BELYAKOV, BORIS NIKOLAYEVICH.

N/5
756.1
.B4

OBSLUZHIVANIYE PASSAZHIROV NA RECHNOM TRANSPORTE (PASSENGER ACCOMODATIONS ON RIVER TRANSPORTS)   MOSKVA, "RECHNOY TRANSPORTE", 1956.

70 P. ILLUS., DIAGRS.

BELYAKOV, B. P.

Centralized production of low-percentage iron-silicon-magnesium foundry alloys. Mashinostroenie no.5:112 S-O '62.
(MIRA 16:1)

(Melting)

BELYAKOV, B.P., inzh.

Binder based on vat residues of paraffin oxidation. Mashinostroenia
no.1 53-55 Ja-F '64.
(MIRA 17:7)

USSR/Cultivated Plants - Potatoes. Vegetables. Melons.   M

Abs Jour   : Ref Zhur Biol., No 12, 1958, 53608

Author   : Belyakov, E.V., Kut'in, G.G.

Inst   : Zhitomir Agricultural Institute

Title   : The Effect of Azotobacter on Eye Sprouting and the Yield
              of Potato Tubers. (With Regard to the Question of the
              Mechanism of Azptobacter Action)

Orig Pub   : Nauchn. tr. Zhitomirsk. s.-kh. in-t, 1957, 4, 145-152

Abstract   : This article gives the results of a laboratory experiment
              with potatoes showing that the treatment of the tubers
              with azotobacterin has some stimulating effect on the
              awakening of the eyes and the initial growth of the
              sprouts. However, this effect is very slight and is
              weaker than the cutting of tubers. In the field experi-
              ment, the treatment of whole tubers with azotobacterin

Card 1/2

- 34 -

BELYAKOV, F.P.

Universal workbenches used in schools. Politekh. obuch. no.1:84-88
Ja '57.   (MIRA 10:4)

(Workshops--Equipment and supplies)

BELYAKOV, P. Yev; BABIN, B.N.; BAL', V.; BOROVKOV, P.N.; VOYEVODIN, I.N.;
GUREVICH, G.M.; GORBUNOVA, P.I.; KONNOV, A.S.; KALANTAROVA, M.V.;
KASHIRSKIY, A.Ya.; KAZANCHEYEV, Ye.N.; LEKSUTKIN, A.F.; LETI-
CHEVSKIY, M.A.; LOPATIN, S.Z.; MIRSKIY, V.N.; PODSEVALOV, V.N.;
SUBBOTINA, V.P.; TANASIYCHUK, N.P.; FEDOTOV, S.D.; FISENKO, K.N.;
EL'KIND, I.G.; BOVIN, S.S.; VASIL'YEV, L.T.; DRINKOV, V.D.; DALE-
CHIN, N.I.; DADAGOV, I.A.; YERMOSHINA, V.I.; ZHUKOV, I.V.; ZIMIN,
D.A.; IVANNIKOV, A.Ya.; KOVALEV, M.K.; LUGAKOVSKIY, N.L.; NALEVSKIY,
A.F.; SEREZHNIKOV, V.K.; SEMIGLASOV, M.D.; SOKOLOV, A.V.; STEPANOV,
V.I.; SAKHARIN, G.S.; SAVENKO, P.A.; SOLODOV, V.P.; UMEROV, Sh.Kh.;
CHIKINDAS, G.S.; SHCHERBUKHINA, S.N.; DYNKIN, G.Z.; LYSOV, V.S.;
OSHEROVICH, A.N.; ROKITSINSKIY, E.V.; BRASLAVSKIY, M.S.; RUDENKO,
I.A.; ZHUKOBORSKIY, M.S.; ZHDANOV, I.Ye.; SUSLIN, V.A.; BRUS, A.Ye.;
VOLYNSKIY, S.A.; KLYUYEV, V.A.; ISTRATOV, A.G.; TIKHOMIROV, I.F.;
BUTYRIN, Ya.N.; VOLYNSKIY, S.A.; MINEYEV, M.F.; MAL'TSEV, V.I.;
VIDETSKIY, A.F., kand.tekhn.nauk, glavnyy red.; DEMIDOV, A.N., red.;
KRAVETS, A.L., red.; KLIMOVA, Z.I., tekhn.red.

[Industrial Astrakhan] Promyshlennaia Astrakhan'. Astrakhan',
Izd-vo gazety "Volga," 1959. 318 p.   (MIRA 12:11)

1. Astrakhan (Province) Ekonomicheskiy administrativnyy rayon.
        (Astrakhan Province--Economic conditions)

BELYAKOV, G.; ERMUSH, N. [Ermusa, N.]; KALNIN'SH, A. [Kalnins, A.]

Possibilities for the utilization of hydrophobic sand treated with wood tar. Vestis Latv ak no.3:85-90 '61.

1. Institut lesokhozyaystvennykh problem i khimii drevesiny AN Latviyskoy SSR.

BELYAKOV, Gr.

Panama Canal

Panama. Znan. sila 22 no. 8, 1952

BELYAKOV, G. (Riga); ERMUSH, N.[Ermusa, N.] (Riga ; KALNIN'SH, A.
[Kalnins, A.](Riga)

Possibilities of utilizing pitch-hydrophobized sand. Vestis Latv ak
no.3:85-90 '61.   (EEAI 10:9)

1. Akademiya nauk Latviyskoy SSR, Institut lesokhozaystvennykh
problem i khimii drevesiny.

                    (Concrete)   (Sand)

DEMOKIDOV, K.K.; ROMANOVICH, B.S.; BUSHKANETS, Yu.S.; BELYAKOV, G.D.

Geology of the Novaya Zemlya islands and of Vaygach Island. Trudy
Nauch.-issl. inst. geol. Arkt. 81:23-25 '57.   (MIRA 11:5)

1. Sotrudniki Nauchno-issledovatel'skogo instituta geologii Arktiki.
       (Novaya Zemlya--Geology)   (Vaygach Island--Geology)

(A) (N)   L 11165-66   EWT(1)/T   IJP(c)

ACC NR: AP6000364   SOURCE CODE: UR/0286/65/000/021/0057/0058

AUTHORS: Goncharenko, Ye. N.; Belyakov, G. F.

ORG: none

TITLE: Reproduction objective. Class 42, No. 176095

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 21, 1965, 57-58

TOPIC TAGS: optic lens, photographic equipment

ABSTRACT: This Author Certificate presents a reproduction objective constructed on the basis of the symmetric objective of the "Planar" type. To obtain different scales in the meridial and sagittal sections, to simplify the design, and to increase the light transmission coefficient, the first component is made of cylindrical lenses (see Fig. 1). A negative cylindrical lens is placed close to the image surface.

Card 1/2   UDC: 535.317:227:771.351.74
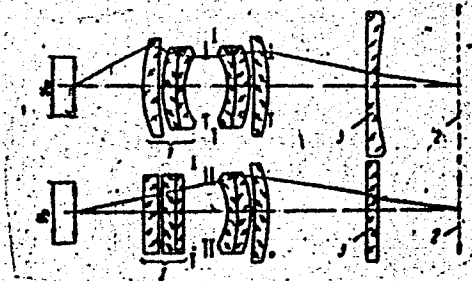
L 11165-66

ACC NR: AP6000364

Fig. 1. 1 - First component; 2 - image surface; 3 - negative cylindrical lens.

Orig. art. has: 1 diagram.

SUB CODE: 14/ SUBM DATE: 11Jul64

Card 2/2

BELYAKOV, G.G.; MULLER, O.Z.

Practice in the construction of the enclosure of high-temperature
drying chambers. Der.prom. 11 no.6:25-26 Je '62.   (MIRA 15:6)
        (Riga—Woodworking industries—Design and construction)
                        (Wood—Drying)

S/865/62/002/000/021/042
D405/D301

AUTHORS: Borshchevskiy, I.Ya., Belyakov, G.M., Gurovskiy, N.N.,
                Kuznetsov, V.S. and Yuganov, Ye.M.

TITLE: Estimating the quality of speech reception and trans-
                mission under weightlessness conditions

SOURCE: Problemy kosmicheskoy biologii. v. 2. Ed. by N. Sisa-
                kyan and V. Yazdovskiy. Moscow, Izd-vo AN SSSR, 1962,
                215-217

TEXT: The investigations were conducted during periods of
weightlessness ranging from 30 to 40 seconds on aircraft following a
parabolic course. Four pilots participated in the experiments; 28
speech records were made during 23 flights. Ultra-shortwave ground
and air radiostations were used. A tape-recorder was connected to
the output of the ground station receiver; it recorded the entire
cycle of speech reception and transmission. The quality of the
speech was determined from a standard sentence (of 5 words) with sub-
sequent frequency-spectrum analysis. The relative quality was assess-

Card 1/2

S/865/62/002/000/021/042
D405/D301

Estimating the quality ...

ed with reference to the pertinent experimental data prior to and after weightlessness. Conclusions: Weightlessness does not appreciably affect the quality of reception of speech ground signals. The quality of speech transmitted under conditions of weightlessness differs somewhat from that transmitted under normal flight conditions: the pronunciation is somehow forced, with an increase in vowel intensity. The frequency spectrum of speech under weightlessness conditions is analogous to that under normal flight conditions; at frequencies of 100-500 and 1000-2000 cycles the spectral components show a relative increase of 2-4 and 2-6 db respectively. The quality of speech changes but insignificantly under weightlessness conditions; thus it should be possible in principle to maintain good communications under such conditions. Further studies of the physiological characteristics of speech are necessary, in particular under more prolonged weightlessness conditions. There are 2 figures.

