-
sional moment is determined. It corresponds to the proportionality limit
of torsion and displacement, and also follows Hook's law. According to
the hypothesis regarding the similarity of torsion and tension diagrams,
the complete relative displacement γ_T corresponds to the yield point,

i.e. γ_T = γ_{rel}/α_T, with α_T denoting the material constant which can be
calculated from the elongation tests. From the diagram M - γ (Fig.),
the limit torsional moment M_T, and from it the yield point τ_T are com-

puted. In determining the yield points by the method suggested the test
curves for determining the quantity τ cannot be graphically examined by
the Ludwig equation nor by N. N. Davidenkov's method (see Fig.). The ex-
periments proved the correctness of the relations obtained. There are
1 figure and 2 Soviet references.

ASSOCIATION: Leningradskiy inzhenerno-stroitel'nyy institut (Leningrad
               Institute of Construction Engineers)

Card 2/2

TARASENKO, I.I.

Failure Mechanics of Iron

1711. Tarasenko, I. I. On the conditions of failure of metals (in Russian). *Zh. tekh. Fiz.* 21, 11, Izm 1111, Nov. 1951

To combine the generalized stress-strain curves for different methods of loading, author introduces the concept of a "constant modulus of plasticity" for the equivalent state of stress, such as yield point, ultimate tensile strength, fracture, etc., in which he assumes that equivalent points of all curves lie on a single ray through the origin. Then he introduces the concept of a reduction coefficient, relating approximate equivalent yield stress for each method of loading to the yield stress of the simple tension curve, and accepts this coefficient for the plastic part of the curve as constant. In his remark-rations he assumes the colinearity of deviation of stress and strain vectors, and the incompressibility of the metal. Author provides some experimental data which, in the reviewer's opinion, do not supply an experimental support for his concepts.

Witold Nelaszkowski, USA

124-57-2-2232

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 2, p 110 (USSR)

AUTHOR: Tarasenko, I. I.

TITLE: Ductility and Strength Criteria for Metals (Usloviya plastichnosti i prochnosti metallov)

PERIODICAL: Nauch. tr. Leningr. inzh.-stroit. in-ta, 1956, Nr 23, pp 102-113

ABSTRACT: Ductility and strength criteria are proposed in the form of a linear relationship between the greatest tangential stress and the mean normal stress. It is noted that such a criterion was proposed earlier by N. N. Davidenkov (Vestn. inzh. i tekhnikov, 1947, Nr 4). From the experimental data adduced the author concludes that the said criterion yields better results than an analogous criterion which in lieu of the greatest tangential stress employs the magnitude of the intensity of the stresses. The author also proposes a refinement of the criterion relative to the effect of the stress deviation parameter. Ultimately the relationship

$$t_1 = t_{max} + ks + l \, s \, \sin \pi \nu$$

Card 1/2

124-57-2-2_32

Ductility and Strength Criteria for Metals

is obtained, where t_{max} is the greatest tangential stress, s is the mean normal stress, u is the Lode stress parameter, and t_1, k, and l are constants. The correction contained in the last term of the formula is introduced by the author on the basis of the well-known diagram for the cessation of the similarity between the stress and deformation deviators. The concepts manipulated by the author at this point remain incomprehensible. Theoretically it is impossible to establish a connection between the cessation of the similarity between the deviators and the resistance to deformation, yet the author fails to provide any experimental substantiation.

Yu. I. Yagn

1. Metals--Properties   2. Metals--Stresses   3. Mathematics

Card 2/2

SOV/124-57-8-9408

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 8, p 121 (USSR)

AUTHORS: Tarasenko, I. I., Tarasenko, Ye. N.

TITLE: Concerning Plasticity and Strength Criteria for Metals (K voprosu o kriteriyakh plastichnosti i prochnosti metallov)

PERIODICAL: Zap. Leningr. gorn. in-ta, 1956, Vol 33, Nr 3, pp 109-116

ABSTRACT: The authors examine two plasticity criteria: 1) The maximum tangential stress is a function of the mean hydrostatic stress, and 2) the octahedral stress is a linear function of the mean hydrostatic stress. To find the linear function in either case, one needs only to know the yield point of the material in tension and compression; one is then able to calculate the yield point in torsion. It emerges that adoption of the first-named criterion yields results that agree with the experimental findings of the present authors and with those of other investigators, whereas adoption of the second leads to an overrating of the yield point of the material in torsion.

