

DEREVYANKO, N.S., inzh.; MOYZHES, L.B., inzh.; SHELKOVICH, G.L., tekhnik

Use of a surface vibration thickener during the concreting
of piling. Transp. stroi. 14 no.3:50-51 Mr '64. (MIRA 17:6)

DEREVYANKO, P., kand.geograf.nauk, starshiy nauchnyy sotrudnik

Crooked methods. NTO 3 no.9:28-30 S '61.

(MIRA 14:8)

1. Energeticheskiy institut imeni G.M. Krzhizhanovskogo.
(Electric power plants--Costs)

DEREVYANKO, P. - MIKHEYEV, A., smennyy shturman

What kind of harbor tugboats should we have? Mor. flot 23 no.4;
30-32 Ap '63. (MIRA 16:5)

1. Nachal'nik Odesskogo portovogo flota (for Derevyanko).
2. Morskoy buksir "Sarych" (for Mikheyev).
(Harbors) (Tugboats)

DEREVYANKO, P.; MIKHEYEV, A., smennyy shturman.

Modernize fueling stations in harbors. Mor. flot 23 no. 12:
16-17 D '63. (MIRA 17:5)

1. Nachal'nik Odesskogo portovogo flota (for Derevyanko).
2. Portovoy buksir "TSiklon", Odessa (for Mikheyev).

DEREVYANKO, P.A.

AVRAAMOVA, A.A.; ALAMPIYEV, P.M.; BADIR'YAN, G.G.; BORODIN, I.A.; VASYUTIN,
V.F.; GUBER, A.A.; GURARI, Ye.L.; DANILOV, A.D.; ~~DEREVYANKO, P.A.~~;
YELSUKOV, M.P.; KOLOSKOV, P.I.; LAPTEV, I.D.; ~~LEONT'YEV, N.F.~~; PECHNI-
KOV, A.M.; PROKHOROV, A.I.; RUDENKO, N.A.; CHERDANTSEV, G.N.; YAKIMOV, A.T.

P.V. Pogorel'skii; Obituary. Izv. AN SSSR. Ser. geog. no. 3:94-95 My-Je
'55. (MLRA 8:9)

(Pogorel'skii, P.V., 1399-1955)

DEREVYANKO, P.A.; Prinsipal uchastnye: SEMENOV, A.A., inzh.

Consideration of the diversification of expenditures and problems
of their distribution in the determination of the economic effective-
ness of water resource developments. Probl. gidroenerg. i reg. rech.
stoka no.11:90-98 '63. (MIRA 18:3)

DEREVYANKO, Pavel Andreyevich; POGOREL'SKIY, P.V. [deceased], doktor ekon. nauk, otv. red.; KUNIN, V.N., doktor geogr. nauk; FILIPPOVA, B.S., red. izd-va; NOVICHKOVA, N.D., tekhn. red.

[Rural water supply in the Mongolian People's Republic] Sel'skokhoziaistvennoe vodosnabzhenie Mongol'skoi Narodnoi Republiki. Izd-vo Akad. nauk SSSR, 1959. 130 p. (Akademiia nauk SSSR. laboratoriiia gidrogeologicheskikh problem. Trudy, vol.21)
(MIRA 12:12)

(Mongolia--Water supply, Rural)

DEREVYANKO, Pavel Andreyevich

[Rural water supply of the Mongolian People's Republic]
Sel'skokhoziaistvennoe vodosnabzhenie Mongol'skoi Narodnoi
Respubliki. Moskva, Izd-vo Akad.nauk SSSR, 1959. 130 p.
(MIRA 14:2)

(Mongolia--Water supply, Rural)

L 47335-65 EWT(m)/EPF(c)/T/ENP(t)/ENP(b) Pr-1 IJP(c) JD/WE

ACCESSION NR: AP5006819

8/0065/65/000/002/0003/0008

AUTHOR: Masagutov, B. M.; Berg, G. A.; Varfolomeyev, D. F.; Seliyanov, T. I.;
Kulinich, G. M.; Mironov, A. A.; Kirillov, T. S.; Pau, G. M.; Anipin, M. K.;
Derevyanko, P. I.; Smirnova, S. G.

TITLE: Water purification of diesel fuel with a lowered expenditure of hydrogen using an industrial unit

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 2, 1965, 3-6

TOPIC TAGS: water purification, diesel fuel, hydrogen

ABSTRACT: Prolonged operation of the UNPZ 24-5 "Order of Lenin" water purification unit which removes water from petroleum verified the recommendations of the Bashkir Scientific Research Institute of the Chemical Industry and the All-Union Scientific Research Institute of the Chemical Industry on the possibility of reducing hydrogen consumption. The average annual hydrogen consumption for 1963 in removing water from directly distilled and redistilled diesel fuel at a reactor pressure of 380°C and a pressure of 28-36 at amounted to 0.46, or less than planned by a factor of 1.5. Lowering the pressure in the reactors from 34-36 to 28-30 at

Card 1/2

L 47385-65

ACCESSION NR: AP5006819

made it possible to reduce hydrogen consumption by 1.3 times without degrading the quality of the work. The regeneration period for operation of the catalyst was 8 months. The activity of the first reactor catalyst decreases more quickly than the catalyst from subsequent reactors. A depth of purification of raw materials of sulfur compounds below 50% occurs in the first reactor after processing 1200 tons of raw material per cubic meter of catalyst and in the second reactor upon the purification of 2300 tons of raw material per cubic meter of catalyst. Orig. art. has: 2 figures, 1 table.

ASSOCIATION: BashNII, Ordens Lenina UNPZ

SUBMITTED: 00

ENCL: 00

SUB CODE: GC, OC

NO REF SOV: 005

OTHER: 000

bro
Card 2/2

DEREVYANKO, P.M., polkovnik; YAROVIKOV, V.S., red.

[Problems of the revolution in military affairs] Problemy
revoliutsii v voennom dele; sbornik statei. Moskva, Voen-
izdat, 1965. 193 p. (MIRA 18:3)

TSYPKIN, V.S.; OKINSHEVICH, A. Ye.; OMEI'YANOVICH, V.M.; SKLYAR, F.T.;
DEREVYANKO, P.P.; GERMAN, P.L.

Review of the book "Geological and industrial evaluation of coal
deposits". Ugol' 39 no.6:76 (MIRA 17:7)

1. Vsesoyuznyy tsentral'nyy gosudarstvennyy institut po pro-
yektirovaniyu i tekhniko-ekonomicheskim obosnovaniyam razvi-
tiya ugol'noy promyshlennosti (for TSypkin, Okinshevich).
2. Glavnyy geolog kombinata Donets'ugol' (for Omei'yanovich).
3. Nachal'nik Krasnogvardeyskoy GRP tresta shakhtnoy geologii
Donetskogo soveta narodnogo khozyaystva (for Sklyar). 4. Na-
chal'nik Makeyevskogo upravleniya tresta shakhtnoy geologii
Donetskogo soveta narodnogo Khozyaystva (for Derevyanko).
5. Nachal'nik Proletarskoy GRP tresta shakhtnoy geologii
Donetskogo soveta narodnogo khozyaystva (for German).