Card 2/2

BORSHCHEVSKIY, I.Ya.; BELYAKOV, G.M.; GUROVSKIY, N.N.; KUZNETSOV, V.S.;
        YUGANOV, Ye.M.

    Studying the quality of the reception and transmission of speech
    in weightlessness. Probl.kosm.biol. 2:215-219 '62.
                                                       (MIRA 16:4)

        (WEIGHTLESSNESS)   (AEROSPACE TELEMETRY)

SADOVSKIY, M.A.; TAMM, I.I., kand.tekhn.nauk; BELYAKOV, G.V., inzh.

     Determining safe distances for detonation transmission. Bezop.truda v prom. 6 no.8:5-9 Ag '62.   (MIRA 16:4)

     1. Institut khimicheskoy fiziki AN SSSR. 2. Chlen-korrespondent AN SSSR (for Sadovskiy).
                             (Blasting—Safety measures)

BELYAKOV, I.

For communist labor. Obshchestv. pit. no.7:40-41 Jl '62.
(MIRA 15:10)

1. Predsedatel' Moskovskogo gorodskogo komiteta professional'nogo
soyuza rabotnikov gosudarstvennoy torgovli i potrebitel'skoy
kooperatsii.

(Moscow—Restaurants, lunchrooms, etc.)

BELYAKOV, I. (gorod Kopeysk, Chelyabinskaya oblast').

Fruitful work. Kinomekhanik no.5:8-9 My '53.   (MLRA 6:6)

(Romov, Pavel Vasil'evich)

BELYAKOV, I

BELYAKOV, I.

The miner's day. Mast.ugl.5 no.7:29 Jl '56.   (MIRA 9:9)

1.Sekretar' partiynoy organizatsii shakhty "Babanakovskaya"
kombinata Kuzbassugol'.
         (Kuznetsk Basin--Coal miners)

BELYAKOV, I.

It is for the plant to decide. Mast. ugl. 7 no.9:24 S '58.

(MIRA 11:10)

1. Otdel rabochikh kadrov tresta Kopeyskugol'.
(Boring machinery)

BELYAKOV, I.,

In a new way. Mast. ugl. 7 no.11:8 N '58.   (MIRA 11:12)

1.Inspektor otdela rabochikh kadrev tresta Kopeyskugol'.
        (Chelyabinsk Basin--Coal mines and mining)

BELYAKOV, I.

New houses for miners. Mast.ugl. 8 no.1:25   Ja '59.   (MIRA 12:3)
    (Chelyabinsk Basin--Apartment houses)

SMIRNOV, V.; PODGAYEVSKIY, Yu.; IYENSEN, V., rabochiy; BELYAKOV, I.;
    PETROV, V., mashinist elektrovoza

Readers' letters. Sov.shakht. 10 no.6:27,28,29 Je '61. (MIRA 14:9)

1. Shakhta "Baydayevskiye uklony" Kemerovskogo sovnarkhoza (for
Iyensen). 2. Shakhta No.1 tresta Cherepet'ugol' Tul'skoy
oblasti (for Petrov).
                    (Coal mines and mining)

BELYAKOV, I.

Without a night shift. Sov.shakht. 11 no.4:35 Ap '62.

(MIRA 15:3)

1. Trest Kopeyskugol'.

(Chelyabinsk Basin--Coal mines and mining)

BELYAKOV, I.

Reliable assistance. Obshchestv.pit. no.2:3-6 F '63. (MIRA 16:4)

1. Predsedatel' Moskovskogo gorodskogo komiteta professional'nogo
soyuza rabotnikov gostorgovli i potrebkooperatsii.
                    (Restaurants, lunchrooms, etc.--Auditing and inspection)
                          (Trade unions)

BELYAKOV, I.

Shoppers' council suggests. Sov. profsoiuzy 19 no.11:16-17 Je
'63.
(MIRA 16:8)

1. Predsedatel' gorodskogo komiteta professional'nogo soyuza
rabotnikov gostorgovli i potrebkooperatsii, Moskva.
(Moscow—Retail trade) (Trade unions)

BELYAKOV, I.A., inzhener; ZENKOV, M.V., inzhener.

Light borehole filter pump (LIU-5). Torf.prom.33 no.4:35-36 '56.
(MIRA 9:9)
1.Giprotorf (for Belyakov).2.Mosgidep (for Zenkov)
(Pumping machinery)

SERGOVANTSEV, V.T., kand. tekhn. nauk; BELYAKOV, I.G., inzh.

Method for locating short-circuits to ground in distribution networks
with insulated neutral lines. Energetik. 13 no.9:9-11 S '65.
(MIRA 18:9)

BELYAKOV, I.I.

MITKEVICH, S.P.; PAVLYUKEVICH, B.L.; BELYAKOV, I.I.

Electric pulse technique for the surface hardening of cast-iron
machine parts. Sbor.nauch.trud. Fiz.-tekh.inst.AN BSSR no.2:221-
229 '55.   (MLRA 10:1)
            (Hard facing) (Electric spark)

5(2)   SOV/78-4-8-39/43

AUTHORS: Tronev, V. G., Belyakov, I. M.

TITLE: Experiments of Synthesizing Selenamine Compounds by Oxidation
              of Selenium by Oxygen Under Pressure in the Presence of
              Liquid Ammonia (Opyty sinteza selenaminovykh soyedineniy
              okisleniyem selena kislorodom pod davleniyem v prisutstvii
              zhidkogo ammiaka)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol. 4, Nr. 8,
              pp 1932-1935 (USSR)

ABSTRACT: In a previous publication (Ref 1) it was pointed to the
              possibility of obtaining sulphamine compounds by oxidation of
              elementary sulphur by means of oxygen under pressure in the
              presence of liquid ammonia. It could be assumed that selenium
              would react in similar way. The existence and the composition
              of selenamine compounds has hitherto not been explained.
              Elementary selenium was heated in an autoclave with liquid
              ammonia under an oxygen pressure from 100 at to 50 to 100°
              during 5 to 6 hours. After the removal of the gases which had
              not entered the reaction the mixture of selenium and oxidation
Card 1/2   products was extracted by means of an ammonia solution, liquid

SOV/78-4-8-39/43

Experiments of Synthesizing Selenamine Compounds by Oxidation of Selenium by Oxygen Under Pressure in the Presence of Liquid Ammonia

ammonia or organic solvents. The extraction was rendered difficult by the easily soluble ammonium nitrate which had formed. From the analyses and the thermograms (Fig 1.) conclusions are drawn to the formation of a compound of the form $NH(SeO_3NH_4)_2$. Moreover, a red explosive formed, probably selenium nitride. There are 2 figures and 6 references, 3 of which are Soviet.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry imeni N. S. Kurnakov of the Academy of Sciences, USSR)

SUBMITTED: March 10, 1959

Card 2/2

L 13320-66   EWP(e)/EWT(m)/EWP(t)/EWP(b)   IJP(c)   JD/JG/WH

ACC NR: AP6003373   SOURCE CODE: UR/0363/66/002/001/0165/0168

AUTHOR: Tananayev, I. V.; Belyakov, I. M.; Dzhurinskiy, B. F.;   52
Berul', S. I.   B

ORG: Institute of General and Inorganic Chemistry im. N. S. Kurnakov,
Academy of Sciences, SSSR (Institut obshchey i neorganicheskoy khimii
Akademii nauk SSSR)

TITLE: Reactions of neodymium and cerium oxides with sodium borate
melts   5.5.27   27

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2,
no. 1, 1966, 165-168

TOPIC TAGS: rare earth, neodymium oxide , cerium oxide, borate, borate
glass, neodymium glass, neodymium borate, single crystal growing,
crystallization, single crystal

ABSTRACT: Reactions in the liquid phase have been studied in the
$Na_2O-B_2O_3-Nd_2O_3$ and $Na_2O-B_2O_3-CeO_2$ systems under isothermal and poly-
thermal conditions to obtain data on solubility of the rare earths in
sodium borate melts and crystallization of the rare-earth element
borates. These data are required for growing single crystals of rare
earth element borates and for preparing glasses activated with rare-
earth element ions. Solubility of Nd_2O_3 and CeO_2 was determined at

Card 1/3   UDC: 553.637

L 13320-66

ACC NR: AP6003373   0

900 and 1000C in the melts containing B_2O_3 and Na_2O in a ratio of from
2:1 to 17:1. This region of compositions was selected as practically
the most important from the viewpoint of glass formation. It was
noted that the behavior of Nd_2O_3 and CeO_2 in these melts differed.
The solubility of Nd_2O_3 was significantly higher than that of CeO_2
because of the formation of neodymium borates, $NdBO_3$ and $Nd(BO_2)_3$,
which crystallize in the 2—3.72 and 3.72—17 B_2O_3/Na_2O range, respec-
tively. CeO_2 apparently does not form any compound and its solubility
is only slightly dependent on the composition of melts. The great
solubility of Nd_2O_3 in the Na_2O-B_2O_3 melts made it possible to grow
$NdBO_3$ acicular single crystals up to several millimeters in size.
Such crystals were grown by slow cooling of the borax melt saturated
with Nd_2O_3 at 1000C. Liquidus curves of the $Na_2B_4O_7$-Nd_2O_3 section
and $Na_2B_4O_7$-CeO_2 section of the phase diagrams were established for
both systems studied. The liquidus branch of the $Na_2B_4O_7$-Nd_2O_3 system
in the 690—1000C range, and the branch of the $Na_2B_4O_7$-CeO_2 system in
the 740—1100C range corresponded to $NdBO_3$ and CeO_2 crystallization,
both without any polymorphic conversion. Transition points on the
liquidus curves at 910C for $Na_2B_4O_7$-Nd_2O_3 and 930C for $Na_2B_4O_7$-CeO_2
systems were attributed to some structural changes in the polymeric
$Na_2B_4O_7$ melt.   [JK]

