BORSZEWSKI, Jerzy; ROZWADOWSKA-DOWZENKO, Maria; OLEJNICZAK, Pawel; JAZIENICKI, Boguslaw; HRYNIWIECKI, Jan

Ballistocardiography following intra-arterial injection of oxygen in obliterative vascular lesions. Polskie arch. med. wewn. 28 no.5: 748-751 1958.

1. Z III Kliniki Chorob Wewnetrznych A.M. w Poznaniu Kierownik: prof. dr. med. F. Labendzinski i z III Kliniki Chirurgicznej A.M. w Poznaniu Kierownik: doc. dr med. J. Borszewski. Adres autora: Poznan, ul. Szkolna 8/12.

(BALLISTOCARDIOGRAPHY, in var. dis.
peripheral vasc. dis., after intra-arterial oxygen inject. (Pol))
(VASCULAR DISEASES, PERIPHERAL, physiology
oxygen in ballistocardiography,(Pol))

EXCERPTA MEDICA Sec 19 Vol 2/4 Rehabilitation Apr 59

787. **Evaluation of intra-arterial administration of oxygen in arterial ischaemia of the lower extremities** Ocena dotetniczego podawania tlenu w niedokrwieniu tetniczym konczyn dolnych. BORSZEWSKI J. and HRYNIEWIECKI J. III Klin. Chir. A.M., Poznan *Pol. Arch. Med. wewnet.* 1958, 28/5 (811–816) Tables 1 Illus. 4

Oxygen is injected into the femoral artery at a pressure slightly higher than the momentary intra-arterial pressure and at a rate of 1–3 ml./sec. Usually, 50 ml. of oxygen are given during the first session, with repetitions every 3–4 days, leading up to 100 ml. in one injection. Increased blood supply is observed 30–45 min. later, and continues for 2–6 hr. Best results were achieved in patients with chronic arterial spasm, embolisms of peripheral arteries, or early thromboangiitis obliterans.

Wozny — Poznan

BORSZEWSKI, Jerzy (Poznan, ul. Matejki 2)

Treatment of peripheral arterial embolism. Polskie arch.med.wewn. 28 no.5:833-836 1958.

1. Z III Kliniki Chirurgicznej A.M. w Poznaniu Kierownik: doc. dr med. J. Borszewski.
(EMBOLISM, ther.
peripheral arterial embolism, indic. & technic (Pol))

BORSZEWSKI, J.; MIETKIEWSKI, K.; SROKA, L.

Surgical treatment of sterility in men caused by occlusion of the seminal vesicles. Gin. polska 29 no.4:365-374 July-Aug 58.

1. Z III Kliniki Chirurgicznej A. M. w Poznaniu Kierownik: doc. dr J. Borszewski Z Zakladu Histologii prawidlowej i Embriologii A. M. w Poznaniu Kierownik: prof. dr T. Kurkiewicz Z I Kliniki Poloznictwa i Chorob Kobiecycy A. M. w Poznaniu Kierownik: doc. dr W. Michalkiewicz. Adres: Poznan, Szkolna 8/12.

(SEMINAL VESICLES, dis.
occlusion causing sterility, surg. (Pol))
(STERILITY, MALE, etiol. & pathogen.
seminal vesicle occlusion, surg. (Pol))

BORSZEWSKI, Jerzy

Surgical therapy of chronic pancreatitis. Polski przegl. chir. 30 no.5: 587-589 May 58.
(PANCREATITIS, surgery,
chronic (Pol))

BORSZEWSKI, Jerzy; MAJEWSKI, Czeslaw

Causes and development of chronic pancreatitis according to clinical and histological observations. Poznan tow przyjac nauk wydz lek 20 no.1:1-25 '61.

(PANCREATITIS)

1. KOROTKOV, V.; RODEVAL'D, I.; BORT, I.

2. USSR (600)

4. Tomatoes

7. State farm cultivation of tomatoes without transplanting, Sad i og., No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

ETLIS, V.S.; MINSKER, K.S.; RYLOV, Ye.Ye.; BORT, D.N.