Country : USSR
Category : Diseases of Farm Animals. R-1
 : General Problems.
Abs. Jour : RZBiol., No. 4, 1959, No. 16782
Author : Derevyanko, P. S.
Instit. : Kiev Veterinary Institute.
Title : Tissue Changes in the Wound Canal after Arthro-
 tomy of the Horse's Hoof Joint Performed
 through the Hoof Bone and Its Joint Cartilage
Orig. Pub. : Tr. Kiyevsk. vet. in-t, 1957, 13, 237-246
Abstract : When studying histological specimens of tissue
 taken from the wound canal which were prepared
 at various intervals between the 7th and 240th
 days after arthrotomy, it was shown that the
 wound canal (I), the defect in the joint's
 cartilage (II), and the defect of the skin
 base in the wall of the hoof bone (III) were
 replaced by newly formed connective tissue. In
 I, close to the surface of the joint the latter
 becomes impregnated with lime salts after a

Card: 1/2

L 10421-67 EWT(m)/EWP(j) IJP(c) RM
ACC NR: AP6029916 (A) SOURCE CODE: UR/0413/66/000/015/0088/0088
AUTHORS: Sichko, P. V.; Sarancha, Ye. T.; Pakhomova, L. S.; Derevyanko, R. Sh. 12
ORG: none
TITLE: A method for obtaining a modified carbamide resin. Class 39, No. 184440 15
SOURCE: Izobret prom obraz tov zn, no. 15. 1965, 83
TOPIC TAGS: resin, carbamide, acetic acid, aldehyde
ABSTRACT: This Author Certificate presents a method for obtaining a modified carbamide resin by treating carbamide resin with aldehyde. To increase its resistance to water, the resin is modified with croton aldehyde in the medium of acetic acid...
SUB CODE: 11/ SUBM DATE: 12Apr65

Card 1/1 6pp

UDC: 678.6521.11:21-9:547.381

ANYUKHIN, B.M.; DEREVIANKO, R. Sh. [Derev'ianko, R. Sh.]

Use of furfuralamide in plant growing. Khim. prom. [Ukr.] no.18
82-83 Ja-Mr'63 (MIRA 12787)

1. Upravleniye khimicheskoy promyshlennosti Donetskogo soveta
narodnogo khozyaystva.

Country : USSR
Category : CULTIVATED PLANTS. POTATOES, Vegetables. Cucurbits.
Abs. Jour. : IZV ZHUR-BIOL., 21, 1958, NO-9500
Author : Vlasjuk, P.A.; Derev'yanko, S.I.
Institut. : AS Ukrainian SSR
Title : The Effects of Different Forms of Potassium Fertilizers on the Physiologic-Biochemical Processes Yield and Quality of Tomatoes and Potatoes Grown*
Orig. Pub. : Visnik AN URSR, 1957, No.9, 42-52

Abstract : In tests conducted with the mid-season maturing Krasnodarets variety tomato and Lorkh potato under irrigation, an investigation has been made of the activity of ferments and respiration, the accumulation of ascorbic acid, sugar and chlorophyll, the change in moisture, as well as the Cl, S and K contents. K₂O and potassium-magnesium increased the vitamin C and dry matter content in tomato fruits from 4.8-5.0 (in the control) to

* Under Irrigation

Card: 1/3

Country :
Category : CULTIVATED PLANTS. POTATOES,
Abs. Jour. : REF ZHUR-BIOL.,21,1958,NO-96004
Author :
Instit. :
Title :
Orig. Pub. :

M

Abstract : 5.4-5.8. All forms of K reduced the acidity of the fruit and favorably affected the water balance in the plants. The synthesis of chlorophyll in the tomato leaves and potato leaves increased only with the application of potash-magnesium and K_2O . The latter produced the optimum respiration rate in the potato leaves. Potassium fertilization did not show any effect on a number of biochemical processes. Tomato yield boats of 25.9, 26.8, and 18.2 cwt/ha. were obtained over the 226.2 of the

Card: 2/3

Country : M
Category : CULTIVATED PLANTS. POTATOES
Abs. Jour. : REF ZHUR-BIOL.,21,1958,NO-95004
Author :
Institut. :
Title :
Orig. Pub. :
Abstract : control from respective applications of K₀, potash
magnesium, K_x; on the potatoes too the very
weakest effect was gotten from K_x--V.V. Prokoshev
Card: 3/3

DEREVYANKO, S.N.

Result of treating initial forms of cancer of the cervix uteri;
data from the Tambov Province Oncological Dispensary. Vop. onk.
6 no. 8:90-93 Ag '60. (MIRA 14:1)
(UTERUS—CANCER)

DEREVYANKO, S.N., inzh.; KHOLODOV, A.M., kand.tekhn.nauk

Automation of the operation of scrapers and bulldozers. Makh. stroi.
19 no.6:5-7 Je '62. (MIRA 17:2)

DEREVYANKO, S.N., inzh.; PLEKHOTKIN, V.P., inzh.

Automatic control of bulldozers' and scrapers' digging. Stroi.
i dor. mash. 9 no.9:12-15 S '64. (MIRA 17:11)

COUNTRY : USSR - I
CATEGORY : PLANT PHYSIOLOGY. Photosynthesis.
ABS. JOUR. : REF ZHUR - BIOLOGIYA, NO. 4, 1959, No. 15251
AUTHOR : Brandt, A.B.; Derevyanko, V.G.; Pavlova, I.P.*
INST. : Not given
TITLE : Significance of Different Intensity and Spectral Composition of Light for Pigment Formation by Plants.
ORIG. PUB. : Biofizika, 1957, 2, No.6, 649-660
ABSTRACT : The property of pigment accretion (chlorophyll and carotenoids) in relation to the intensity and spectral composition of light was studied in leaves of grains, cucumbers, horsebeans, radishes, and lettuce. With low intensity exposure the pigment accumulated more rapidly in the red zone of the spectrum, and with high intensity in the blue zone. Young leaves contained more pigment and in a more labile form than old ones. The reaction
* Tagayeva, S.V.
CARD: 1/2

DEREVYANKO, V. G., TAGAEYEVA, S. V., BRANDT, A. B.

Inst. of Biophysics, Academy of
Sciences, Moscow.

"The peculiarities of the leaves' optical properties."

paper submitted for the Third Intl. Congress on Photobiology, Copenhagen, 31 July -
5 August 1960.

L 41311-65

ACCESSION NR: AP5008726

6/0209/65/000/003/0037/0040

AUTHOR: Derevyanko, Ye. (Lieutenant colonel of aviation service, Candidate of biological sciences); Kuznetsov, V. (Major of medical service, Physician, Aviator); Myl'nikov, V. (Major of medical service, Physician, Aviator)

TITLE: Better flight simulation in trainers

SOURCE: Aviatsiya i kosmonavtika, no. 3, 1965, 37-40

TOPIC TAGS: flight simulation, pilot training

ABSTRACT: The authors review common and frequent pilot errors committed both during flight and in flight simulators. They state that after training exercises involving unusual circumstances and instrument failures are performed on flight simulators, the quantity of wrong decisions is decreased by 40 to 50% after three or four sessions. The authors advocate the use of special training to improve pilot psychophysiological reserve. This reserve can be evaluated in simulators by increasing the number of instruments to which the pilot must react. It is suggested that a light board be mounted in the instrument panel and that the pilot react to a light signal by pressing a corresponding button located in the engine-control sector. For a correct reaction, the first light goes out and the next light goes on auto-

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L 41311-65

ACCESSION NR: AP5008726

matically. It is concluded that the simulation of failures must be included not only in special failure exercises but also in other exercises without pilot foreknowledge. Orig. art. has: 2 figures. [LB]

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MS

NO REF SOV: 000

OTHER: 000

ATD PRESS: 3212

Card 2/2

TAGEYEVA, S.V.; BRANDT, A.B.; DEREVYANKO, V.G.