Card 2/3

L 13320-66

ACC NR: AP6003373

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SUB CODE: 07,20/SUBM DATE: 22Sep65/ ORIG REF: 004/ OTH REF: 010
ATD PRESS: 4/88

Cmd 3/3 FW

KIM, Yu.Kh.; LUK'YANOV, I.A.; YAZYDZHAN, I.N., sadovod; SUL'MENEVA, Ye.M.,
   starshiy tekhnik; ZHIL'TSOV, MI.I, starshiy master; KUZNETSOVA, P.G.,
   inzh.-tekhnolog; ANISKOV, A.T., pirometrist; BELYAKOV, I.P., kalil'-
   shchik; NAUMOV, M.D., kalil'shchik

Let us create winter gardens in industrial plants with high temperatures.
Zdorov'e 6 no.10:32 O '60.   (MIRA 13:9)

1. Moskovskiy zavod shlifoval'nykh stankov. 2. Glavnyy metallurg
Moskovskogo zavoda shlifoval'nykh stankov (for Kim). 3. Zaveduyushchiy
zdravpunktom Moskovskogo zavoda shlifoval'nykh stankov (for Luk'yanov).
                        (GREENHOUSES)

BELYAKOV, I. S., Engineer

"Investigation of Chronometers." Sub 16 May 47, Moscow Inst of Engineers of Geodesy, Aerial Photography and Cartography

Dissertations presented for degrees in science and engineering in Moscow in 1947

SO: Sum No. 457, 18 Apr 55

Cand. Technical Sci.

BELYAKOV, I.S.; ROMANOV, V.A.

Structural materials used in the watch and clock industry abroad.
Priborostroenie no.5:20-22 My '56.   (MIRA 9:8)
                    (Clockmaking and watchmaking)

BELYAKOV, Ivan Semenovich; KUNAYEV, I., kandidat tekhnicheskikh nauk,
retsenzent; KOMANOV, A.D., inzhener, retsenzent; BOGDANOV, Yu.M.,
kandidat tekhnicheskikh nauk, redaktor; MATVEYEVA, Ye.N., tekhni-
cheskiy redaktor; EL'KIND, V.D., tekhnicheskiy redaktor

[Clockworks] Chasovye mekhanizmy. Moskva, Gos.nauchno-tekhn.
izd-vo mashinostroit.lit-ry, 1957. 335 p.   (MIRA 10:8)
        (Clockmaking and watchmaking)

BELYAKOV, IVAN SEMENOVICH

BELYAKOV, IVAN SEMENOVICH

N/5
744.5
.B4

Chasovyye Mekhanizmy (Clock Mechanisms) Moskva, Mashgiz, 1957.
335 p. Illus., Diagrs, Tables.
"Literatura": p. 331-332.

BELYAKOV, L.S.; KREPS, S.Ye.; SURIN, P.D.; BARINOVA, O.N., red.;
    GORBATKIN, B.G., tekhn. red.

[Clock and watch repairing]Remont chasov. Moskva, Gosmestprom-
izdat, 1962. 240 p.   (MIRA 16:3)
       (Clocks and watches--Repairing and adjusting)

BELYAKOV, I.T., dotsent, kand. tekhn. nauk

      Plotting curves of actual stresses in sheet metals. Izv. vys.
ucheb. zav.; mashinostr. no.10:79-86 '58.   (MIRA 12:11)

      1.Moskovskiy aviatsionnyy institut imeni Sergo Ordzhonikidze.
           (Strains and stresses—Graphic methods)

ACCESSION NR: AP4043429   S/0147/64/000/003/0124/0127

AUTHOR: Belyakov, I. T.

TITLE: Toward a better understanding of the concept "technological effectiveness of design"

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 3, 1964, 0124-0127

TOPIC TAGS: design technique, technological effectiveness, design efficiency, aircraft design

ABSTRACT: On the basis of several examples drawn from the aircraft industry, the author considers the problem of the development of a general methodology which will make it possible for the designer and the technologist to select, objectively, the design variant with the most advantageous (from the point of view of the economy of the country) level of "weighted perfection"; that is the optimal combination of weight and expenditure. In other words, the author calls attention to the need for a method for an overall evaluation of aircraft designs, which will take into account not only the interests of the designer, technologist and ultimate consumer, but also the general interests - those of the national economy. In the author's view, the determination of the efficiency of a new

Card   1/4

ACCESSION NR: AP4043429

concept of "technological effectiveness of design" does not extend to the sphere
of the actual operation of the aircraft. In addition, the author attempts an
analysis of the concept of "repairability". By "repairability of design" is to
be understood its adaptability to the detection and elimination of faults, as
well as to their prevention. Quantitatively, repairability may be characterized
either by the expenditures of time and material on the detection, elimination
and prevention of faults (considering the required qualification rating of the
servicing personnel) or by the readiness factor

$$k_r = \frac{t_w}{t_w + t_r}$$

where t_w is the sum in-operation time of the aircraft over a sufficiently long
time interval and t_r is the outage time for repairs during the same interval. The
author attempts to demonstrate that the concept of technological effectiveness
is applicable to designs having identical repairability. On the basis of the
author's reasoning, the concept of the technological effectiveness of design may
be formulated in the following manner: by the technological effectiveness of a
given design variant is understood the complex of its properties which permit the
manufacture of this design with smaller production expenditures (in comparison
with some other variant) and with identical, or better, values for the assigned

Card   3/4

ACCESSION NR: AP4043429

machine presupposes a comparison of the "effect", obtained by means of the
machine, with the "national-economic expenditure":

$$\mathcal{E} = \frac{E}{B}$$

where $\mathcal{E}$ is the efficiency, E is the effect, and B is the expenditure. Analyzing
this formula on the basis of examples from the aircraft industry, the author states
that "the most important task of the Design Bureau is the development of an air-
craft which will yield the highest possible value for the criterion of efficiency".
Noting that the problem of the overall or "complex" evaluation cannot be consider-
ed completely solved, at the present time the author analyzes, in the light of
this problem, the technological effectiveness of design. This concept is shown
to reflect the perfection of the design from the point of view of actual production
and is, therefore, an economic concept characterizing the adaptability or applica-
bility of a given design variant to manufacture with less cost in comparison with
other variants. The concept thus has sense only when discussing two or more
design variants of the same part or component of the machine (in this case, an
aircraft), which satisfy assigned parameters (in terms of strength, weight,
aerodynamics, reliability, and so forth). It has been emphasized that the

Card   2/4

ACCESSION NR: AP4043429

·design parameters, repairability and equal qualitative output. Orig. art. has:
2 figures and 2 formulas.

ASSOCIATION: none

SUBMITTED: 15Nov63   ENCL: 00   SUB CODE: AC

NO REF SOV: 002   OTHER: 000

Card   4/4

BELYAKOV, K., brigadir elektrikov

Sense of cooperation. Avt.transp. 40 no.11:7 N '62.
(MIRA 15:12)
1. 11-y gruzovoy avtopark Leningradskogo avtoupravleniya.
   (Leningrad Province—Transportation, Automotive)

BELYAKOV, K.; KHRENOV, V.

Moscow University

Public feeding in the new building of the Moscow State University. Sov. torg. No. 3,
1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

BELYAKOV, K., inzh.-tekhnolog.

Frozen fruits and vegetables in the United States. Obshchestv. pit.
no.3:56-57 '57.   (MIRA 11:3)

(United States--Food, Frozen)

BELYAKOV, K.

Containers for semiprepared foods. Obshchestv. pit. no.3:40-43 Mr '58.
(Containers) (MIRA 11:4)

TROFIMOVA, V.I.; SHTEYMAN, R.A.; SHAPIRO, M.S.; MALEVICH, O.A.; ODINTSOV,
A.I.; GROZNOV, S.R.; RYBAK, I.A.; SHORIN, G.F.; BELYAKOV, K.M.;
SIDOROV, V.A.; VOYTINSKAYA, S.Ye.; DUNTSOVA, K.G.; KHRUSTALEVA,
O.N.; CHERVYAKOVA, L., red.; BABICHEVA, V.V., tekhn.red.

[Manual on technological advice and technical specifications for
semiprocessed products and dishes of meat, poultry, fish, potatoes,
and vegetables] Sbornik tekhnologicheskikh instruktsii i tekhni-
cheskikh uslovii na polufabrikaty i kulinarnye izdeliia iz miasa,
ptitsy, ryby, kartofelia i ovoshchei. Moskva, Gos.izd-vo torg.
lit-ry, 1958. 101 p.   (MIRA 13:4)

1. Russia (1923- U.S.S.R.).Ministerstvo torgovli.
    (Food industry)   (Cookery)

BELYAKOV, L.

Growth of self-service stores in foreign countries. Sov. torg.
no.7:55-59 Jl '57.   (MLRA 10:9)
                    (Self-service stores)

BELYAKOV, L.

World tonnage of chartered tankers. Mor. flot 25 no.5:42-43 My '65.
(MIRA 18:5)

1. Starshiy ekonomist kon'yunkturnogo otdela Vsesoyuznogo ob"yedineniya "Sovfrakht".

IVANOV, A.; BELYAKOV, L.
    Large-tonnage vessels in the world tanker fleet. Mor. flot 25 no.7:40-41
                                                            (MIRA 18:7)
    Jl '65.

    1. Starshiy ekonomist kon"yunkturnogo otdela Vsesoyuznogo ob"yedineniya
    "Sovfrakht" (for Belyakov).

BELYAKOV, L.

Automobile and tractor shipments in marine transportation.
Mor. flot. 24 no.5:43-44 My '64.   (MIRA 18:12)

1. Starshiy ekonomist Vsesoyuznogo ob"yedineniya "Sovfrakht".

BELYAKOV, L.N.