Crystalline poly(vinyl chloride). Vysokom. soed. 1 no.9:1403-1406 S '59. (MIRA 13:3)

(Ethylene)

RYLOV, Ye.Ye.; BORT, D.N.; MINSKER, K.S.; KRONMAN, A.G.; TEPLOV, B.F.

Some data on the crystalline polyvinyl chloride structure.
Zhur.strukt.khim. 2 no.5:615-616 S-O '61. (MIRA 14:11)
(Ethylene) (Crystals)

BORT, D.N.

1

3h990
S/190/62/004/003/010/023
B110/B144

15.2050

AUTHORS: Minsker, K. S., Kronman, A. G., Teplov, B. F., Rylov, Ye. Ye., Bort, D. N.

TITLE: Stereospecific homogeneous vinyl chloride polymerization

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 3, 1962, 383-388

TEXT: The effect of various polar solvents (nitro compounds, amines, amides, nitriles, ethers, esters, ketones, aldehydes, acids, anhydrides, and heterocyclic compounds) on the polymerization of vinyl chloride (I) was studied to determine the structure of the polymer formed. Polymerization was conducted for 18 hrs between 0 and 60°C in an N_2 atmosphere with radical initiators ($8 \cdot 10^{-4}$ moles/mole of monomer). Films kept at 120°C for 2.5 hrs were used for the electronographic determination of crystallinity. Only few solvents yielded stereoregular PVC structures. Electron diffraction patterns showed four diffuse rings. $HCOOH$, CH_3COOH, C_2H_5COOH, C_3H_7COOH lead to a higher order of the polymer chain and produce two more diffuse bands of aliphatic aldehydes yielded crystalline PVC. Electron diffraction patterns showed some new lines with d = 5.07, 5.27 Å (instead of 5.16);
Card 1/3

Stereospecific homogeneous ...

2.52, 2.62 Å (instead of 2.56); 2.26, 2.31 Å (instead of 2.28); 1.74 and 1.69 Å. Low yields and molecular weights suggest: (1) that aldehydes regulate the molecular weight in radical polymerization of I; and (2) chain transfer. $CHCl_3$ and CHI_3 were used for chain rupture, since the formation of a regular structure is easier at low molecular weights. PVC with the characteristic viscosity of 0.1 was obtained with 1 mole $CHCl_3$ per monomer-mole. Absence of aldehyde in the system (monomer initiator and aldehyde) leads to amorphous PVC. Substitution of azoisobutyric dinitrile by peroxide initiators yielded poorly crystalline PVC. Peroxide on the basis of butyric aldehyde yielded highly crystalline PVC. Electron diffraction patterns of PVC twice reprecipitated PVC showed further new bands with d = 1.69, 1.54, and 1.44 Å. Free radicals formed by the decomposition of the hydroperoxide group in peracids initiate the radical polymerization of I in the presence of aldehydes so that adding of initiators becomes unnecessary. Complexes of aldehyde and vinyl chloride cause the formation of crystalline PVC. Conclusions. (1) The C=O groups do not affect the crystallinity, since amides, esters, ketones, acids, and anhydrides are ineffective. (2) Regularity (but not crystallinity) is increased in the

Card 2/3

Stereospecific homogeneous ...

systems containing COOH groups. (3) Crystallinity is caused by aliphatic aldehydes only. Stereospecificity is affected by substituents in aldehydes and acids ($(CH_3)_2CHCHO$, CCl_3COOH). There are 1 figure and 1 table. The reference to the English-language publication reads as follows: P. H. Burleigh, J. Amer. Chem. Soc., 82, 749, 1960.

SUBMITTED: February 23, 1961

Card 3/3

S/190/62/004/006/024/026
B139/B144

AUTHORS: Bort, D. N., Ovchinnikov, Yu. V., Rylov, Ye. Ye.