V. A. Lomakin

Card 1/1

SOV/124-58-3-3248

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 3, p 103(USSR)

AUTHOR: Tarasenko, I. I.

TITLE: Calculation of Rigid Beams for Eccentric Compression and
            Tension (K raschetu zhestkikh sterzhney na vnetsentrennoye
            szhatiye i vnetsentrennoye rastyazheniye)

PERIODICAL: V sb.: 15-ya nauchn. konferentsiya Leningr. inzh. -stroit.
            in-ta. Leningrad, 1957, pp 382-386

ABSTRACT: Justification of the possibility of a considerable increase in
            the standards of permissible stresses is given for eccentric
            compression and tension of beams manufactured out of plas-
            tically deforming materials when calculated not according to
            their ultimate strength but nominally according to their elas-
            tic stage of deformation. Expressions are offered for coef-
            ficients that enable one to convert the permissible stresses
            for simple compression or simple tension into nominally
            permissible stresses under eccentric tension and eccentric
            compression. These coefficients were obtained from the
            factual curvilinear deformation diagrams of the material in
Card 1/2   the elastic-plastic zones and also approximately by the

SOV/124-58-3-3248

Calculation of Rigid Beams for Eccentric Compression and Tension

straightening of the stress curves from the limit of elasticity to the yield
strength.

N. I. Bezukhov

Card 2/2

SOV/124-58-11-13524

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 11, p 222 (USSR)

AUTHOR: Tarasenko, I. I.

TITLE: On Brittle-strength Criteria of Materials (O kriteriyakh khrupkoy prochnosti materialov)

PERIODICAL: Sb. nauchn. tr. Leningr. inzh.-stroit. in-t, 1957, Nr 26, pp 161-168

ABSTRACT: Ref. V sb.: 13-ya nauchn. konferentsiya Leningr. inzh.-stroit. in-ta, Leningrad, 1955, pp 214-215

Card 1/1

TARASENKO, I.I.; TARASENKO, Ye.N.

Brittle strength of isotropic materials. Zap. LGI 36 no.3:146-155
'58.   (MIRA 16:5)
                         (Strength of materials)

TARASENKO, I.I.

Resistance of metals to rupture. Zav.lab. 26 no.5:611-614 '60.
(MIRA 13:7)

1. Leningradskiy inzhenerno-stroitel'nyy institut.
(Metals--Testing)

S/137/62/000/007/042/072
A057/A101

AUTHORS: Tarasenko, I. I., Khaldina, O. N., Chebanov, V. M.

TITLE: Strength of steel in complex stressed states in case of simple and complex courses of loading

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 7, 1962, 31, abstract 7I180
             (In collection: "Issled. po uprugosti i plastichnosti", I. L.
             Leningr. un-t, 1961, 205 - 212)

TEXT: Strength characteristics of tube samples of steel 3 were investi-
gated at simple and complex courses of loading in biaxial tension. The rated
real stresses and deformations were determined by equations of the theory of
maximum normal stress and maximum relative elastic elongation, maximum tangential
stress, and the theory by Huber-Mises. At simple loading the course of loading
in the axes σ_z-σ_θ coincides with the radius starting from the origin of coor-
dinates at certain angles $\delta(\sigma_z/\sigma_\theta = tg\,\delta = const)$. The complex loading occurred
in two ways: a) course $\sigma_z = \sigma_z$ passed up to a definite load, and diverged in
different sides of the line $\sigma_\theta = \sigma_z$ perpendicularly to it until rupture; b) the

Card 1/2

Strength of steel in...

S/137/62/000/007/002/002
A057/A101

first part of the course passed along the line $G_j = 0$ or $G_z = 0$ up to a certain load, after which another stress was increased at constant G_j or G_z. At the investigated courses if complex loading the strength of the steel decreased by 5.5% in comparison to the strength at simple loading; at simple loading the experimental data are in better agreement with Sen-Vennan conditions of plasticity than with Mises conditions; the shape of the curves $G_1 = G_i(e_i)$ depends upon the course of loading. There are 5 references.