Relationship of wind currents with local winds and the wind field.
Probl.Arkt.i Antarkt. no.5:67-70 '60.

(MIRA 14:4)

(Ocean currents)   (Winds)

BELYAKOV, I.N.

Effect of waves on the records of different current meters. Trudy
AANII 210:91-93 '61.
(Ocean currents)

(MIRA 14:11)

L 23376-66   EWT(1)   GW

ACC NR: AP6007653   (N)   SOURCE CODE: UR/0213/66/006/001/0159/0161

AUTHOR: Belyakov, L. N.

ORG: Arctic and Antarctic Scientific Research Institute (Arkticheskiy i antarkti- cheskiy nauchno-issledovatel'skiy institut)

TITLE: The measurement of low velocity currents with a BPV automatic recorder

SOURCE: Okeanologiya, v. 6, no. 1, 1966, 159-161

TOPIC TAGS: geophysic instrument, instrument calibration equipment , ocean current

ABSTRACT: Since low velocity current (0 to 10 cm/sec) measurements made with Alekse- yev BPV-2 and BPV-2p automatic recorders are difficult to analyze, twelve automatic recorders of this design were examined to determine the precision of calibration. The data show that V_{in} (the initial velocity of a recorder in a quenching stream) varies from 2 to 2.5 cm/sec and from 3.0 to 3.5 cm/sec for BPV-2 and BPV-2p models, respec- tively. V_0 magnitudes (the velocities at which the wheels of a recorder begin to turn) vary from 0 to 6 cm/sec. The author suggests a special calibration curve in which an imaginary zero point would be replaced by zero. Orig. art. has: 1 table, 1 figure.

SUB CODE: 08/   SUBM DATE: 23Jan65/   ORIG REF: 000/   OTH REF: 000

Card 1/1   UDC: 551.46.085

_____, _. _., _____, _u. _., MEZHENNAYA, S. O., OSVENSKIY, V. B. (Moscow Inst. of
Steel)

"The Internal Friction of 'Metastable' Solid Solutions."

report presented at an Inter-vuz Conference on Relaxation Phenomena in Pure Metals and
Alloys, 2-4 Apr 1958, at Moscow Inst. of Steel.

Vest. Vys. Shkoly, 9, 72-3, 1958.

BELYAKOV, L. N.

AUTHORS: Arzhanyy, P. M. and Belyakov, L. N. (Moscow).   24-2-23/28

TITLE: Investigation of the structure and of the phase composition of diffusion coatings of an alloy of chromium with silicon and beryllium. (Issledovaniye struktury i fazovogo sostava diffuzionnykh pokrytiy splava khroma kremniyem i berilliyem).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, No.2, pp. 149-152 (USSR).

ABSTRACT: The authors investigated the structure and the phase composition of an alloy containing 60% Cr and 40% Fe, the surface of which was saturated by means of diffusion with silicon and beryllium in the solid phase at temperatures of 950 to $1200°C$ for durations between thirty minutes and fifteen hours. It was found that at the surface the following phases are separated out: the silicide $(Cr,Fe)Si$, the silicide $(Cr,Fe)_3Si$, the σ-phase and the eutectic of the solid solution of silicon in the α-phase plus the σ-phase. After saturating the same alloy with silicon at $950°C$, the beryllides $(Cr,Fe)Be_5$ and $(Cr,Fe)Be_2$ and the solid solution of Be and the α-phase were observed; at $1000°C$ and above the beryllides $(Cr,Fe)Be_5$ and $(Cr,Fe)Be_2$, the σ-phase and the solid solution of Be in the α-phase could be detected. The micro-hardness

Card 1/2

BELYAKOV, L.N.

SOV/126-6-1-15/33

AUTHORS: Avraamov, Yu. S., Belyakov, L. N. and Livshits, B. G.

TITLE: Internal Friction Peaks in Ni-Cr Base Solid Solutions
(Piki vnutrennego treniya v tverdykh rastvorakh na
baze nikel'-khroma)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol 6, Nr 1,
pp 116-121 (USSR)

ABSTRACT: The alloys used were 20% Cr, 0.05% C, balance Ni, and
20% Cr, 2.48% Ti, 0.68% Al, 0.03% C, balance Ni
(nichrome and nimonic respectively). Torsional
oscillations in vacuo, using an apparatus not described,
were employed. Fig.1 shows the effect of variable
grain size (produced by quenching from various
temperatures) on the internal friction-temperature curve
for nimonic (up to 750°C); two peaks are found, at
150 (A) and 650-660°C (E) respectively. The latter is
caused by grain boundary displacement. Fig.2 gives
similar curves for nimonic of low and high carbon
contents, the latter after quenching and ageing. Fig.3
shows the same for nimonic containing varying amounts of
Ti. From these results it is concluded that the A peak
is related to the presence of Ti, as no deformation is

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SOV/126-6-1-15/33

Internal Friction Peaks in Ni-Cr base solid solutions

involved, and the peak rises with Ti content. The
exact shape of the peak is affected by ageing at 520°C,
and completely removed by ageing at 575°C for eight
hours. Fig.4 illustrates the results of applying
various heat-treatments to the alloy. The effects are
related to the formation of a K-state in the α' solid
solution. The fact that the A peak tends to split into
two separate peaks, which behave differently, is not,
however, discussed.
There are 4 figures and 8 references, 5 of which are
Soviet, 3 English.

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED: October 22, 1956

1. Nickel alloys--Physical properties   2. Nickel alloys--
Mechanical properties   3. Grains (Metallurgy)--Metallurgical
Card 2/2   effects   4. Titanium--Metallurgical effects

LYAKOV, L.N.

18.7520

66234
SOV/126-8-3-18/33

AUTHORS: Livshits, B.G., Avraamov, Yu.S., Osvenskiy, V.B., Mashennaya, S.O. and Selyakov, L.

TITLE: Internal Friction of Metastable Solid Solutions

PERIODICAL: Fizika metallov i metallovedeniye, 1959, Vol 8, Nr 3, pp 440-448 (USSR)

ABSTRACT: The alloy of stoichiometric composition Ni₃Mn and alloys of the same composition alloyed with 1.34 and 2.77% Mo, respectively, were studied by measuring the temperature dependence of internal friction. Using this method, Ni₃Fe type alloys without molybdenum and those alloyed with molybdenum, and also EI437A type alloys (nimonic) were studied. The chemical composition of the investigated alloys is shown in the table on p 441. The internal friction was measured in wire specimens, 500 mm long and 0.7 mm diameter, in vacuum. The alloy Ni₃Mn is an ordered alloy with a Curie point of approximately 550°C (Ref 10 and 11). In the curve showing the temperature dependence of internal friction of a quenched Ni₃Mn alloy (quenched from a temperature above that at which ordering occurs) two peaks, A and B, with maxima at 120 and 290°C are observed (Fig 1). In the curve of the temperature

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...dependence of internal friction of a deformed Ni₃Mn alloy (75% deformation), the peaks A and B remain, and an additional peak, D, having a maximum at 226°C, appears; the general level of internal friction rises sharply (Fig 2). An additional peak, C, having a maximum at 316°C, is evident in a carburised Ni₃Mn alloy containing 0.35% C (Fig 3). The appearance of this peak is due to the diffusion of carbon atoms in the elastic stress range. During the investigation of the influence of alloying the Ni₃Mn solid solution with molybdenum, it was found that supplementary maxima — peaks M and C at 32 and 316°C — appeared in temperature dependence of internal friction curves (Fig 4). In Fig 5, the influence of heat treatment on the temperature dependence of a Ni₃Mn alloy containing 1.34% Mo is shown. A similar result is obtained with an alloy containing 2.77% Mo. On measuring the internal friction of Ni₃Fe alloys alloyed with Mo (Fig 6) two peaks were obtained in the low temperature range, one in the region of 65°C (peak A) and the other at 170°C (peak B). Fig 7 shows the influence of heat treatment on the temperature dependence of internal

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friction of the alloy Ni₃Fe. Fig 8 shows the influence of heat treatment on the internal friction of a nimonic alloy. In Fig 9, the change in internal friction with Ti content in a nimonic alloy is shown. The authors conclude that on measuring the temperature dependence of internal friction of metastable solid solutions characteristic effects can be expected even when the structural factor is exceedingly small. The magnitude of the effects in this case must be the greater, the greater the difference in free energy between a quenched and tempered alloy. A comparison of the internal friction of ordering alloys with that of alloys forming a K-state structure at low temperatures is exceedingly interesting (see Fig 4 and 6). On adding molybdenum to ordering alloys (Ni₃Mn) the metastability peak decreases as molybdenum decreases the degree of possible order. Conversely on adding this element to K-state alloys (Ni₃Fe + Mo) the metastability peak increases, as the increase in molybdenum concentration appears to increase the extent of atom segregation (K-state) in the solution. The same can be said about titanium in the alloy EI437.

Card 3/4

(Fig 9). Thus measurement of the internal friction (metastability peaks) renders differentiation between ordering and K-state possible. There are 9 figures, 1 table and 19 references, 12 of which are Soviet and 7 Western.

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BELYAKOV, L. N.

PHASE I BOOK EXPLOITATION   SOV/5305

Moscow. Institut stali

Relaksatsionnyye yavleniya v metallakh i splavakh; trudy Mezhvuzovskogo soveshchaniya. (Relaxation Phenomena in Metals and Alloys; Transactions of the Inter-Institute Conference) Moscow, Metallurgizdat, 1960, 325 p.

Sponsoring Agency: Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya RSFSR and Moskovskiy institut stali imeni I.V. Stalina.