TITLE: Molecular ordering in polymers

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 6, 1962, 935 - 937

TEXT: The degree of molecular ordering in amorphous polymers which have not undergone any treatment such as melting, annealing, or reprecipitation has been compared with that in films prepared by vaporization of solutions of these polymers. PVC was used as experimental material. Electron diffraction photographs were taken of films prepared from 0.1 % solution of PVC in cyclohexanone under the following conditions: a) at room temperature, b) at room temperature followed by annealing at 120°C, and c) at 120°C. Further, electron diffraction photographs were recorded of PVC latex. The occurrence of an additional reflex with d = 4.65 Å on the electron diffraction photograph was adopted as a criterion for the molecular ordering. Films prepared at room temperature and not heated showed the lowest degree of molecular ordering, PVC latex the

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Molecular ordering in polymers

highest. The diffraction pattern so obtained enables the structure of the polymer to be determined with maximum approximation only if the films under investigation have been prepared at temperatures above T_c or have afterwards been heated correspondingly. This holds for amorphous polymers as well as crystalline. Crystalline PVC with T_c = 80°C produces an amorphous pattern, if the film forms at room temperature. If the polymer is reprecipitated for purification, and is X-rayed, the result is a pattern which does not correspond to the structure that existed during the polymerization process. This was established by V. A. Kargin (V. A. Kargin et al. Vysokomolek. soyed., 1, 94, 1959) during the investigation of isotactic polystyrene. There are 2 figures.

SUBMITTED: April 25, 1961

RAZUVAYEV, G.A.; MINSKER, K.S.; KRONMAN, A.G.; SANGALOV, Yu.A.; BORT, D.N.

Mechanism of homogeneous radical stereospecific polymerization of vinyl chloride in aldehydes. Dokl. AN SSSR 143 no.5:1116-1118 Ap '62. (MIRA 15:4)

1. Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete im. N.I.Lobachevskogo. 2. Chlen-korrespondent AN SSSR (for Razuvayev).
(Vinyl compound polymers)

S/020/62/143/006/015/024
B106/B138

AUTHORS: Bort, D. P., Kronman, A. G., Minsker, K. S., Shtarkman, B. P., and Kargin, V. A., Academician

TITLE: Electron microscopic study of crystalline polyvinyl chloride

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 6, 1962, 1345-1347

TEXT: Electron microscopic investigations of highly crystalline polyvinyl chloride were carried out for the first time. To prepare the specimens, one drop of a solution of the polymer in cyclohexanone was put on the surface of distilled water saturated with cyclohexanone. The resulting film was applied to a collodion base. Such specimens were crystallized by heating to 80, 100, and 120°C for different periods and were compared against amorphous specimens obtained by drying the film at room temperature. In the electron microscope specimens heated to 100°C for 30 min showed, compact formations consisting of parallel bands, the number and dimensions of which increased with heating time. In shape, they were either reminiscent of extended concertinas, crabs, claws, or macromolecules in bundles. These bundles were sometimes bent, the bands re-

Card 1/3

Electron microscopic study...

maining parallel and the density in the bends being lower owing to the more defective crystal structure. The specimens heated to 120°C showed basically the same structures. Specimens crystallized at 80°C (near the brittle temperature of the polymer) showed triangles and rhombs as morphological formations. Strangely bent stripes and disks always formed the background of the preparations. When the surface of the crystalline foils was etched in dichlorethane, the bands showed a transversely folded structure (thickness of the folds 300 Å, length 800 Å). The position of the folds in the bands fitted very well into the formation mechanism for bands proposed by V. A. Kargin and G. L. Slonimskiy (Vvedeniye v fiziko-khimiyu polimerov (Introduction to the physical chemistry of polymers), M., 1960, p. 118). After etching, the background surface also changed a fibrous structure. It is probable that these fibrous structures cannot produce more perfect shapes (bands) due to the prevailing kinetic conditions. The stability of the crystalline structures was studied by intense electron irradiation of the film base in the electron microscope. The crystallites showed high strength in all cases. In crystalline forms obtained from a solution of polyvinyl chloride in dichlorethane, no new forms were observed other than the morphological ones described. There are 3 figures. The English-language reference reads as follows: P. H. Till, .

Card 2/3

S/020/62/143/006/015/024
B106/B138

Electron microscopic study...