Variations in the optical properties of leaves during vegetation,
Dokl. AN SSSR 135 no.5:1270-1273 D '60. (MIRA 13:12)

1. Institut biologicheskoy fiziki AN SSSR. Predstavleno akademikom
A.I. Oparinym. (Leaves--Optical properties) (Birch)
(Lindep)

SOV/86-58-7-17/38

THOR: Derevyanko, Ye. A., Lt Col

FILE: A Fighter Pilot Takes the Initial Position for
an Attack (Letchik-istrebitel' zanimayet iskhodnoye polo-
zheniye dlya ataki)

RIODICAL: Vestnik vozdushnogo flota, 1958, Nr 7, pp 36-38 (USSR)

STRACT: The article describes flights organized for the purpose
of finding out how accurately fighter pilots take their
initial position for an attack in relation to the
aerial target. Photos taken from an Il-28 aircraft
flying at a higher altitude than the fighter-plane and
the aerial target showed that in most cases the pilots
made great errors in estimating the proper interval be-
tween the initial point of attack and the target. The
author suggests that pilots should be more intensively
trained in the art of maneuvering into the initial
position for an attack. To check the execution of this
maneuver by the pilots, the aerial gunner of the bomber-

rd 1/2

Fighter Pilot Takes the Initial (Cont.)

SOV/86-58-7-17/38

target should be equipped with a small optical range finder. Each time the fighter pilot reports by radio that he has maneuvered into the initial position for an attack, the aerial gunner reports back to the pilot the readings taken from the range finder. Thus the fighter pilot can immediately estimate the correctness of his maneuver. One diagram.

ard 2/2

DEREVYANKO, Ye.A., mayor med.sluzhby, kand.biol.nauk

Dynamics of the development of fatigue in flying personnel during
flight. Voen-med.zhur. no.11:78-79 N '57. (MIRA 11:4)
(FATIGUE) (AVIATION MEDICINE)

DEREVYANKO, Ye.A.

Interrelationship between simultaneously developing conditioned motor and verbal-motor (verbal) reactions [with summary in English].
Biul.eksp.biol.i med. 43 no.1:7-10 Ja '57. (MLRA 10:8)

1. Iz Instituta aviatsionnoy meditsiny, Moskva; Predstavlena deystvitel'nym chlenom AMN SSSR N.A.Roshanskim.

(REFLEX, CONDITIONED,

interrelationship between simultaneous motor & verbal reflexes (Rus))

DEREVYANKO, Ye.A. (Moskva); MYL'NIKOV, V.G. (Moskva)

Some patterns of the appearance of acceleration sensations
during the acceleratory changes of gravity. Vop. psikhol.
10 no.3:131-139 My-Je '64. (MIRA 17:9)

ACC NR: AP7000138

SOURCE CODE: UR/0177/66/000/011/0050/0054

AUTHOR: Derevyanko, Ye. A. (Lieutenant Colonel of Administrative Services; Candidate of Biological Sciences); Kuznetsov, V. G. (Major Medical Services)

ORG: None

TITLE: Experimental study of spatial illusion during flight

SOURCE: Voenno-meditsinskiy zhurnal, no. 11, 1966, 50-54

TOPIC TAGS: medical experiment, space biologic experiment, human ailment, human physiology, jet aircraft, research aircraft, transport aircraft

ABSTRACT: Spatial illusion is one of the factors complicating the pilot's activities when flying on instruments. The causes, conditions and mechanisms which give rise to this phenomenon are of great theoretical and practical interest since only by understanding them can preventive measures be taken. B. A. Yakubov and A. A. Vorona are cited as sources for descriptions of the nature and symptoms of spatial illusions. But it is acknowledged that experimental data on the concrete circumstances in which these illusions arise, other than the word of pilots themselves, is lacking. Present research will only make it possible to establish some of the sensations of the illusions, and indicate some paths to be followed during further experimental study of their causes. Research has been conducted using specially

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UDC: 616.89-008.42-02:629.13

ACC NR: AP7000138

equipped recording devices installed in TU-104 aircraft. The K-12-21 oscillograph, used in conjunction with MP-69, TsGV, and DUS-3 sensors records physical parameters for overload, bank, and angular speed of the aircraft heading into a bank and emerging from it, and glide. Eleven command pilots and co-pilots, as well as six non-flying personnel participated in the research. The manner in which the research was conducted is described. The results obtained indicated that distinction could be made between three types of illusions: prolonged bank, reverse bank, and cyclical illusions, all of which are characterized by descriptions of the sensations experienced. It is concluded that, apart from internal factors involving the central nervous system, acceleration is a major factor in causing illusions. But the analysis of the indications of the three types notes that they were registered in the absence of optical information on spatial conditions. Orig. art. has: 3 figures.

SUB CODE: 22, 01, ⁰⁶22/ SUBM DATE: none

Card 2/2

YELOVKOV, Yuriy Ivanovich; PROKHOROV, Boris Fedorovich; DEREVIANKO, Yu.G.,
nauchnyy red.; KAZAROV, Yu.S., red.; PSAL, P.K., tekhn. red.

[Corrugated materials for shipbuilding] Sudovye gofirovannyye
konstruktsii. Leningrad, Gos. soiuznoe izd-vo sudostroiti, promyshl.,
1958. 95 p. (MIRA 11:10)

(Shipbuilding)

SOV-135-58-3-4/19

AUTHOR: Derevyanko, Yu.G., Candidate of Technical Sciences

TITLE: Automation of Welding Processes in Shipbuilding (Avtomatizatsiya svarochnykh protsessov v sudostroyenii)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 3, pp 12-17 (USSR)

ABSTRACT: Information is presented on new technology and equipment for flux welding in shipbuilding developed by engineers M.R. Shrayerman, N.M. Nikitinykh and M.M. Matsov, along with engineers from TsNII MSP, the Baltic, the Admiralteyskiy and other plants. Descriptions and illustrations of the following equipment are given: 1) welding stands with flux cushions for welding sheet structures; "STS-1" welding assembling automatic device (Figure 3) for assembling parts up to 1 m height; 2) "ASU-138" and "DASU-138" automatic machines for welding angular seams (Figures 4a,b) designed at TsNII MSP with the participation of Engineer L.M. Myshkovskiy; 3) "ASU-138" and "PSh-5" semi-automatic devices for separate assembling and welding of longitudinal and transverse parts; 4) a "rocking bed" (Figure 7) for welding forward and aft bottom sections; 5) a portable flux-exhauster (Figure 8) designed under the supervision of Engineer Ye.I. Simkin. Engineers V.F. Zabolin, A.A. Vychezhzhanin and B.A. Mironov, from the Kherson Plant,

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Automation of Welding Processes in Shipbuilding

SOV-135-58-3-4/19

participated in developing semi-automatic welding sheets of moderate thickness in gas shields. Engineers A.I. Safonov, L.B. Tonkonogov, B.G. Yungel'son and V.P. Sashchenko, from the Plant imeni Nosenko, participated in developing the electric-slag welding process for the production of large size ship parts. Recommendations for further development of automatic welding in shipbuilding are given. There are 2 tables, 12 photos, 1 graph and 1 drawing.