Ed. (Title page): B.N. Finkel'shtern; Ed. of Publishing House; Ye.I. Levit; Tech. Ed.; A.I. Karasev.

PURPOSE: This collection of articles is intended for personnel in scientific institutions and schools of higher education and for physical metallurgists and physicists specializing in metals. It may also be useful to students of these fields.

COVERAGE: The collection contains results of experimental and theoretical investigations carried out by schools of higher education and scientific research institutions in the field of the relaxation phenomena in metals and alloys. Several articles are devoted to the investigation—by the internal-friction method—of the decomposition of supersaturated solid solutions. Also analyzed are the defects of the crystalline lattice, plastic deformation, high-temperature behavior of alloys, and creep. Problems of the relation between internal friction and temper brittleness, the use of the method of internal friction in the investigation of powder-metallurgy products, and the mechanics of impact fatigue are discussed. The collection also contains articles on the damping characteristics of materials, elastic after-effect, and the new alloy-detection method. No personalities are mentioned. References follow most articles. There are 326 references: 192 Soviet and 174 non-Soviet.

Boris, R.S. (Moscow Steel Institute).   On Dispersion Correlations in the Theory of Elastic Relaxation   55

Starodubov, K.F., and A.A. Baranova (Dnepropetrovsk metallurgicheskiy institut [Dnepropetrovsk Metallurgical Institute]). Effect of the Tempering Temperature After Quenching and the Temperature of Isothermal Processing on the Vibration Damping in the Silicon Spring Steel   58

Piguzov, Yu.V., M.F. Alekseyenko, and L.S. Fedotova [Moscow Steel Institute and Vsesoyuznyy institut aviatsionnykh materialov (All-Union Institute of Aviation Materials)]. Effect of the Temper Brittleness of High-Chromium Steels on the Internal Friction   64

Curudzhan, I.M. (Moscow Steel Institute). Study of the Tempering of Carbon Steels by the Internal-Friction Method   85

Krishtal, M.A., and S.A. Golovin (Tul'skiy mekhanicheskiy institut [Tula Mechanical Institute]). On the Problem of the Internal Friction in Hardened and Tempered Steel   95

Krishtal, M.A., and S.A. Golovin (Tula Mechanical Institute). Relative Damping of Torsional Vibrations in Heat-Treated U7A steel   101

Mishev, Karel, and Karel Trnka [Institute of Technical Physics of the Czechoslovak Academy of Sciences]. Aging of the Aluminum-Silver Alloy   104

Mal'tsern, G.K., and V.S. Rostutkov [Kemerovskiy pedagogicheskiy institut (Kemerovo Pedagogical Institute)]. Decomposition of the Supersaturated Beryl-Copper Solid Solution   109

Polyakov, B.N. [Institut chernoy metallurgii AN UkrSSR (Institute of Ferrous Metallurgy of the Academy of Sciences UkrSSR)]. Behavior of Carbon in α-Iron Alloyed With Manganese and Molybden   118

Khrshits, B.O., Ye.S. Arsenyev, V.D. Garanukh, G.G. Kozhemyako, and L.I. Malygin [Moscow Steel Institute]. Internal Friction of Metastable Solid Solutions   125

Raspa, L.F. [Moscow Steel Institute]. Investigation of the Carbon Influence on the Properties of Low-Carbon Steel by the Method of Measuring Internal Friction   136

Akhmarin, O.M. [Moscow Steel Institute]. The High-Temperature Internal Friction of Iron-Vanadium Alloys   186

BELYAKOV, L.N.; BELYAKOVA, L.T.

Some geological characteristics of the convergence region of the
Urals and Pay-Khoy. Mat.po geol.i pol.iskop.Sev.-Vost.Evrop.-
chasti SSSR no.1:55-60 '61.

(MIRA 14:11)

(Ural Mountains--Geology)

28868

The role of delta-ferrite ....

S/180/61/000/004/006/020
E111/E380

0.14-1.90 Al in the different batches) by anodic solution in an electrolyte containing 350 g/litre $FeCl_3$ and 20 ml./litre of HCl [Abstractor's note - the text gives "20 mm/litre]. The delta-ferrite was subjected to microchemical analysis. Since martensite and carbides were absent after quenching from 1 050 °C, the austenite composition could be calculated. The influence of delta-ferrite on the martensite transformation was studied on two other heats, whose composition (respectively, 0.06, 0.09% C; 0.53, 0.54 Mn; 0.28, 0.42 Si; 16.88, 15.20 Cr; 2.69, 4.60 Ni; 0-11.12, 0 Co; 0, 0-2.32 Al) was chosen so as to give martensite points above room temperature in each batch. Various quenching temperatures were used and the effect of aluminium, cobalt and delta-phase content on the martensite transformation was studied. The authors conclude that delta-ferrite appearing in the structure of stainless steel produces a substantial redistribution of carbon and alloying elements between delta-ferrite and austenite, leading to a drop in martensite-transformation temperature, the drop increasing with increasing delta-ferrite

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The role of delta-ferrite ....

28868
S/180/61/000/004/006/020
E111/E380

content. The experiments showed that in the absence of carbides, small quantities of delta-ferrite lead either to a slight increase in the martensite-point temperature or to a decrease smaller than calculated. Further experiments are needed to elucidate this effect. Delta-ferrite leads to a considerable increase in transformation temperature after heating that results in carbide formation. This is explained by a more intensive separation of the carbide phase at the delta-ferrite/austenite boundaries compared with that at austenite/austenite boundaries. There are 2 figures, 3 tables and 7 references: 2 Soviet-bloc and 5 non-Soviet-bloc. The four latest English-language references quoted are: Ref. 1 - quoted in text: Ref. 2 - F.C. Monkman, F.B. Cuff and N.J. Grant - Metal Progr., 1957, v. 71, no. 4; Ref. 3 - H.T. Shirley - J. Iron and Steel Inst., 1957, v. 174, no. 3; Ref. 5 - H.C. Vacher, C.J. Bechtoldt - J. Res. Nat. Bur. Standards, 1954, v. 53, no. 2.

SUBMITTED: February 27, 1961

Card 3/3

S/180/61/000/005/014/018
E071/E435

AUTHORS: Belyakov, L.N. and Livshits, B.G. (Moscow)

TITLE: Delta ferrite in an austenite-ferrite stainless steel

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye
            tekhnicheskikh nauk. Metallurgiya i toplivo, no.5,
            1961, 90-95

TEXT: The influence of hot plastic deformation (forging and
rolling) the retention time at temperatures of homogenization
(1050 to 1300°C) and cooling velocity of ingots on the amount of
δ-ferrite in an austenite-ferrite stainless steel (C 0.07 to 0.09;
Mn 0.44 to 0.70; Si 0.52 to 0.70; Cr 14.53 to 15.73;
Ni 7.7 to 8.8; Mo 1.60 to 2.30; Al 1.30 to 1.38) were
investigated.   The determination of δ-ferrite was done in all
cases by the metallographic method with an accuracy of ± 0.5 abs.%
and by the magnetic method with a relative accuracy of ± 3%.
For the latter method, specimens were austenized at 1050°C for
15 minutes, cooled in air to 300 – 250°C and annealed at 250°C for
1 hour in order to stabilize the austenite.   It was found that
the velocity of cooling of the ingots has an influence on the
amount of δ-ferrite in the austenite-ferrite steel.   The lower

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Delta ferrite in an austenite- ...

S/180/61/000/005/014/018
E071/E435

the cooling rate in the range of crystallization temperatures, the higher is the content of δ-ferrite in the cast steel. In the axial part of the ingots weighing 25 and 450 kg the amount of δ-ferrite is 1.35 times higher than on the periphery. On the periphery of the ingots, martensite is present in a considerably smaller amount than in the axial part. Hot plastic deformation of stainless steel at 1000 to 1100°C lowers substantially the amount of δ-ferrite, whereupon forging and rolling produce equivalent results. A non-uniform distribution of martensite is more stable, but this non-uniformity of the structure is removed on rolling a 450 kg ingot into plates 6 to 2.3 mm thick. On heating cast and forged steel to 1050 to 1150°C and retaining it at this temperature for 0.5 to 5 hours, the amount of δ-ferrite changes only a little, whilst at 1200 to 1300°C, it increases substantially. Hot plastic deformation at 1000 to 1100°C lowers the amount of δ-ferrite considerably faster than annealing at the same temperature. It is considered that the non-uniformity of the distribution of δ-ferrite and martensite in ingots is due to dendritic segregation, since zonal non-uniformity along the cross-section of an ingot is insignificant. There are 5 figures.
Card 2/3

Delta ferrite in an austenite- ...

S/180/61/000/005/014/018
E071/E435

2 tables and 9 references: 6 Soviet and 3 non-Soviet.   The
two references to English language publications read as follows:
Ref.4: Irvine K.J., Llewellyn D.T., Pickering F.B., J. Iron and
Steel Inst. 1959, v.192, no.3.
Ref.7: Cina B. J. Iron and Steel Inst., 1954, v.177, no.4.

SUBMITTED: February 27, 1961

Card 3/3

BELYAKOV, L.N.; LIVSHITS, B.G.

    Phase analysis of X18H8IU austenite-ferrite steel. Zav.lab. 27
    no.10:1192-1194 '61.   (MIRA 14:10)

    1. Moskovskiy institut stali im. I. V. Stalina.
                        (Steel—Analysis)
                        (Austenite)
                        (Ferrite)

L 26605-65   EWT(m)/EWA(d)/T/EWP(t)/EWP(b)   JD/HW
ACCESSION NR: AP5005108   S/0129/65/000/002/0052/0054

AUTHOR: Belyakov, L. N.; Kozlovskaya, V. I.