J. Polym. Sci., 24, 301 (1957).

SUBMITTED: January 19, 1962

Card 3/3

S/020/62/145/004/015/024
B110/B144

AUTHORS: Bort, D. N., Minsker, K. S., Okladnov, N. A., Shtarkman, B. P., and Kargin, V. A., Academician

TITLE: Direct formation of secondary polyethylene structures in polymerization processes

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 145, no. 4, 1962, 787 - 788

TEXT: Crystalline polymer structures ranging from primary supermolecular forms (packets) to higher secondary structures were studied directly in the course of the polymerization. Polyethylene synthesized in benzene (60°C, 10 atm) with a catalytic mixture of partially chlorinated metallic Al and $TiCl_3$ forms a layer ~ 4-5 mm thick on the Al surface. This layer consists of fibers perpendicular to the Al surface with cross stripes 1.5 μ wide. After dispersion of the fibers in water and separation of the larger particles, helical bands with distinct transverse folds (3.5 - 4.5 μ) of striated structure (150 - 250 Å packets) were observed by electron microscope. This proves the stepwise development of the supermolecular structure, corresponding to the structure of the crystalline polymer phase

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Direct formation of secondary ...

according to V. A. Kargin, G. L. Slonimskiy (Kratkiye ocherki po fiziko-khimii polimerov (The physical chemistry of polymers in brief outline), M. 1960). The distribution of molecular weight indicates that polyethylene consists of homologs having an average molecular weight of 100,000. The melting point (121 - 132°C), the heat of fusion (35.9 cal/g), and the degree of crystallization (67 %) were determined thermographically. The density was 0.955 g/cm^3. The assumption of V. A. Kargin, G. L. Slonimskiy (Usp. khim., 24, 785 (1955)) that internal stresses affect the shape of the crystals is confirmed. There are 3 figures.

SUBMITTED: April 6, 1962

Card 2/2

S/0190/64/006/002/0189/0192

ACCESSION NR: AP4017628

AUTHORS: Kargin, V. A.; Bort, D. N.; Shtarkman, B. P.; Minsker, K. S.

TITLE: Supermolecular structures arising directly in the polymerization process

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 6, no. 2, 1964, 189-192

TOPIC TAGS: polymerization, polymer, polyvinylchloride, polyethylene, supermolecular formation, catalyst, aluminum, chlorinated aluminum, tape formation, fibrillar formation, fagot, fibrillar orientation, solution, film, suspension, folded structure, crystalline structure

ABSTRACT: This investigation was conducted on crystalline polyvinylchloride (obtained in a butyraldehyde medium) and on polyethylene prepared in a benzene medium. In both instances partly chlorinated aluminum in combination with the alpha-alpha modification of titanium trichloride was used as catalyst. The obtained polyvinylchloride was dried, ground in a porcelain mortar, suspended in aqueous alcohol, spread on a collodion film, dried and subjected to examination on a Tesla-242M electron microscope at a 10 000-20 000 magnification. The polyethylene was split into fibers by means of a needle, and treated as in the preceding case. The electron microscopic picture of polyvinylchloride showed that the

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ACCESSION NR: AP4017628

particles consisted of fibrillar aggregate formations, the structure of which resembled accumulations of tapes and macrofagot packages. The authors assume that these structures were formed directly during the process of polymerization and were reconstructed only in the course of the subsequent procedure. Samples of polyethylene showed a similar structure but were more distinct. Here the tape formations revealed distinct transverse striations of folded fibers 150-200 Å in diameter. Another structural type of polyethylene was dendritic, seemingly growing from the bit of aluminum. Similar structures were also obtained from solution in ortho-xylene. Orig. art. has: 3 pictures.

ASSOCIATION: none

SUBMITTED: 30Jun62 DATE ACQ: 23Mar64 ENCL: 00

SUB CODE: CH NO REF SOV: 018 OTHER: 003

Card 2/2

KARGIN, V.A.; BORT, D.N.; SHTARKMAN, B.P.; MINSKER, K.S.

Supermolecular structures arising directly in the process of polymerization. Vysokom.soed. 6 no.2:189-192 F '64. (MIRA 17:2)

ACCESSION NR: AT4020699 S/0000/63/000/000/0045/0047

AUTHOR: Minsker, K. S.; Kronman, A. G.; Sangalov, Yu. A.; Bort, D. N.; Razuvayev, G. A.