ASSOCIATION: TsNII MSP

1. Welding--Equipment 2. Welding--Control 3. Ships--Construction

Card 2/2

BALAYEV, D.N.; BEZUKLADOV, V.F.; DERREYANKO, Yu.G.; IOFFE, A.F.; ISAKOV, I.S.;
MAYTES, N.V.; MOISEYEV, A.A.; NEGANOV, V.I.; NOVOZHILOV, V.V.;
PAVLENKO, G.Ye.; PERSHIN, V.I.; POPOV, V.F.; RETIVOV, V.S.

Seventy-fifth birthday of Academician Iulian Aleksandrovich
Shimanskii. Sudostroenie 24 no.12:66-67 D '58.

(MIRA 12:2)

(Shimanskii, Iulian Aleksandrovich, 1883-)

DEREVYANKO, Yu.G., kand.tekhn.nauk

Foreword. Trudy NTO sud.prom. 8 no.3:4 '59.
(Shipbuilding) (MIRA 13:5)

BUTOMA, B.Ye.; YEGOROV, M.Ye.; DEREVYANKO, Yu.G.; KHABAKHPASHEV, A.A.;
BAKAYEV, V.G.; ISHKOV, A.A.; KOLESNICHENKO, N.S.; KAMENTSEV, V.M.;
GORSHKOV, S.G.; KASATONOV, M.A.; ISHCHEKOV, N.V.; AFANAS'YEV, S.A.;
TITOV, G.A.; LARIONOV, M.F.

Boris Evgen'evich Klopotov; obituary. Sudostroenie 30
no.11:81 '64. (MIRA 18:3)

88685

S/137/61/000/001/019/043
A006/A001

187000

Translation from: Referativnyy zhurnal, Metallurgiya, 1961, No. 1, pp. 33 - 34,
1D288

AUTHORS: Lokshin, F.L., Lyutsedarskiy, V.A., Derevyannykh, A.P., Andreyeva,
O.I.

TITLE: The Effect of Hydraulic Impacts of Ultrasonic Frequency on the Struc-
ture of Quenched Alloys

PERIODICAL: "Tr. Novocherk. politekhn. in-ta", 1959, No. 73, Raboty Kafedry fiz.
pp. 81 - 95

TEXT: The effect of hydraulic ultrasonic-frequency impacts on the struc-
ture was investigated on Δ 1 (D1) type alloys (3.8% Cu, 1.4% Mg), and λ 18 H 9
(Kh18N9) and γ 12 (U12) steel by measuring the hardness and by roentgenostructural
analysis. A description is made of a device for the excitation of ultrasonic-fre-
quency hydraulic impacts. All the investigations were made at a frequency of 500-
600 kilo-cycles. The specimens investigated were after quenching subjected to
hydraulic impacts of ultrasonic frequency in a water bath. It was found that as

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S/137/61/000/001/019/043
A006/A001

The Effect of Hydraulic Impacts of Ultrasonic Frequency on the Structure of Quenched Alloys VX

a result of hydraulic impacts of ultrasonic frequency, the aging process of duraluminum alloys was considerably accelerated; limit hardness values in time are obtained earlier than during artificial or natural aging. After the effect of hydraulic impacts of ultrasonic frequency on the quenched alloys, processes in the alloys take place which are analogous to processes during tempering. In practice, the use of hydraulic impacts of ultrasonic frequency during heat treatment of steel, reduces the probability of crack formation and assures the formation of tempering structures within a shorter time interval. When subjecting steel to hydraulic impacts of ultrasonic frequency, structural changes of the same nature as in cold treatment, may be expected. There are 26 references.

A. B.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

20373

s/058/61/000/003/016/027

A001/A001

24:1900 1063, 1155, 1162

Translation from: Referativnyy zhurnal, Fizika, 1961, No. 3, p. 323, # 3E338

AUTHORS: Lokshin, F. L., Lyutsedarskiy, V. A., Derevyannykh, A. P., Andreyeva, O. I.

TITLE: The Effect of Ultrasonic-Frequency Hydraulic Impacts on the Structure of Hardened Alloys

PERIODICAL: "Tr. Novocherk. politekhn. in-ta", 1959, Vol. 73, "Raboty Kafedry fiz.", pp. 81-95

TEXT: Treatment of Δ -1 (D-1) Duralmin by hydraulic impacts of ultrasonic frequency results in a considerable acceleration of the aging process: after treatment by hydraulic impacts for 3 min the same hardness is obtained as after artificial aging for 30 min or after natural aging during 6.5 - 7 hours. An X-ray examination showed that under the action of hydraulic impacts the grains become finer, texture appears and the lines of roentgenograms are widening. In $X_{18}H_9$ (Kh18N9) steel (18% Cr, 8% Ni) with the martensite point $-60^{\circ}C$ the treatment by hydraulic impacts results in the formation of martensite at room tempera-

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20373

S/058/61/000/003/016/027
A001/A001

The Effect of Ultrasonic-Frequency Hydraulic Impacts on the Structure of Hardened Alloys

ture; thereby hardness increases from 87 to 88.5 R_p. In Y12 (U12) steel hardened from 1,000°C in water and having 15 - 20% residual austenite, hydraulic impact treatment for 5 min leads to decomposition of residual austenite, decrease of hardness from 64 to 62 R_c and narrowing of martensite lines. This indicates the occurrence of the annealing process during the treatment by hydraulic impacts.

E. Estrin

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

DEREVYANNIKH, A.P.

1.1730

27372

S/194/61/000/003/038/046
D201/D306

AUTHORS: Lokshin, F.L., Lyutsedarskiy, V.A., Dyerevyannykh, A.P. and Andreyeva, O.I.

TITLE: The effect of ultrasonic frequency hydraulic shocks on the structure of hardened alloys

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 3, 1961, 19, abstract 3 E134 (Tr. Novocherk. politekhn. in-ta, 1959, 73, Raboty Kafedry fiz., 81-95)

TEXT: Structural changes are investigated in hardened steels and aluminum alloys as resulting from their processing by hydraulic shocks at ultrasonic frequencies (500-600 Kc/s). It is explained that under the effect of hydraulic shocks, processes arise in alloys similar to those in annealing. The duration of these processes is much shorter than that in normal ageing and annealing. It is possible to put into practical use the effect of hydraulic shocks in

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The effect of ultrasonic frequency... 27372
S/194/61/000/003/038/046
D201/D306

thermal processing of duraluminum (the processing time is shortened and a higher degree of hardness is obtained) and of steel (the possibility of cracks occurring is reduced, the annealed structure is obtained in a shorter time). The schematic of the installation is given. The results of the experiments are presented in the form of a table, graph and X-ray photographs. 14 figures. 26 references.
[Abstracter's note: Complete translation]