TITLE: Residual austenite in martensitic stainless steels

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 2, 1965, 52-54

TOPIC TAGS: stainless steel, martensitic stainless steel, chromium nickel marten-
sitic steel, residual austenite, residual austenite behavior, steel treatment

ABSTRACT: Six martensitic stainless steels containing 0.13—0.25% C, 11.78—15.70%
Cr, 1.56—3.20% Ni, 0—1.89% W, and 0—1.80% Mo were tested to determine the effect
of heat treatment on the quantity of residual austenite. It was found that the
quantity of residual austenite increases with increasing annealing temperature and
increasing content of carbon and alloying elements. The quantity of residual
austenite in steels with a high content of alloying elements reaches 40—50% when-
ever steels quenched in hot (100—150C) oil are tempered at 350C without being
cooled to room temperature. However, this austenite is not completely stable and
is transformed to martensite by cooling to -70C. Whenever residual austenite is
undesirable, the steel must be cooled to room temperature before tempering or

·Card 1/2

L 26605-65
ACCESSION NR: AP5005108

subjected to subzero treatment. Room temperature storage of steels with high content of alloying elements, quenched from 1050—1200C, increases the stability of austenite. Stresses of 30—40 kg/mm^2 contribute to γ- to α-transformation. Orig. art. has: 2 figures and 3 tables.   [ND]

ASSOCIATION: none

SUBMITTED: 00Feb65   ENCL: 00   SUB CODE: MM

NO REF SOV: 000   OTHER: 000   ATD PRESS: 3188

Card 2/2

ACC NR:AT6035116   (N)   SOURCE CODE: UR/2561/66/000/022/0035/0042

AUTHOR: Shpaykher, A. O.; Belyakov, L. N.; Izmaylov, V. V.

ORG: None

TITLE: The influence of Pacific Ocean waters on the hydrological regime in sections of the Arctic basin near the Pacific Ocean

SOURCE: Leningrad. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut. Problemy Arktiki i Antarktiki, no. 22, 1966, 35-42

TOPIC TAGS: hydrology, ocean current, ocean dynamics, ocean property, ocean tide

ABSTRACT: The efforts of scientists to determine the genesis of the warm layer in the sections of the Arctic near the Pacific Ocean are discussed in some detail. Computed and observed values for heat exchange in the areas are compared and are found to coincide well. Study of the activities of Pacific Ocean waters will undoubtedly prove to be useful for an understanding of the characteristics of the formation of hydrometeorological conditions in the sections of the Arctic basin adjacent to the Pacific Ocean, but to do so will require the organization of regular measurements of the quantities of Pacific Ocean water flowing into the Arctic basin through Bering Strait. Orig. art. has: 1 figure and 4 tables.

SUB CODE: 08/SUBM DATE: 09Jun65/ORIG REF: 011/OTH REF: 001

Card 1/1   UDC: 551.465(268)

BELYAKOV, L.P.; GOLOVANOV, N.P.; SAFRONOV, V.P.

Stratigraphy of Sinian complex sediments in the Kotuykan basin.
Uch. zap. NIIGA. Reg. geol. no.4:60-72 '64.   (MIRA 18:12)

ACC NR: AP6029011   SOURCE CODE: UR/0413/66/000/014/0009/0009

INVENTOR: Vyalov, N. N.; Finagin, P. M.; Sorokin, A. N.; Tartakovskiy, I. K.;
Belyakov, L. S.

ORG: None

TITLE: Pipe rolling mill. Class 7, No. 183693 [announced by the Elektrostal' Heavy
Machine Building Plant (Elektrostal'skiy zavod tyazhelogo mashinostroyeniya)]

SOURCE: Izobret prom obraz tov zn, no. 14, 1966, 9

TOPIC TAGS: pipe, rolling mill

ABSTRACT: This Author's Certificate introduces: 1. A pipe rolling mill consisting of
a housing with drive and input and output equipment. The housing is equipped with
pilger mill roller and automatic mill roller assemblies. 2. A modification of this de-
vice for producing tubes by the pilger method. The unit has a feed mechanism, a
mechanism for controlling mandrel cooling and transfer, and a lifting trough on the
input side. The output side of the mill is equipped with a lift table. 3. A modifi-
cation of this unit for automatic pipe rolling using master rollers on the input side
of the mill to replace the hoisting trough. The unit also has a fixed trough, while
a single assembly consisting of wiring, crosspiece and brake-centering unit is mounted
on the output side of the mill.

SUB CODE: 13/ SUBM DATE: 10Jan64

Card 1/1

UDC; 621.771.28

ASATULLAYEV, N.R.; BELYAKOV, L.V.; DOROKHOV, I.L.; ZHURAVLEV, B.Ya.; KATS,
    Ya.G.; MIKHAYLOV, A.Ye.; TIKHOMIROV, V.G.; USPENSKIY, Ye.P.

Tectonics of the convergence zone of structures in the Chingiztau and
Lake Balkhash region (central Kazakhstan). Sov. geol. 8 no.4:90-102
Ap '65.   (MIRA 18:7)

1. Moskovskiy geologorazvedochnyy institut i Moskovskiy gosudarstvennyy
universitet.

BELYAKOV, L.V.; VITMAN, F.F.; ZLATIN, N.A.

Collisions of deformable bodies and simulating the process. Part 2,
Zhur. tekh. fiz. 33 no.8:990-995 Ag '63.   (MIRA 16:11)

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR, Lenin-
grad.

ACCESSION NR: AP4020582   S/0057/64/034/003/0519/0522

AUTHOR: Belyakov, L.V.; Vitman, F.F.; Zlatin, N.A.

TITLE: On the impact of deformable bodies and its simulation. 3. On the correspon-
dence of the instantaneous values of the parameters of the simulated and simulating
processes

SOURCE: Zhurnal tekhnicheskoy fiziki; v.34, no.3, 1964, 519-522

TOPIC TAGS: impact, deformable body, deformable body impact, simulation, impact si-
mulation, deformable body impact simulation, steel dural impact, copper aluminum
impact

ABSTRACT: On the basis of dimensional analysis, two of the authors have previously
proposed the following general expression for the depth, L_K, of the crater formed
by the normal impact of a body of revolution moving parallel to its axis on the
plane surface of a large target (F.F.Vitman and N.A.Zlatin, DAN SSSR,146,No.2,337,
1962; ZhTF,33,No.8,982,1963) and experimental evidence of its adequacy has been ob-
tained (L.V.Belyakov, F.F.Vitman and N.A.Zlatin, Ibid.,33,No.8,990,1963).

Card 1/3

ACC.NR: AP4020582

$$\frac{L_{\kappa}}{l_0} \simeq \varphi_1 \left(\frac{\rho_{01} v_0^2}{H_1}, \frac{H_2}{H_1}, \frac{\rho_{02}}{\rho_{01}}, k_0, \frac{l_0}{d_0}, \frac{\rho_{02} a_2}{\rho_{01} a_1} \right)$$

Here H is the "dynamic hardness" of the material, ρ is the density, and a is the velocity of sound. l and d are characteristic longitudinal and transverse dimensions of the projectile and k is a form factor describing the shape of the projectile head. v_0 designates the impact velocity. The subscripts 1 and 2 refer to the target and projectile materials respectively, and the subscript 0 indicates the values prior to impact. It was hypothesized that not only the final crater depth L_K, but also the values assumed during the course of the impact process by all the relevant parameters are functions of the dimensionless quantities appearing in this equation and of an appropriate reduced time. To test this hypothesis, impacts of soft steel cylinders with dural targets and copper cylinders with aluminum targets were observed by an x-ray technique similar to that employed by V.A.Tsukerman and M.A.Manakova (ZhTF,24,No.2,391,1957). The materials and the impact velocities were so chosen that the dimensionless parameters in the above equation had the same values in the two cases. It was found that the penetration depth, the projectile length, and the maximum projectile width all were the same functions of the reduced time t/T for the steel-dural collisions as for the copper-aluminum collisions. Here t is the

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ACC.NR: AP4020582

time since contact and T is the duration of the impact process. T was 68 microsec for the steel-dural impact and 100 microsec for the copper-aluminum impact. Twelve x-ray photographs of the impacts are reproduced. Orig.art.has: 4 formulas and 3 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im.A.F.Ioffe AN SSSR, Leningrad (Physico-technical Institute, AN SSSR)

SUBMITTED: 09Feb63   DATE ACQ: 31Mar64   ENCL: 00

SUB CODE: PH   NR REF SOV: 017   OTHER: 006

Card 3/3

L 25378-65   /EWT(1)/EWT(m)/EWP(w)/EWA(d)/T/EPF(n)-2/EWP(b)/EWP(t)   Pu-4   IJP(c)   JD/WW

ACCESSION NR: AP5004589   S/0020/65/160/002/0314/0316

AUTHOR: Belyakov, L. V.; Valitskiy, V. P.; Zlatin, N. A.

TITLE: The role of thermal phenomena in collision of metal bodies

SOURCE: AN SSSR, Doklady, v. 160, no. 2, 1965, 314-316, and top half of insert facing p. 314

TOPIC TAGS: impact heat, collision heat, metal collision impact heat, metal collision heat, impact heat effect, impact effect, metal bodies collision effect, collision heat effect, collision impact heat

ABSTRACT: The role of thermal effects in the formation of the impact cavity in the target is considered at threshold impact speeds at which temperature is a major factor, i.e., at temperatures approaching the melting point of the target material. Aluminum disks (diameter-to-thickness ratio, 4:1) were shot flatly at a massive lead target. The disk and target materials were selected on the basis of their shock characteristics in the pressure versus mass-velocity coordinates. The temperature effect was evident at impact speeds exceeding 1.6 km/sec. At 1.7—1.8 km/sec a conical cavity formed in addition to and underneath the typical depression corresponding to lower speeds. The conical cavity displayed obvious traces of fusion.