TITLE: Crystalline polyvinyl bromide

SOURCE: Karbotsepny*ye vy*sokomolekulyarny*ye soyedineniya (Carbon-chain macromolecular compounds); sbornik statey. Moscow, Izd-vo AN SSSR, 1963, 45-47

TOPIC TAGS: polymerization, stereospecific polymerization, crystalline polymer, block polymerization, polyvinyl chloride, polyvinyl bromide, butyraldehyde

ABSTRACT: Crystalline polyvinyl bromide was prepared by homogeneous free-radical stereospecific polymerization at room temperature in a butyraldehyde medium. After 5 hours, the yield of polyvinyl bromide was 5-6% with a 0.02% active oxygen content in the aldehyde. The resulting polymer was a white powder with an absolute viscosity of 0.912 cp at 20C in dichlorethane. The absolute viscosity of highly crystalline polyvinyl chloride obtained under the same conditions was 0.939 cp. X-ray patterns of annealed unoriented polyvinyl bromide films obtained by block polymerization and by the polymerization of the monomer in a butyraldehyde solution are given. The maximum degree of crystallinity of polyvinyl bromide was obtained at a molar ratio of monomer to aldehyde = 1 : 1. Addition of water and alcohols to

Card 1/2

ACCESSION NR: AT4020699

the homogeneous stereospecific system produced a strongly amorphous polymer structure. By polymerizing the monomer in ether solutions, a sufficiently high degree of crystallinity could be retained. Orig. art. has: 1 figure.

ASSOCIATION: Nauchno-issledovatel'skiy institut khimii pri Gor'kovskom gosudarstvennom universitete im. N.I. Lobachevskogo (Scientific Research Institute of Chemistry, Gor'kiy State University)

SUBMITTED: 09Apr62 DATE ACQ: 20Mar64 ENCL: 00

SUB CODE: OC NO REF SOV: 005 OTHER: 003

Card 2/2

L 24119-65 EPF(c)/EWP(j)/EWT(m)/T Pc-4/Pr-4 RM
ACCESSION NR: AP5003827 S/0190/65/007/001/0050/0054

AUTHOR: Bort, D. N.; Rylov, Ye. Ye.; Okladnov, N. A.; Shtarkman, B. B. P.; Kargin, V. A.

TITLE: Morphology of bulk poly(vinyl chloride)

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 1, 1965, 50-54

TOPIC TAGS: polymerization, bulk poly(vinyl chloride), supramolecular structure

ABSTRACT: The formation of supramolecular structures (morphological forms) in the course of polymerization and their development with an increasing degree of conversion has been studied during bulk polymerization of poly(vinyl chloride). The polymerization was conducted at 18—22C in ampoules which made sampling possible at any stage of polymerization. The structure of the sample and the particle size were determined by electron microscopy. Depending on the degree of conversion, the polymerization product was an opalescent liquid (traces of polymer), a white suspension (conversion, 1—25%), a gel (conversion, 25—60%), or a solid block (conversion, 60—90%). Electron micrographs

Card 1/2

L 24119-65
ACCESSION NR: AP5003827

indicate that the polymer is formed in spherical particles of approximately equal size. During polymerization the concentration of the particles remains constant, but the particles grow as a result of polymer formation on their surface and aggregate into a solid block. At first the block is not transparent because of the presence of a system of pores between the spherical particles. Further polymerization of the monomer between these particles results in the formation of a transparent region at the bottom of the block. The first supramolecular structures appear when the concentration of macromolecules attains a critical value, at which time their association sets in. Orig. art. has: 7 figures. [BO]

ASSOCIATION: none

SUBMITTED: 02Mar64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 003 OTHER: 000 ATD PRESS: 3176

Card 2/2

L 29934-65 EPF(c)/EWP(j)/EWT(m)/T Pc-4/Pr-4 RM
ACCESSION NR: AP5004603 S/0020/65/160/002/0413/0415

AUTHOR: Bort, I.N.; Okladnov, N.A.; Shtarkman, B.P.; Vidyaykina, L.I.