V. Osipov

[Abstracter's note: Complete translation]

Card 2/2

PANARIN, N.Ya., doktor tekhn. nauk, prof.; TARASENKO, I.I., kand.
   tekhn. nauk, dots.; KOSTOVTSEV, G.G., doktor tekhn. nauk,
   prof., nauchnyy red.; REYZ, M.B., red. izd-va; VORONETSKAYA,
   L.V., tekhn. red.

   [Strength of materials]Soprotivlenie materialov. Leningrad,
   Gosstroiizdat, 1962. 528 p.   (MIRA 15:9)
                    (Strength of materials)

TARASENKO, I.I.; KIMLAT, Z.A.

      Unit for investigating the extrusion of plastics. Mashinostroenie
      no.2:86 Mr-Ap '62.   (MIRA 15:4)

                         (Plastics--Molding)

L 16754-63   EWP(q)/EWT(m)/BDS   AFFTC/ASD   JD

S/124/63/000/004/050/064

AUTHOR: Tarasenko, I. I.

TITLE: Concerning the stability of compressed columns made of brittle and
             plastic materials.

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 4, 1963, 25, abstract 4V199
             (Stroit. mekhan. i raschet sooruzh., no. 5, 1962, 24-27)

TEXT: The author adduces familiar formulas for the critical loading of a central
compressed hinge-supported column of constant cross-section, the material of which
possesses various moduli for loading and for no load. With values of the critical
stresses close to the yield limit (in brittle materials, the breaking stress), the
author recommends the use of the relation s (epsilon) instead of sigma (epsilon),
where s is the true stress, sigma is the conditional stress computed for the initial
area of the transverse cross-section, epsilon is the conditional (not logarithmic)
deformation. By this method the critical flexibility is computed which corresponds
to the yield limit, for a material with clearly marked yield range. This flexibil-
ity turns out to be approximately equal to pi - this being 15-20 times less than the
empirical values for low-carbon steel of type St-3. B. M. Broude.

[Abstracter's note: Complete translation.]

Card 1/1

TARASENKO, I.I., inzh.; CHALIK, L.Ye., inzh.

Semiautomatic jig-boring machine with position programming
control. Mashinostroenie no.6:9-11 N-D '62.   (MIRA 16:2)

1. TSentral'noye konstruktorskoye byuro Gosplana UkrSSR.
                (Drilling and boring machinery)
                    (Automatic control)

TARASENKO, I.I. (Leningrad)

The stability of compressed rods of brittle and plastic materials.
Stroi.mekh.i rashch.soor. 4 no.5:24-27 '62.   (MIRA 15:11)
        (Elastic rods and wires)

MYLKO, Sergey Nesterovich, kand. tekhn. nauk; GONCHAROV, Ivan
Nikolayevich, kand. tekhn. nauk; TARASENKO, Ivan Ivanovich,
inzh.; KIMLAT, Zyurya Aronovich, inzh.; INDUTNYY, Yevgeniy
Vasil'yevich, inzh.; DOROFEYEV, Yuriy Grigor'yevich, kand.
tekhn. nauk; CHUKMASOV, S.F., doktor tekhn.nauk, retsenzent;
KUDELYA, F.Ya., inzh., retsenzent; TANCHAROVA, V.F., red.izd-
va; MATUSEVICH, S.M., tekhn. red.

[Uses for scrap metal] Ispol'zovanie metallicheskoi struzhki.
Kiev, Gostekhizdat USSR, 1963.   142 p.   (MIRA 16:12)
                         (Scrap metals)

SHLYAKHTIN, Ye.I.; ZHOROVA, A.G.; ANANCHENKO, M.V.; GRISHUTIN, V.G.;
    IVANOV, V.I.; DORONIN, A.A.; POPOVA, M.S., inzh.; TARASENKO, I.I.;
    ROMANOV, A.I.; ZHUKOV, A.V.; LAPTEV, G.I., inzh.