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L 25378-65
ACCESSION NR: AP5004589

At the same impact speed, a shock wave with a frontal speed of 650 m/sec developed
in the impact region of the target. This speed corresponds to temperatures close
to the melting points of the material. The conical cavity seems to have formed
through the ejection of melted or softened material. This assumption was checked
by the pulse x-ray method, which makes it possible to observe the successive stages
in the development of the process. The formation of "protuberances" above the
cavity was observed 300—400 µsec after contacts at speeds from about 1.7 to
2.4 km/sec. These protuberances are interpreted as clouds of the target substance
ejected from the conical part of the cavity. Further experiments with other target
materials confirmed the same relation between the mass speeds of the shock wave
and the melting temperatures of the particular metal. These speeds for tin, cad-
mium, and zinc were found to be 750, 800, and 1050 m/sec, respectively. Orig. art.
has: 2 figures.   [FP]

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR
(Physicotechnical Institute, Academy of Sciences, SSSR)

SUBMITTED: 28Jul64   ENCL: 00   SUB CODE: ME, TD

NO REF SOV: 007   OTHER: 003   ATD PRESS:
                                                                      3182

Card 2/2

L 07413-67   EWT(m)/EWP(w)/EWP(t)/ETI/EWP(k)   IJP(c)   JD/HW/JH

ACC NR: AP6032848   SOURCE CODE: UR/0020/66/170/003/0540/0543

AUTHOR: Belyakov, L. V.; Valitskiy, V. P.; Zlatin, N. A.; Mochalov, S. M.

ORG: Physical-Technical Institute im. A. F. Ioffe, Academy of Sciences SSSR (Fiziko-tekhnicheskiy institut Akademii nauk SSSR)

TITLE: The melting of lead in a shock wave

SOURCE: AN SSSR. Doklady, v. 170, no. 3, 1966, 540-543

TOPIC TAGS: shock wave, x ray photography, high speed camera, pressure distribution, specific volume, thermodynamic analysis

ABSTRACT: A study was made of adiabatic heating of lead to the fusion point during impact shock loading. Thermodynamic analysis of melting in a shock wave is presented and schematic drawings are given of pressure as a function of specific volume and distance. Thermodynamic equations are given for the specific work done by pressure to $\alpha\lambda$, where λ is the specific heat of fusion and α is a coefficient which depends on the shock pressure. Melting in a shock wave resulted in an entropy increase and a change in pressure distribution. These analytical results were checked by shock wave experiments on lead, in which high speed x-ray photographs were taken of the fractured ends of lead sheets. Impact velocities ranged from 1085 to 1570 m/sec. A sharp change in fracture appearance occurred at an impact velocity of 1250-1300 m/sec; this coincided

Card 1/2   UDC: 531.66.001.11

L 07413-67

ACC NR: AP6032848

3

with a mass velocity of 700 m/sec. It is known that melting of lead occurs in a shock wave when the mass velocity becomes 650-700 m/sec. This velocity corresponded to a pressure of 230-250 x 10^3 atm and to a 22-23% change in specific volume. X-ray photographs are also shown of fracture in 1 mm thick lead sheets at an impact velocity of 1340 m/sec, during time intervals of 15, 30, 45, and 54 μsec. These tests show that the difference between the speed of the split flange (initial fracture condition) and the residual mass of the "whiskers" (final fracture condition) was 3%, verifying the specific work equation. Sheet thicknesses ranging from 0.5 to 3 mm were tested 15 μsec after the moment of fracture at 1340 m/sec. Some of the sheets were covered with 0.05 mm thick aluminum foil during testing. The use of the foil changed the spacings of cleavage "whiskers". These experiments confirmed that the originally postulated position of shock adiabates of lead in the solid and two-phase conditions was correct. A calculation of the relaxation time from the data gave 3 x 10^{-7} sec. Presented by Academician B. P. Konstantinov on 13 December 1965. Orig. art. has: 4 figures, 2 formulas.

SUB CODE: 11/ SUBM DATE: 27Nov65/ ORIG REF: 008/ OTH REF: 001

Card 2/2

L 07367-67   EWT(d)/EWT(1)/EWT(m)/EWP(o)/EWP(w)/EWP(t)/ETI   IJP(c)   JD/EM/JH

ACC NR: AP6033425   SOURCE CODE: UR/0057/66/036/010/1875/1882

AUTHOR: Belyakov, L. V.; Valitskiy, V. P.; Zlatin, N. A.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-   54
tekhnicheskiy institut AN SSSR)   B

TITLE: Thermal effects accompanying an impact on a metal half-space

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 10, 1966, 1875-1882

TOPIC TAGS: impact, impact effect, impact thermal effect, impact effect modeling,
metal test

ABSTRACT: The article discusses experiments aimed at expanding the range of
applicability of criteria to parallel the effects between low-speed impact of one
pair of materials to similar effects for a pair of different materials at a higher,
experimentally unattainable, speed. The upper limit of the interval for which the
modeling curve will yield correct results is discussed at some length. The concept
of "threshold speed " is introduced. Threshold speed corresponds to the discon-
tinuity of the modeling curve caused by melting of the metals in question and is
estimated at about 0.7 to 1 of the velocity of sound in the given metal. If the
threshold speed is correctly determined, the modeling curve should yield accurate
data on impact results for speeds at least 3 to 3.5 times higher than the experi-
mental. Experiments were conducted in which blocks of lead, tin, and cadmium were
impacted by aluminum disks 4 mm thick and 15 mm in diameter at speeds up to 24 km/sec.

Card 1/2   27   UDC: 531.66.001.11   14

L 07367-67

ACC NR: AP6033425

The results were in good agreement with calculated threshold speeds. A marked difference was observed in the cavities formed at impact speeds of about 1 km/sec and those obtained at about 1.7 to 1.8 km/sec, the latter showing conical deepening with evidence of fusing of the target. A special high-speed x-ray investigation of the process at impact speeds up to 2.4 km/sec confirmed the ejection of molten material at speeds of 1.7 to 1.8 km/sec and higher. Further confirmation of the threshold speed magnitudes was obtained in a special series of x-ray tests in which a copper cylinder was made to hit thin (about 0.05 of the diameter of the cylinder) sheets of lead, tin, and cadmium. The threshold speeds for metals with higher melting point were calculated on the assumption that the heating up of the target by the impact is a function of the mass speed developed by the shock load and obeys the same law for all metals. The results of calculations for a number of metals confirm the assumption and agree with experimental data from various sources. Reference is made to the experiments of A. C. Charters (Sci. Amer. v. 203, no. 4, 1960, 128), whose results could be extrapolated for impact speeds of 30 to 50 km/sec. Orig. art. has: 6 figures.

SUB CODE: 20/ SUBM DATE: 18Oct65/ ORIG REF: 012/ OTH REF: 007/ ATD PRESS: 5101

Card 2/2 afs

L 20179-66   EWT(m)/EWP(v)/T/EWP(t)   IJP(c)   JD

ACC NR: AP6007088   UR/0057/66/036/002/0358/0364

AUTHOR: Belyakov,L.V.; Zlatin, N.A.

ORG: Physicotechnical Institute im. A.F.Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: On the deformation and rupture of massive metallic bodies under the action of short-duration pressure

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 2, 1966, 358-364

TOPIC TAGS: impact strength, impact stress, high velocity impact, copper, zinc, tin, cadmium, lead, lead alloy, antimony alloy, aluminum, hardness, plasticity

ABSTRACT: The authors have investigated the cavities produced in large blocks of copper, zinc, tin, cadmium, lead, and a lead-antimony alloy by impact of 15-mm-diameter, 4-mm-thick aluminum disks at velocities up to 2.4 km/sec. The experimental technique is not described. Aluminum was selected as the projectile material because the velocity of sound in this metal is relatively high and because its shock adiabat lies well below those of the target metals. The depth L of the cavity increased smoothly with the impact velocity u except at a certain critical value of u, different for the different target materials, at which L was discontinuous. Rupture of the target metal was observed at impact velocities exceeding the critical value, but not at lower impact

Card 1/2   UDC: 531.66.001.11   2

L 20179-66

ACC NR: AP6007088   4

velocities. When L/ct was plotted against du^2/H, where c is the velocity of sound, d
the density, and H the dynamic hardness of the target metal and t is the duration of
impact determined from the velocity of sound in aluminum and the thickness of the pro-
jectile disk, the points for all the target metals corresponding to impact velocities
exceeding the respective critical values lay on a single smooth curve. The value of
the parameter du^2/H at the critical velocity was different for the different metals.
That this difference was due to the difference in the plasticities of the several metals
was confirmed by the behavior of the lead-antimony alloy (3% antimony), whose plasticity
and critical velocity were both much lower than those of lead. The cavities produced
at high impact velocities in target metals other than copper were roughly conical in
shape, whereas the cavities in copper had relatively flat floors. This difference in
behavior is ascribed to the larger value for copper than for the other target metals of
the quantity ct/D, where D is the diameter of the projectile disk. After some discus-
sion it is concluded that the processes taking place during impact under the conditions
of the experiments are determined mainly by wave phenomena. Orig. art. has: 3 formulas,
5 figures, and 1 table.
                                                                            [15]

SUB CODE: 20/   SUBM DATE: 17Jun65/   ORIG REF: 011/   OTH REF: 003 /
ATD PRESS: 4215

Card   2/2   MJS

BELYAKOV, M., inzhener.

Gas turbine automobiles. Tekh.mol. 24 no.5:15-17 My '56.(MLRA 9:8)
(Automobiles--Engines) (Gas turbines)

BELYAKOV, M.