TITLE: Electron-microscopic study of structures arising during the polymerization and processing of polyvinyl chloride produced by block and suspension polymerization

SOURCE: AN SSSR. Doklady, v. 160, no. 2, 1965, 413-415

TOPIC TAGS: polyvinylchloride, block polymerization, suspension polymerization, electron microscopy, polymer structure

ABSTRACT: Structures of polyvinyl chloride formed in the course of block and suspension polymerization as well as structures arising during its further processing were investigated by means of the electron microscope. Block polymerization was carried out in ampoules provided with a special device permitting the withdrawal of polymer samples at any stage of the process without interrupting it. Initiation was with the usual peroxide-type initiators. It was shown that in the course of free-radical block and suspension polymerization, supermolecular structures of a globular type are formed. The processing of polyvinyl chloride leads to a thorough transformation of the structure: the globular structures are converted into fibrillar ones. Therefore, the authors conclude that the main purpose of the processing of polyvinyl chloride and similar polymers should be a

Card 1/2

L 29934-65
ACCESSION NR: AP5004603

complete and uniform rearrangement of the original globular structure into a fibrillar system, which imparts high physicomechanical properties to the material. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 08Sep64 ENCL: 00 SUB CODE: GC, EC

NO REF SOV: 001 OTHER: 000

Card 2/2

GLADYSHEV, B., kand.tekhn.nauk; BORT, G.; DYUZHENKO, M., inzh.; CHEBOTAREV, D.

Experimental manufacturing of three-dimensional elements by guniting. Zhil. stroi. no.7:26-27 '62. (MIRA 15:9)

1. Zaveduyushchiy kafedroy Khar'kovskogo instituta inzhenerov kommunal'nogo stroitel'stva (for Gladyshev). 2. Glavnyy inzhener Ordena Lenina stroitel'no-montazhnogo tresta No.86 (for Bort). 3. Glavnyy tekhnolog Ordena Lenina stroitel'no-montazhnogo tresta No.86 (for Chebotarev).
(Precast concrete construction)

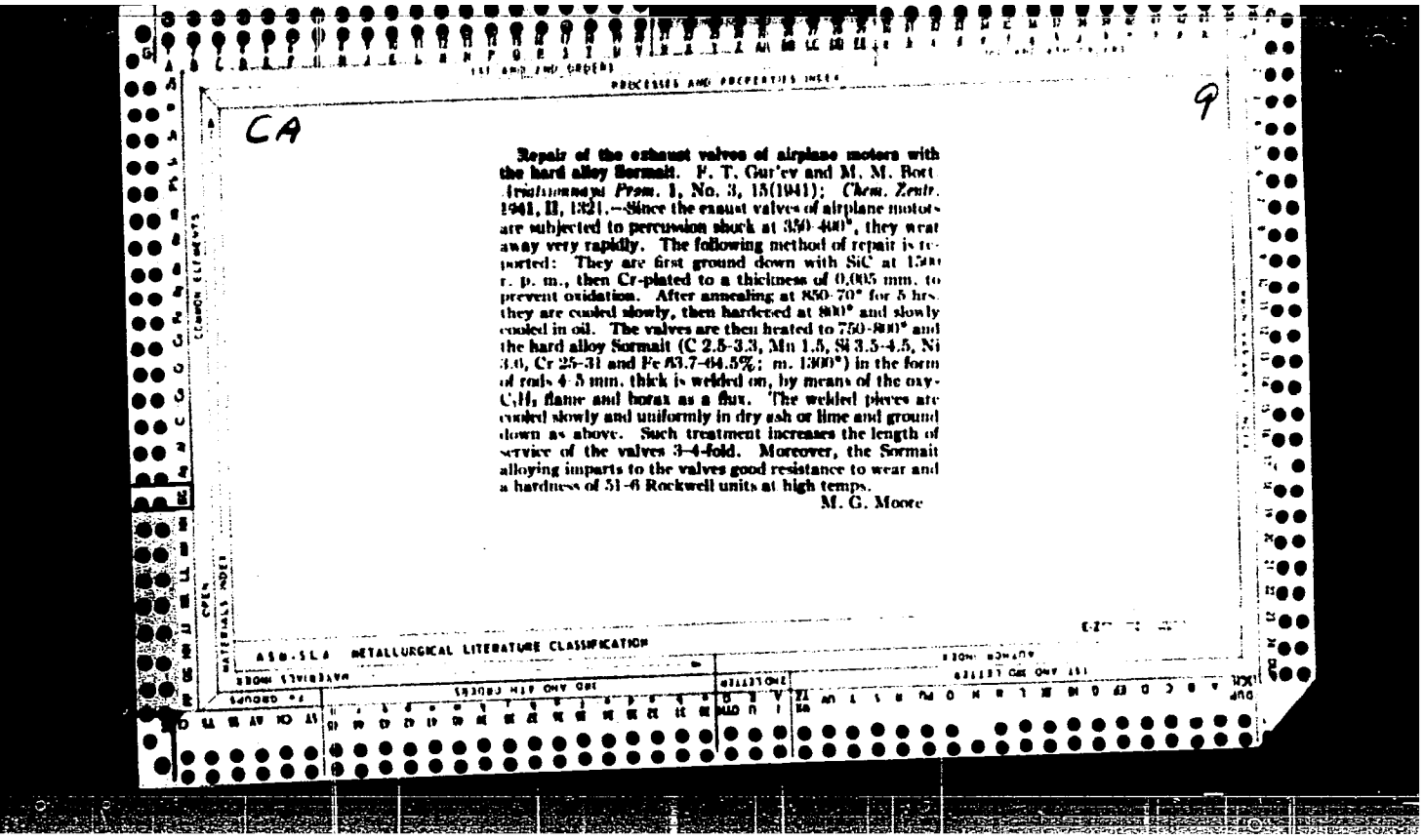
BORT, G.I., inzh.; GAYEVOY, A.F., inzh.; KHOKHLOV, A.I., inzh.