Card 2/2

L 52054-65 EWT(m)/EWA(a)/E/EWP(t)/EWP(k)/EWP(z)/EWP(b)/EWA(c) PF-4
MJW/JI/HW
ACCESSION NR: AR5006387 S/O.137/64/000/012/I062/I062
SOURCE: Ref. zh. Metallurgiya, Abs. 12I408 34
AUTHOR: Lokshin, F. L.; Deravannykh, A. P.; Pertseva, A. P. 33
TITLE: Influence of impact thermomechanical quenching on the quantity of residual B
austenite.
CITED SOURCE: Sb. Metallovedeniye i term. obrabotka. M., Mashinostroyeniye,
1964, 130-134
TOPIC TAGS: metallurgy, ferrous metals, metalworking, metal testing
TRANSLATION: Impact thermomechanical quenching consists of heating steel to the
austenite formation temperature and continuous impact during cooling. The impact
load was communicated to the metal through a coolant by spark discharge. U10A,
U12A, ShKh9 and ShKh15 steels were studied. Impact thermomechanical quenching of
these steels was conducted under the following conditions: U10A, from 1000° in
water; U12A, from 950° in water; ShKh9, from 840° in oil; ShKh15, from 840° and
1000° in oil. X-ray analysis established that impact thermomechanical quenching
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ACCESSION NR: AR5006387

facilitates more complete conversion of austenite to martensite than ordinary tempering. Conditions of impact thermomechanical quenching were found under which no residual austenite was formed. For steel ShKh9, impact thermomechanical quenching from 840° is recommended (discharge voltage 60 kv, capacity of the condenser 0.95 µf, time of treatment 20 seconds). There is no residual austenite. Under some impact thermomechanical quenching conditions complete conversion of austenite to martensite does not take place, in such a case the residual austenite is less stable than in steel tempered by ordinary methods: in ShKh9 steel quenched from 840° without impact, there is 12% residual austenite. After annealing at 150° and 200°, the residual austenite was still retained; it was removed only after annealing at 250°. After impact thermomechanical quenching (840°, 60 kv, 0.24 µf 14 seconds) ShKh9 steel contains 8% residual austenite which is completely removed by annealing for one hour at 150°. Carbon and chromium increase the stability of austenite.

SUB CODE: MM

ENCL: 00

Card 2/2

PAPUSHIN, L.L.; DEREVYANSKIY, V.M.

Increasing the output capacity of vacuum filters by
precoagulation of the charge. Koks i khim. no.16:16-17 '61.
(MIRA 15:2)

1. Opornaya laboratoriya Donetskogo sovnarkhoza.
(Coal preparation plants--Equipment and supplies)
(Filters and filtration)

DEREVYANSKIY, V.M.; PAPUSHIN, L.L.; BOCHAROV, N.G.

Comparison indices for the performance of airlift, ejector, and mechanical flotation machines. Koks i khim. no.2:17-19 '63. (MIRA 16:2)

1. Yasinovskiy koksokhimiicheskiy zavod.
(Flotation--Equipment and supplies)

DEREVYASHKIN, A.F.

KOYRE, V.Ye., inzh.; DEREVYASHKIN, A.F., inzh.

~~and the following information is being released:~~
Finish machining on planers. Mashinostroitel' no.1:21-22 Ja '58.
(Planing machines--Attachments) (MIRA 11:1)

DEREVYTSKAYA, V.

L. Verechtshagin, V. Deryvitskaya, S. Rogovin

"Investigation of the Polymerization Process of Methylmethacrylate under Ultrahigh Pressure." Journal for Physical Chemistry, 21, pp. 233-40, February 1947, Moscow Academy of Sciences, Institute for Organic Chemistry, Laboratory for Ultra-High Pressures and Textile-Institute, Department of Synthetic Fibers.

ABSTRACT AVAILABLE

D-50054

DIREZA, A.S., inzh.

All-Union conference on electric painting and heat-radiation
drying. Vest. mash. 38 no.9:83 S '58. (MIRA 11:10)
(Painting, Industrial) (Drying)

L 35566-65 EWT(1)/PCC GW

ACCESSION NR: AP5068138

S/0286/65/000/005/0014/0014

AUTHORS: Dereza, L. K.; Kononov, A. K.

TITLE: A filter for purifying air from fog. Class 12, No. 168643

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 5, 1965, 14

TOPIC TAGS: air filter, fog

ABSTRACT: This Author Certificate presents a filter for purifying air from fog, consisting of a housing and a filtering element fastened to a frame. To increase the efficiency and degree of purification, the housing is made with wedge-like corrugations that support the filtering element by means of wedge-like inserts. To produce a gradient of capillary potential in the filter, the wedge-like inserts are made with the acute angle of the wedge less than the wedge angle of the corrugation.

ASSOCIATION: none

SUBMITTED: 11Jul62

ENCL: 00

SUB CODE: PR, IE

NO REF SOV: 000
Card 1/1

OTHER: 000

DEREZA, M.

Airplane weighing one gram. Znan. ta pratsia no.2:29-30 F '63.
(MIRA 16:4)

(Airplanes—Models)

DEREZHIAN, A.; KRUSTEVA, E.

Effect of intravenous anesthesia on arterial pressure. Khirurgia,
Sofia 13 no.2-3:274-275 '60.

1. Iz Katedrata po bolnichna khirurgia pri ISUL.
(BLOOD PRESSURE)
(ANESTHESIA INTRAVENOUS)

DERZHINA, A.; KRUSTEVA, E.

Our experiences with decurarizing effects of nivaline. *Khirurgia*,
Sofia 13 no.2-3:272-274 '60.

1. Iz Katedrata po bolnichna khirurgia pri ISUL.
(AUTONOMIC DRUGS)
(CURARE antag.)

AUTHOR: DEREZHKOVSKIY
Moshnin, E.N., Candidate of Technical Sciences and
Derezhkovskiy, D.I., Engineer. 129-4-7/17

TITLE: Mechanical properties of steels at high temperatures and various schemes of deformation. (Mekhanicheskiye svoystva staley pri vysokikh temperaturakh i razlichnykh skhemakh deformirovaniya.)

PERIODICAL: "Metallovedenie i Obrabotka Metalloy" (Metallurgy and Metal Treatment), 1957, No. 4, pp. 35 - 41 (U.S.S.R.)

ABSTRACT: So far the influence of the deformation regime on the mechanical properties of metals in the hot state have not been investigated. The authors of this paper have studied the mechanical properties during tension, compression, bending and torsion. The used test machines were adapted for operation at high temperatures by fitting electric tubular furnaces with a protective atmosphere inside which deformation of the specimens was effected. To obtain uniform deformation during compression a graphite lubricant of the contact surfaces was applied up to 700 °C and glass fibres above that temperature. The resistance to deformation at various types of loading, the change of the resistance to deformation as a function of the degree of deformation, the influence of the size factor and other features of deformation of specimens at high temperatures

Card 1/3

Mechanical properties of steels at high temperatures and various schemes of deformation. (Cont.) 129-4-7/17

were studied. The resistance to deformation of structural carbon and low alloy steels between 700 to 1 200 °C during tension, compression and bending is equal; during torsion the tangential stresses are 0.50 to 0.58 times the normal stresses determined for tension, compression and bending. The resistance to deformation of heat-resistant steel between 600 and 1 200 °C is lower for stretching than for compression and bending. During deformation of steel in the hot state there will be an intensive increase of the resistance to deformation up to a degree of deformation which is equivalent to the uniform relative elongation during tension. With a further increase of the degree of deformation at 700 to 1 200 °C the resistance to deformation of structural steels will remain almost constant. The yield point during deformation of structural steels in the hot state amounts to 54-82% of the ultimate strength; no approach of the yield point to the ultimate strength was observed with increasing temperatures. Uniform relative elongation in structural steels at the forging temperatures amounts to 10 - 15%. Investigation of geometrically similar specimens

Card 2/3

Mechanical properties of steels at high temperatures and various schemes of deformation. (Cont.) 129-4-7/17

with dimension ratios of 1:5 under otherwise equal conditions did not reveal any appreciable influence of the size factor on the obtained mechanical properties in low carbon steels. In determining the force parameters of technological processes of shaping by pressure of structural steels with reductions exceeding 10 to 15% it is necessary to assume a resistance to deformation equalling "the real stress" S_B where $\tau_B = (0.50 \text{ to } 0.58) S_B$.