Who should perform the forwarding and carrier services?
Zhel. dor. transp. 45 no.6:42-45 Je '63.   (MIRA 16:7)

1. Zamestitel' nachal'nika stantsii Smolensk Moskovskoy dorogi
po gruzovoy rabote (for Shlyakhtin). 2. Nachal'nik pogruzkontory
stantsii Smolensk Moskovskoy dorogi (for Zhorova). 3. Zave-
duyushchiy gruzovym dvorom stantsii Smolensk Moskovskoy dorogi
(for Ananchenko). 4. Nachal'nik tovarnoy kontory stantsii
Smolensk Moskovskoy dorogi (for Grishutin). 5. Zaveduyushchiy
konteynernoy ploshchadkoy stantsii Smolensk Moskovskoy dorogi
(for Ivanov). 6. Sekretar' partiynogo byuro stantsii Smolensk
Moskovskoy dorogi (for Tarasenko). 7. Stantsiya Smolensk
Moskovskoy dorogi (for Doronin, Romanov, Popova). 8. Upravlya-
yushchiy Smolenskim oblastnym avtotrestom (for Zhukov).
                    (Freight and freightage)

TARASENKO, I. M.

"The Pests of Young Pine Plantings and Their Control in the Far Eastern Region of Khar'kovskaya Oblast." Cand Agr Sci, Khar'kov Order of Labor Red Banner Agricultural Inst imeni V. V. Dokuchayev, Min Higher Education USSR, Khar'kov, 1954. (KL, No 3, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (13)
SO: Sum. No. 598, 29 Jul 55

VOYEVODIN, A.V., kand. sel'skokhoz. nauk; KUDEL', K.Ye., nauchnyy sotrudnik;
    MURAROVA, O.I.; NIBYT, V.A.; TARASENKO, I.M., kand. biolog. nauk;
    SMELYANETS, V.P.; PALASKAS, D.N.; KOROBATOV, V.A., starshiy nauchnyy
    sotrudnik; BORDUKOVA, M.; KACHAYEVA, V., semenovod; GLINKA, Ye., agronom;
    SHEVCHENKO, A.B., aspirant; BOCHAROV, K.; GLEBOV, M.A., kand. ekonom.
    nauk

Results of herbicide testing. Zashch. rast. ot vred. i bol. 9
no.7:23-26 '64.
                                                        (MIRA 18:2)

1. Vsesoyuznyy institut zashchity rasteniy (for Voyevodin).
2. Ukrainskiy nauchno-issledovatel'skiy institut zashchity
rasteniy (for Kudel', Smelyanets). 3. Nachal'nik Kiyevskoy
oblastnoy stantsii zashchity rasteniy (for Murarova).
4. Zaveduyushchiy Mironovskim punktom signalizatsii (for Nibyt).
5. Nizhnedneprovskaya stantsiya obleseniya peskov i vinogradarstva
na peskakh, TSuryupinsk, Khersonskoy oblasti (for Tarasenko).
6. Zaveduyushchiy Kokandskim nablyudatel'nym punktom, Ferganskoy
oblasti (for Palaskas). 7. Azerbaydzhanskiy nauchno-issledovatel'-
skiy institut khlopkovodstva, Kirovabad (for Korobatov).
8. Zaveduyushchiy Moskovskoy kartofel'noy toksikologicheskoy
laboratoriyey (for Bordukova). 9. Sovkhoz "Voskresenskiy",
Moskovskoy oblasti (for Kachayeva). 10. Moskovskaya
kartofel'naya toksikologicheskaya laboratoriya (for Glinka).
11. Ukrainskiy institut rasteniyevodstva, selektsii i genetiki
imeni V.Ya. Yur'yeva (for Shevchenko). 12. Nachal'nik Kurskoy stantsii
zashchity rasteniy (for Bocharov).

22. NEGATIVE FRONT ANGLES FOR COAL CUTTING. Tarasenko, I. S.
(Ugol (Coal), Oct. 1950, 24 28).

Figures are given to show that for drilling in hard coal a
negative front angle on the bit of a rotary drill increased speed and
reduces wear on the bit.   (L).