Concrete placer. Mekh. stroi. 20 no.4:25-26 Ap '63. (MIRA 16:3)
(Concrete construction--Equipment and supplies)

BORT, G.I., inzh.; GAYEVOY, A.F., inzh.; MATOKHIN, V.P., kand.tekhn.nauk; SMIRNOV, A.M., kand.tekhn.nauk

Assembly-line erection of the frame of a forge shop made of precast reinforced concrete elements. Prom. stroi. 40 [i.e. 41.] no.3: 2-5 Mr '63. (MIRA 16:3)

(Precast concrete construction)
(Kharkov--Forge shops--Design and construction)

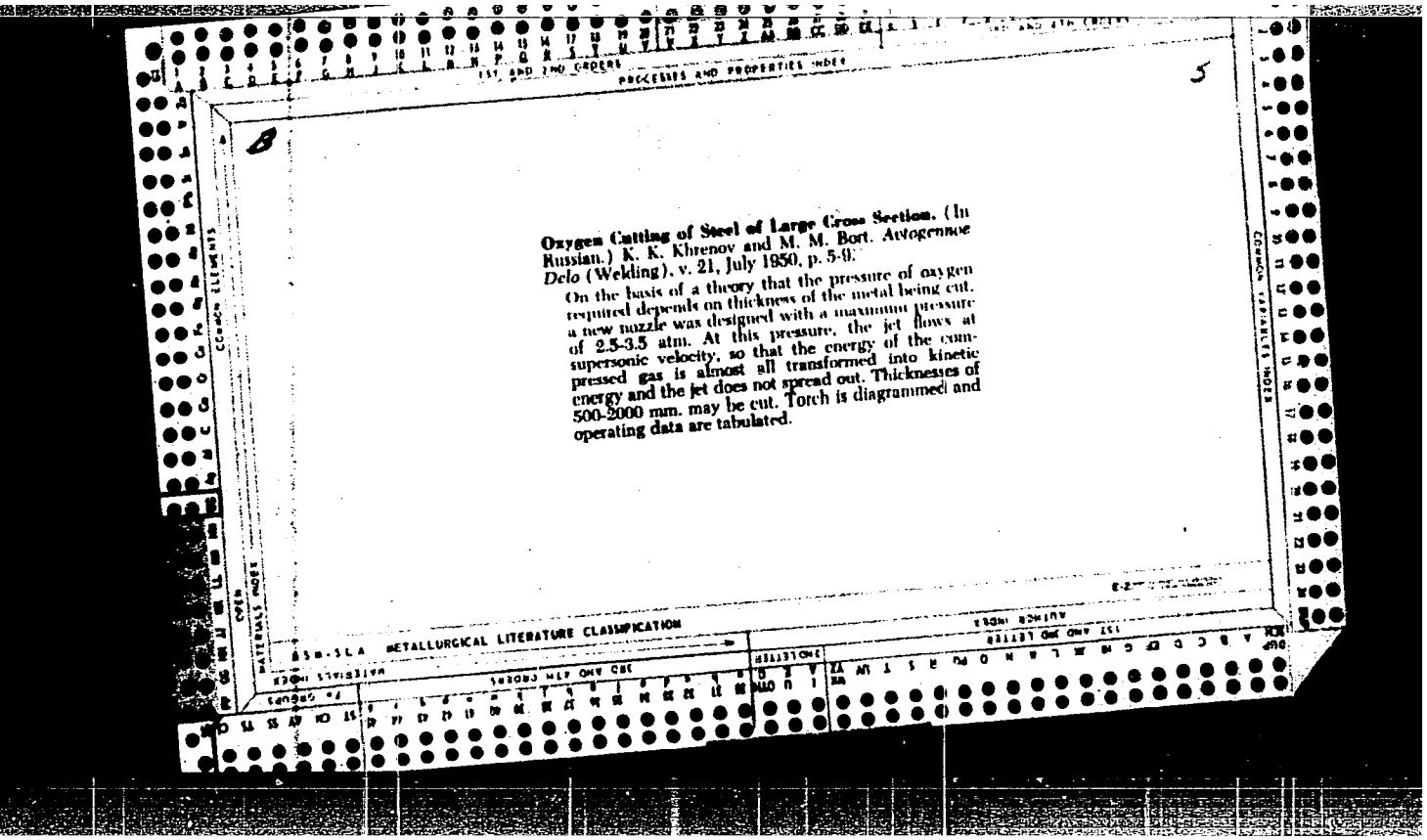


CA

9

Repair of the exhaust valves of airplane motors with the hard alloy Sormait. F. T. Gur'ev and M. M. Bort (*Aviatsionnaya Prom.* 1, No. 3, 15(1941); *Chem. Zentr.* 1941, II, 1321.—Since the exhaust valves of airplane motors are subjected to percussion shock at 350-400°, they wear away very rapidly. The following method of repair is reported: They are first ground down with SiC at 1500 r. p. m., then Cr-plated to a thickness of 0.005 mm. to prevent oxidation. After annealing at 850-70° for 5 hrs. they are cooled slowly, then hardened at 800° and slowly cooled in oil. The valves are then heated to 750-800° and the hard alloy Sormait (C 2.5-3.3, Mn 1.5, Si 3.5-4.5, Ni 3.0, Cr 25-31 and Fe 53.7-64.5%; m. 1300°) in