There are 4 tables, 2 graphs, 2 photos and 5 Slavic references.

ASSOCIATION: TsNIITMASH.

AVAILABLE:

Card 3/3

DEREZHOV, S.R.

Gas supply and distribution for radio relay units. Gaz. prom.
4 no.12:39-40 D '59. (MIRA 13:3)
(Gas pipes) (Pressure regulators)

DEREZHOV, S.R.; YUDIN, S.I.; LYKOV, Yu.N.

Automating and centralizing the control in purification and drying units for the natural gas of the headwork of the Stavropol-Moscow Gas Pipeline. Gaz. delo. no.2:30-36 '64.

(MIRA 17:6)

1. Moskovskoye upravleniye magistral'nykh gazoprovodov i Rayonnoye upravleniye gazoprovoda Bukhara - Ural.

DEREZPOLSKI, ROMAN.

Eugleniny denne. Les eugleniens bentheaux.

Krakow, Poland. Nakl. Polskiej Akademii Umiejetnosci, 1948, 18p.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 7, July 1959

Uncl.

DERFEL', A. G.

DERFEL', A. G. --"Temperature Conditions in the Finishing Period of Basic Open-Hearth Melting." *(Dissertations for Degrees in Science and Engineering Defended at USSR Higher Educational Institutions) Min of Higher Education USSR, Dnepropetrovsk Order of Labor Red Banner Metallurgic Inst imeni I. V. Stalin, Dnepropetrovsk, 1955

SO: Knizhnaya Letopis', No. 25, 18 Jun 55

* For Degree of Candidate in Technical Sciences

112-57-8-16886

Translation from: Referativnyy zhurnal, Elektrotehnika, 1957, Nr 8, p 135 (USSR)

AUTHOR: Derfel', A. G.

TITLE: Measuring the Temperature of Molten Steel by Means of Immersion Thermocouples (Izmereniye temperatury zhidkoy stali termoparami pogruzheniya)

PERIODICAL: Tr. nauchn. -tehn. o-va chernoy metallurgii (Transactions of the Scientific and Engineering Society of Ferrous Metallurgy), 1956, Nr 9, pp.78-81

ABSTRACT: A short description of the construction of an immersion thermocouple is followed by an analysis of 450 molten-steel temperature measurements, made by means of a platinum-rhodium-platinum immersion thermocouple. The measurements revealed that the temperature regimes at various plants, and also in the same department within the same furnace, are not constant. Ore additions and heat loads do not correspond to a given metal temperature, which results in 60-80° C overheating of metal when it is ready for tapping. Dependence of metal quality on metal temperature by the end of the final melting and at the time of tapping has been determined. With a temperature control, it is

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112-57-8-16886

Measuring the Temperature of Molten Steel by Means of Immersion Thermocouples
possible to actually regulate the temperature regime of the melting in the final
period.

I. G. A.

Card 2/2

SOV/137-58-9-18585

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 59 (USSR)

AUTHORS: Derfel', A.G., Kravtsov, P.Ya.

TITLE: Scrap-process Smelting of Pipe Steel With Low-manganese Cast Iron (Vyplavka trubnoy stali skrap-protssom na malo-margantsovistom chugune)

PERIODICAL: V sb.: Staleplavil'n. proiz-vo. Moscow, Metallurgizdat, 1958, pp 19-26

ABSTRACT: Scrap-process smelting of pipe steel of types St. 4 and D involving low-manganese cast iron (LMCI) was investigated in the 185-ton, fuel-oil-operated, open-hearth furnaces with magnesite-chromite crowns at the im. K. Libknekht (K. Liebknecht) plant. The smeltings were carried out with and without the addition of Fe-Mn in the course of the working process. The LMCI contained 1.04% Mn, 0.81% Si, and 0.068% S; standard cast iron contains 2.12% Mn and 0.070% S. It was found that smelting operations employing LMCI as well as processes involving standard cast iron required an identical amount of time for completion. Owing to a reduction in Mn content occurring after fusion and prior to deoxidation (0.15 and 0.20%

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SOV/137-58-9-18585

Scrap-process Smelting of Pipe Steel With Low-manganese Cast Iron

respectively, instead of 0.25-0.27 and 0.29-0.31% as in the case of standard cast iron) during processing of LMCI for the manufacture of steel, the consumption of the Fe-Mn increased to 5.7 kg/t, in processes not involving the addition of this substance, and to 6.2 kg/t in procedures involving the addition of the Fe-Mn for finishing purposes; analogous operations involving the processing of standard cast iron required 4.2 kg of Fe-Mn per ton. After fusion and prior to deoxidation, the slag contained greater quantities of Fe oxides and smaller amounts of Mn oxides than would be the case during processing of standard cast iron. During processing of the LMCI the S content is greater after the smelting of the metal; however, in the finished metal it is identical to the S content of metals manufactured by smelting with standard cast iron. With regard to the amount of spoilage, the consumption of metal during the manufacture of pipes, mechanical properties, macro- and microstructure, as well as with regard to the amount of oxygen, nitrogen, and nonmetallic inclusions, the steel smelted with LMCI does not differ from the steel obtained through processing of standard cast iron.

1. Steel--Processing 2. Cast iron--Performance 3. Manganese L.K.
--Reduction 4. Pipes--Production

Card 2/2

SOV/130-58-8-5/18

AUTHORS: Shneyerov, Ya.A., Derfel', A.G., Kotin, A.G., Byl'skiy, M.T. and Alimov, A.G.

TITLE: Pre-refining Pig Iron in Ladles with a Steam-oxygen Mixture (Predvaritel'naya obrabotka chuguna v kovshakh parokislorodnoy smes'yu)

PERIODICAL: Metallurg, 1958, Nr 8, pp 11 - 14 (USSR)

ABSTRACT: At the "Azovstal'" Works, hot metal forms 75% of the open-hearth furnace charge and conditions are therefore particularly suitable for pre-refining. A semi-full-scale installation (Figure 1) was constructed in the mixer house at the works. The authors describe tests on 130 ladles (114 phosphoric and 16 ordinary open-hearth grade). With 20-40% steam evolution of brown fumes was avoided. The following additions (in % of the weight of phosphoric iron) were also tested: limestone 1.5 and 3 with 1% ore in the latter case; ore, 2.5 and 5%; ore and limestone, 1.5 and 2.5% each. With the ordinary grade: limestone, 1.5; ore 1.5; ore and limestone 1.5 each. The authors describe the effects of the different additions on iron composition and lance consumption (which is associated with the formation of slag capable of coating the lance). With increasing consumption of

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SOV/130-58-8-5/18

Pre-refining Pig Iron in Ladles with a Steam-oxygen Mixture

oxygen per ton of metal ($3-8 \text{ cm}^3$), oxidation of manganese and silicon increases. Steam consumption was regulated to prevent fume formation; the highest oxygen: steam ratios were obtained with large amounts of additions, which produced a protective slag layer. Both top blowing and lancing were tried, tube consumptions being 300-400 and 100 mm, respectively, per lancing. Temperatures were measured with platinum/platinum-rhodium thermocouples: the mean temperature rise during the lancing was $25-70^\circ \text{C}$, the rise with additions being greater because of the greater oxidation of silicon. Analysis of the metal showed that good mixing occurred during mixing. Metal losses were as follows: splashes, 0.51%, evolution in fume 0.04%. The hydrogen content of the metal was found to rise during lancing from 2.3 - 3.9 to 4.6 - 6.0 $\text{cm}^3/100 \text{ g}$, falling during pouring into the mixer to 4.2 - 4.3 $\text{cm}^3/100 \text{ g}$.