Belyakov, M. "From the history of our native meteorology," Vestnik vozdush. flota, 1948, No. 12, p. 11-15

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

Distr: 4E4J/4E3d

Hetero-chain polyesters. I. Polyesters of isomeric phthalic acids. V. V. Korshak, S. V. Vinogradova, and V. M. Belyakov (Inst. Heteroorg. Compds., Acad. Sci. U.S.S.R., Moscow). Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk 1957, 730-6.—The conventional transesterification of di-Me esters of isomeric benzenedicarboxylic acids with glycols in the presence of PbO catalyst (0.25%) gave the indicated polyesters: p-C₆H₄(CO₂H)₂ with ethylene glycol, m. 256°; trimethylene glycol, m. 217-18°; 1,4-butanediol, m. 222-3°; 1,5-pentanediol, m. 134-40°; 1,6-hexanediol, m. 148-54°; 1,10-decanediol, m. 123-7°; 1,20-eicosanediol, m. 103-13°; 1,2-propanediol, m. 106-11°; 1,3-butanediol, m. 82-7°; diethylene glycol, m. 65-70°; triethylene glycol, m. 60-6°; m-C₆H₄(CO₂H)₂ with ethylene glycol, m. 103-8°; trimethylene glycol, m. 92-6°; 1,4-butanediol, m. 88-94°; 1,5-pentanediol, m. 78-82°; 1,6-hexanediol, m. 75-80°; 1,10-decanediol, m. 34-6°; 1,20-eicosanediol, m. 47-9°; 1,2-propanediol, m. 80-7°; 1,3-butanediol, m. 50-5°; diethylene glycol, m. 55-60°; triethylene glycol, m. 60-5°; phthalic acid with ethylene glycol, m. 63-5°; 1,4-butanediol, m. 17-18°; 1,5-pentanediol, m. 6-9°; 1,6-hexanediol, m. 0-2°; 1,10-decanediol, m. -27 to -26°; 1,20-eicosanediol, m. 47-52°; 1,2-propanediol, m. 45-50°; 1,3-butanediol, m. -8° to 0°; diethylene glycol, m. 10-11°; triethylene glycol, m. -8° to -7°. Solubilities of the polyesters in EtOH and C₆H₆ are tabulated. The relation of the m.p. and soly. to the structure of the polyesters is discussed from the viewpoint of chain packing and symmetry of macromol.

K. K. Konshik, S. V. Vinogradova

...Transesterification with various glycols of di-Me esters of isomeric biphenyldicarboxylic acids yielded the corresponding polyesters. The catalyst used in the polycondensation was LiOH; some polyesters of the m,m'- and o,o'-isomers were prepd. from the acids and the glycols by heating finally to 220° in vacuo under N; the less reactive ones were prepd. at 270-355°. The m,m'- and p,p'-isomeric acids were prepd. from the appropriate isomer of MeC₆H₄MgBr and CuCl₂; thus were prepd. m,m'-ditolyl, b.p. 118-20°; p,p'-ditolyl isomer, m. 121°. These were oxidized with K₂Cr₂O₇ in autoclave at 375° to the corresponding acids in 62-80% yields. Di-Me diphenate, m. 73-4°; di-Me m,m'-biphenyldicarboxylate, m. 102-3°; p,p'-analog, m. 213-4°, was prepd. from the acid through its chloride prepd. by heating the acid with PCl₅-POCl₃, followed by reaction with MeOH. The polyesters had the following m.ps.: p,p'-biphenyldicarboxylic acid polyesters with: ethylene glycol, m. 330-3°; trimethylene glycol, 240-49°; tetramethylene glycol, 255-60°; pentamethylene glycol, 160-70°; hexamethylene glycol, 195-200°; decamethylene glycol, 126-32°; eicosamethylene glycol, 112-15°; diethylene glycol, 117-19°; triethylene glycol, 86-93°; 1,2-propanediol, 130-40°; 1,3-butanediol, 125-35°; the corresponding polyesters of m,m'-biphenyldicarboxylic acid: 119-22°, 76-8°, 62-6°, 57-60°, 62-6°, 86-90°, 69-91°, 69-75°, 43-6°, 93-7°, 85-7°; those of diphenic acid: 96-8°, 70-8°, 34-6°, 8-13°, 4-9°, -7° to -3°, -18° to -16°, 54-9°, 38-41°, 51-5°,

V. V. Korshak, S. V. Vinogradova

36-8°. The relation of m.ps. to structures is discussed from viewpoint of chain packing and symmetry. Comparison with aliphatic polyesters is made on the same basis. III. Polyesters of β-methyladipic and β-p-nitrophenylglutaric acids. V. V. Korshak and S. V. Vinogradova Ibid. 746-9.—Polyesters of various glycols with the above indicated acids were prepd. conventionally. The m.ps. and soly. are tabulated. Polyesters of various glycols shown below with HO₂CCH₂CHMeCH₂CH₂CO₂H were: ethylene glycol, m. −31° to −27°; trimethylene glycol, m. −36° to −31°; tetramethylene glycol, m. −43° to −38°; pentamethylene glycol, m. −46° to −42°; hexamethylene glycol, m. −47° to −43°; decamethylene glycol, m. −3° to −2°; eicosamethylene glycol, m. 57-60°; 1,2-propanediol, m. −25° to −21°; 1,3-butanediol, m. −34° to −30°; diethylene glycol, m. −28° to −24°; triethylene glycol, m. −43° to −38°; the polyesters of glutaric acid with: ethylene glycol, m. −19° to −12°; pentamethylene glycol, m. 22-5°; hexamethylene glycol, m. 29-34°; eicosamethylene glycol, m. 77-80°; corresponding polyesters of HO₂CCH₂CH(C₆H₄NO₂-p)CH₂CO₂H: ethylene glycol, m. 73-6°; eicosamethylene glycol, m. 43-6°; that with pentamethylene glycol was a rubbery solid, and that with hexamethylene glycol was also a rubbery solid. The relation of phys. properties to the stiffness and symmetry of the polyester chain is discussed in detail.

G. M. Kosolapoff

AUTHOR: Belyakov, M., Institute Director   SOV/27-58-11-25/29

TITLE: More Attention to the Learning of a Second and Associate
               Trades (Bol'she vnimaniya izucheniyu vtorykh i smezhnykh
               professiy)

PERIODICAL: Professional'no - tekhnicheskoye obrazovaniye, 1958, Nr 11,
               p 26 (USSR)

ABSTRACT: The unusual development of engineering has caused the dis-
               appearance of some trades and the appearance of new ones.
               The teaching of a second and associate profession, within
               the limits of every installation, makes it possible to raise
               the workmens' qualification standard and labor efficiency.
               The experience of many years has shown that there are suf-
               ficient possibilities to acquire a second trade. Thus, e.g.,
               persons learning the trade of operators of steam engines,
               compressors, crushers, whinches, etc., must also learn the
               job of a metal craftsman. Last year, when switching-over
               to the 7-hour working day at the metallurgical combines
               imeni Serov, Nizhniy Tagil, Magnitogorsk, and others, the
               mass instruction of workmen of various trades in the repair-
Card 1/2   man and metal craftsman trades permitted a growth in labor

SGV/27-58-11-25/29

More Attention to the Learning of a Second and Associate Trade

efficiency of up to 15%. The author mentions the number of men who learned a second profession at the Magnitogorsk Combine, and points out that an associate trade is usually learned in the installations through an accelerated course.

ASSOCIATION: Sverdlovskiy institut tekhnicheskogo obucheniya rabochikh (Institute of Technical Training of Workmen, Sverdlovsk)

1. Industrial training   2. Personnel—Performance   3. Engineering personnel—Training

Card 2/2

22 (1)   SOV/27-59-3-29/37

AUTHOR: Belyakov, M., Institute Director

TITLE: Schools of Advanced Experience   (Shkoly peredovogo opyta)

PERIODICAL: Professional'no-tekhnicheskoye obrazovaniye, 1959, Nr 3,
                 p 31, (USSR)

ABSTRACT: Plant workers in the sector of ferrous metallurgy have
                 obtained considerably higher results in the productivity
                 of blast and open-hearth furnaces and of tube-rolling and
                 drawing mills than workers in the capitalistic countries.
                 The shop and intershop classes of advanced experience have
                 played a great part in attaining these results. Tens of
                 thousands of workmen of metallurgical and tube-rolling
                 plants are yearly being trained in these schools. They
                 are either new workmen or those who do not reach the out-
                 put-standard or whose showings are below the productivity
                 of advanced workmen. Hundreds of classes are usually con-
                 ducted at the large metallurgical combines, such as the
                 Magnitogorsk, Kuznetsk, Nizhniy Tagil,
Card 1/3   Pervoural'skiy novotrubnyy,   Sinarskiy trubnyy

SOV/27-59-3-29/37

Schools of Advanced Experience

acquired the advanced working methods and their showings
correspond with those set by the school.

ASSOCIATION: Sverdlovskiy institut tekhnicheskogo obucheniya rabochikh
chërnoy metallurgii (The Sverdlovsk Institute of Technical
Training of Ferrous Metallurgy Workers)

Card 3/3

BELYAKOV, M., inzh., izobretatel' (Sverdlovsk)

    Open-hearth furnaces feed corn. Izobr. i rats. no.7:8-10
J1 '61.   (MIRA 14:6)
             (Corn (Maize))
              (Slag)

ANATOL'EV, V.; SEMENOV, A.; BELYAKOV, M., dotsent, general-mayor
        inzhenerotekhnicheskoy sluzhby

    New publications. Znan.-sila 37 no.9:45 S '62. (MIRA 15:12)
                          (Astronautics)