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SOV/130-58-8-5/18
Pre-refining Pig Iron in Ladles with a Steam-oxygen Mixture

There are 2 figures.

ASSOCIATIONS: Ukrainskiy institut metallov (Ukrainian Institute of Metals) and Zavod "Azovstal'" ("Azovstal'" Works)

Card 3/3

1. Iron--Production
2. Open hearth furnaces--Operation
3. Dippers--Applications

SOV/133-58-8-6/30

AUTHOR: Shneyerov, Ya.A., Derfel', A.G., Kotin, A.G.,
Bul'skiy, M.T. and Alimov, A.G.

TITLE: Experiments on a Pre-treatment of Pig Iron in Ladles
with a Steam Oxygen Mixture (Opyt predvaritel'noy
obrabotki chuguna v kovshakh parokislородnoy smes'yu)

PERIODICAL: Stal', 1958, Nr 8, pp 694 - 702 (USSR)

ABSTRACT: Experimental results obtained on the de-siliconisation of pig iron in ladles by blowing an oxygen-steam mixture with and without various additions to the ladle are described. The treatment was carried out on the way to the mixer in the open-hearth melting shop. The experimental set-up is shown in Figure 1. Initially, blowing of pure oxygen was tried but, due to the formation of copious fumes, this was discontinued and an oxygen-steam mixture was used, steam being added according to blowing conditions to keep the formation of fumes down. The method of mixing oxygen with steam is shown in Figure 2 and the sampling device for taking samples from the ladles in the course of blowing - Figure 3. Additions of ore, limestone and ore-limestone mixtures to the ladle were introduced at blast furnaces during the filling of the ladle with iron. The compositions

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SOV/133-58-8-6/30

Experiments on a Pre-treatment of Pig Iron in Ladles with a Steam Oxygen Mixture

of additions and mean data on the elimination of pig-iron impurities during filling of the ladle, its transport to the mixer and during 15, 30 and 45 minutes of blowing oxygen, as well as mean iron temperatures before and after blowing are given in Tables 1 and 2. The dependence of the degree of de-siliconisation during 45 minutes of blowing on the initial concentration of silicon - Figure 4 and on the consumption of oxygen - Figure 5; mean consumption of oxygen and steam and limits of their variation for blowing with various additions to the ladle - Table 3; the dependence of oxidation of manganese during 45 minutes of blowing on the consumption of oxygen - Figure 6; the all of the iron temperature during filling of the ladle and its transport to the place of the treatment - Table 4; the influence of the oxygen-steam ratio on the increase of the iron temperature during 45 minutes of blowing - Figure 7; changes in the chemical composition of iron along the height of the ladle after blowing - Table 5. Conclusions: 1) as a result of blowing phosphorus pig-iron (about 1.5% of P) in the ladle with an oxygen-steam mixture at a specific

Card2/5

SOV/133-58-8-6/30

Experiments on a Pre-treatment of Pig Iron in Ladles with a Steam
Oxygen Mixture

consumption of oxygen of $4.8 \text{ m}^3/\text{t}$ and of steam 4.0 kg/t at a pressure of 4.5 atm. , the following elements are oxidised: 0.20% of silicon (41.5% of the initial content), 0.55% of manganese (29.5% of the initial content), and 0.29% of carbon (7.3% of the initial content). During the transport of the ladle, the content of sulphur was decreased by 0.027% and during blowing it was increasing by 0.005, thus the decrease in the sulphur content was 0.024% (21.2% of the initial content). The content of phosphorus remains practically unchanged. On blowing low phosphorus iron, the oxidation of iron admixtures was on the same level as for phosphorus iron; 2) the introduction of oxidising and slag-forming admixtures into the ladle during its filling with iron helped in oxidising the iron admixtures during the filling and the transport of the ladle and noticeably improved their oxidation during the blowing of oxygen. The best results in respect of the oxidation of admixtures, utilisation of oxygen and increasing the iron temperature were obtained with additions of 15 kg of ore and 15 kg of limestone per ton of iron. Under the above conditions, the

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907/133-58-8-6/30

Experiments on a Pre-treatment of Pig Iron in Ladles with a Steam Oxygen Mixture

following results were obtained (in brackets the percent of the initial content):

	Si	Mn	C	S
Phosphorus				
Iron	0.44(66.7)	0.78(40.0)	0.31(8.0)	0.023(19.0)
Usual iron	0.52(73.5)	0.62(30.5)	0.20(4.5)	0.025(26.0)

During surface blowing of oxygen (without immersing the tube into the iron), the oxidation of the elements remained the same; 3) on blowing with oxygen-steam mixture (20-40% by wt. of steam) the formation of brown fumes was not observed. With an increasing proportion of additions to the ladle the consumption of steam in the oxygen steam mixture was decreasing. On blowing without immersing the tube the proportion of steam can be decreased to 20%; 4) the increase in the iron temperature during surface blowing is higher than when blowing with an immersed tube. The temperature of the iron after blowing with the optimum additions of limestone and ore is 40 °C higher than the usual iron temperature delivered to the mixer; 5) the maximum utilization of the volume of the ladle (up to 85%) was obtained

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Experiments on a Pre-treatment of Pig Iron in Ladles with a Steam Oxygen Mixture

on surface blowing (with 15 kg/t additions of limestone and ore); 6) the consumption of blowing tubes was 100 mm for ladle with surface blowing and 300-400 mm when the tube is immersed; 7) the total losses of metal on blowing were about 0.15%.

There are 7 figures, 5 tables and 7 references, 3 of which are Soviet and 4 English.

ASSOCIATIONS: Ukrainskiy institut metallov (Ukrainian Institute of Metals) and Zavod "Azovstal'" ("Azovstal'" Works)

Card 5/5

1. Iron--Production 2. Silicon--Oxidation 3. Oxygen
--Applications 4. Steam--Applications 5. Dippers--Applications

AUTHORS: Derfel', A.G., Dubina, Yu.G., Kotin, A.G., Myshonkov, N.I., SOV/133-59-5-6/31
Sologub, S.L., Tret'yakov, Ye.V., Khmirov, V.I.,
Chernenko, F.A. and Shneyerov, Ya.A.

TITLE: Efficiency of the Use of Sinter and Briquettes Instead of Ore and Limestone in Open-hearth Furnaces (Effektivnost' primeneniya v martenovskikh pechakh aglomerata i briketov vzamen rudy i izvestnyaka)

PERIODICAL: Stal', 1959, Nr 5, pp 400 - 407 (USSR)

ABSTRACT: In order to compare the efficiency of using fluxed sinter and ore-lime briquettes instead of ore and limestone in open-hearth furnaces as well as to determine the optimum composition of the above agglomerated materials, experimental heats were carried out in 570-ton open-hearth furnaces at the imeni Dzerzhinskiy Works during 1957-1958. Altogether 63 heats with briquettes, 76 with sinters of various compositions and 90 comparative heats using ore and limestone were made. All heats were made in the same furnaces and during the same periods. The composition of briquettes and sinters tested is given in Table 1 (basicity of briquettes varied from 0 - 5.4 and of

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SOV/155-59-5-6/31

Efficiency of the Use of Sinter and Briquettes Instead of Ore and Limestone in Open-hearth Furnaces

sinters from 0.4 to 2.2). Changes in the basicity and FeO content in slag in the course of smelting are shown in Figures 1 and 2, respectively, the main indices of the experimental and comparative heats in Table 2, the comparison of the amounts of CaO, SiO₂ and Σ FeO transferred to slag from various granular materials - Table 3, changes in the SiO₂ content of slag in the course of smelting for various heats - Figures 3 and 8, the same changes in slag basicity - Figure 4, the same changes in the P₂O₅ content - Figures 5 and 9, the same changes in the CaO content - Figure 6, the same changes in the Σ FeO and CaO and Σ FeO contents - Figures 7 and 11, the same changes in the content of sulphur - Figure 10. It was found that the use of fluxed briquettes or sinters instead of ore and limestone leads to a considerably faster formation of slag during the melting down period, to an earlier slag removal and to a corresponding decrease in the melting

Card2/4

SOV/133-59-5-6/31
Efficiency of the Use of Sinter and Briquettes Instead of Ore and Limestone in Open-hearth Furnaces

period. The use of fluxed briquettes or sinter of a basicity 2.0 - 2.5 without additions or with minimal additions of ore and limestone made it possible:

- 1) to decrease the melting period in 370-ton furnaces by 40-45 min with an increase in the furnace productivity of 6-7%;
- 2) to decrease the duration of heating up successive layers of granular materials during the charging period as well as their heating after the charging is completed (which permitted a further decrease of 10-15 min in the duration of heats);
- 3) to increase slag basicity in the course of smelting and to decrease the FeO content of slag at the beginning of the melting period and to increase its FeO content at the end of this period;
- 4) to increase the dephosphorising and desulphurising ability of slag due to its earlier formation and higher basicity throughout the whole course of smelting and
- 5) to exclude blow-outs from the furnace during melting.

The briquettes and sinters can also be used with success during refining. The organisation of a large-scale

Card3/4

SOV/133-59-5-6/31

Efficiency of the Use of Sinter and Briquettes Instead of Ore and Limestone in Open-hearth Furnaces

production of fluxed briquettes and sinters for the open-hearth furnaces and their wide application in steel-making practice is recommended. There are 11 figures, 3 tables and 6 Soviet references.

ASSOCIATIONS: Ukrainskiy institut metallov (Ukrainian Institute of Metals) and Zavod imeni Dzerzhinskogo (imeni Dzerzhinskiy Works)

Card 4/4

18.3200

77447

SOV/133-60-1-8/30

AUTHORS: Shneyerov, Ya. A., Leporskiy, V. V., Derfel', A. G.,
Bul'skiy, M. T., Alimov, A. G.

TITLE: The Use of Preliminary Processed Cast Iron in Open-
Hearth Smelting

PERIODICAL: Stal', 1960, Nr 1, pp 32-35 (USSR)

ABSTRACT: This is a report concerning ladle treatment of liquid
cast iron blowing steam-oxygen mixture. The experiments
were conducted at the "Azovstal'" Plant in 1957, on a
semi-industrial installation in the mixing building.
Only one ladle could be blown at a time. Later on,
from June to August of 1958, fourteen experimental melts
were made. B. S. Kurapin, V. I. Khmirov, N. T. Berilov,
A. M. Kercher, and A. I. Tkachenko participated in the
work. For each test melt, 4 ladles (each holding approxi-
mately 60 tons of cast iron) were blown. The beginning
of blowing took place 1 to 2 hours before the beginning
of the test melt. 1.5% of ore and 1.0% of lime were
added to each ladle. The degree of filling the ladle

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The Use of Preliminary Processed Cast Iron in
Open-Hearth Smelting

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was an average of 73%. The blowing schedule was as follows: Pressure (atm gage): for oxygen, 3.4; for steam, 3.5. Hourly consumption: oxygen, 295 m³/hr; steam, 195 kg/hr. Specific consumption: oxygen, 2.6 m³/ton; steam, 1.7 kg/ton. An increase of steam superheating (up to 300-400° C, instead of 160-180° C) will increase the degree of filling of the ladle by elimination of the splash-out. The open-hearth melts were conducted in 340-ton furnaces using the blown cast iron. The authors arrived at the following conclusions. (1) The experiments showed that during the preliminary blowing of conversion cast iron by the steam-oxygen mixture, silicon, manganese, and sulphur were burned out to the extent of 54%, 37%, and 13.7% respectively. (2) The average increase of temperature of cast iron during blowing equals 30° C. (3) As a result of the decreased consumption of ore and limestone (in the charge), while smelting the blown cast iron, and due to the increase of cast iron temperature, the duration of melts decreased by 45 minutes for rimmed

Card 2/3

The Use of Preliminary Processed Cast Iron in
Open-Hearth Smelting

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steel and by 1 hour 11 minutes for rail steel. The specific fuel consumption decreased and the productivity of the furnace increased on the average by 8%. In connection with good experimental results obtained at the "Azovstal'" Plant, it is planned to build an industrial installation for ladle treatment of cast iron. The editors comment that, due to the small number of test melts (only 5000 tons of steel were smelted) the above conclusions should be regarded as only preliminary. There are 2 figures.

ASSOCIATION: Ukrainian Scientific Research Institute of Metals and the "Azovstal'" Plant (Ukrayinskiy n.i. institut metallov i zavod "Azovstal'")

Card 3/3

DERFEL, A. G.

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PHASE I BOOK EXPLOITATION

SOV/5411

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

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

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

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

Card 1/16

115

Physicochemical Bases of (Cont.)

SOV/5411

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

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

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Physicochemical Bases of (Cont.)

SOV/5411

- Panov, A. S., and P. N. Perchatkin. Comparison of the Desulfurizing Capacity of Oxides During the Melting Period in Processing Low-Manganese Pig Irons 66
- Shneyerov, Ya. A., A. G. Kotin, and A. G. Derfel'. Accelerating the Open-Hearth Process in the Preparation of the Charge (Pig Iron and Loose Materials) 70
- Shneyerov, Ya. A., A. I. Sukachev, and A. G. Kotin. Accelerating the Slag Formation and Melting Processes by Blowing Oxygen Into the Bath During the Meltdown Period 81
- Kazachkov, Ye. A. Kinetics of the Oxidation of Low-Concentrated Carbon in the Open-Hearth Bath 88
- Zorin, O. D., and A. Ye. Khlebnikov. The Kinetic Decarburization
- Card 5/16

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A.G., kand.tekhn.nauk; Prīnīmali uchastiye: ZAYTSEV, I.A.; KURAPIN,
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DOLINENKO, O.V.; SHAROV, B.A.; Primali uchastiye: DYUBINA, A.V.;
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Monthly Index of East European Accessions (MEAT) IC. Vol. 7, no. 2,
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Vol. 11, No. 7/8, July/ Aug. 1959

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Author : Derfoldi, Antal; Szasz, Tibor.

Inst : Not given.

Title : Problems of Natural Renewal and Forest Development.

Orig Pub: Az erdo, 1956, 5, No 2, 68-72.

Abstract: A system of main cuttings in Hungary is reviewed in connection with the orientation to preliminary renewal. Technical recommendations for rationalization of cuttings are cited.

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ABS. JOUR. : RZhBiol., No. 4, 1959, No. 15485
AUTHOR : Derföldi, Antal
INST. : --
TITLE : Question of Systemization of Forest Utiliza-
tion, particularly in respect to a Forest
Classification.
ORIG. PUB. : Erdészeti Kutatasok, 1957, No.3-4, 73-157
ABSTRACT : No abstract.

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