the form of rods 4-5 mm. thick is welded on, by means of the oxy-C_2H_2 flame and borax as a flux. The welded pieces are cooled slowly and uniformly in dry ash or lime and ground down as above. Such treatment increases the length of service of the valves 3-4-fold. Moreover, the Sormait alloying imparts to the valves good resistance to wear and a hardness of 51-6 Rockwell units at high temps.

M. G. Moore



Oxygen Cutting of Steel of Large Cross Section. (In Russian.) K. K. Khrenov and M. M. Bort. *Avtogennoe Delo* (Welding), v. 21, July 1950, p. 5-9.

On the basis of a theory that the pressure of oxygen required depends on thickness of the metal being cut, a new nozzle was designed with a maximum pressure of 2.5-3.5 atm. At this pressure, the jet flows at supersonic velocity, so that the energy of the compressed gas is almost all transformed into kinetic energy and the jet does not spread out. Thicknesses of 500-2000 mm. may be cut. Torch is diagrammed and operating data are tabulated.

BORT, M.M.

RYBASENKO, I.D.; YAKUBOVSKIY, L.A.; KAGAN, I.Z.; NEVSKIY, B.N., inzhener, redaktor; MEDOVAR, B.I., kandidat tekhnicheskikh nauk, retsenzent; BORT, M.M., inzhener, retsenzent; PRITSKER, G.S., tekhredaktor.

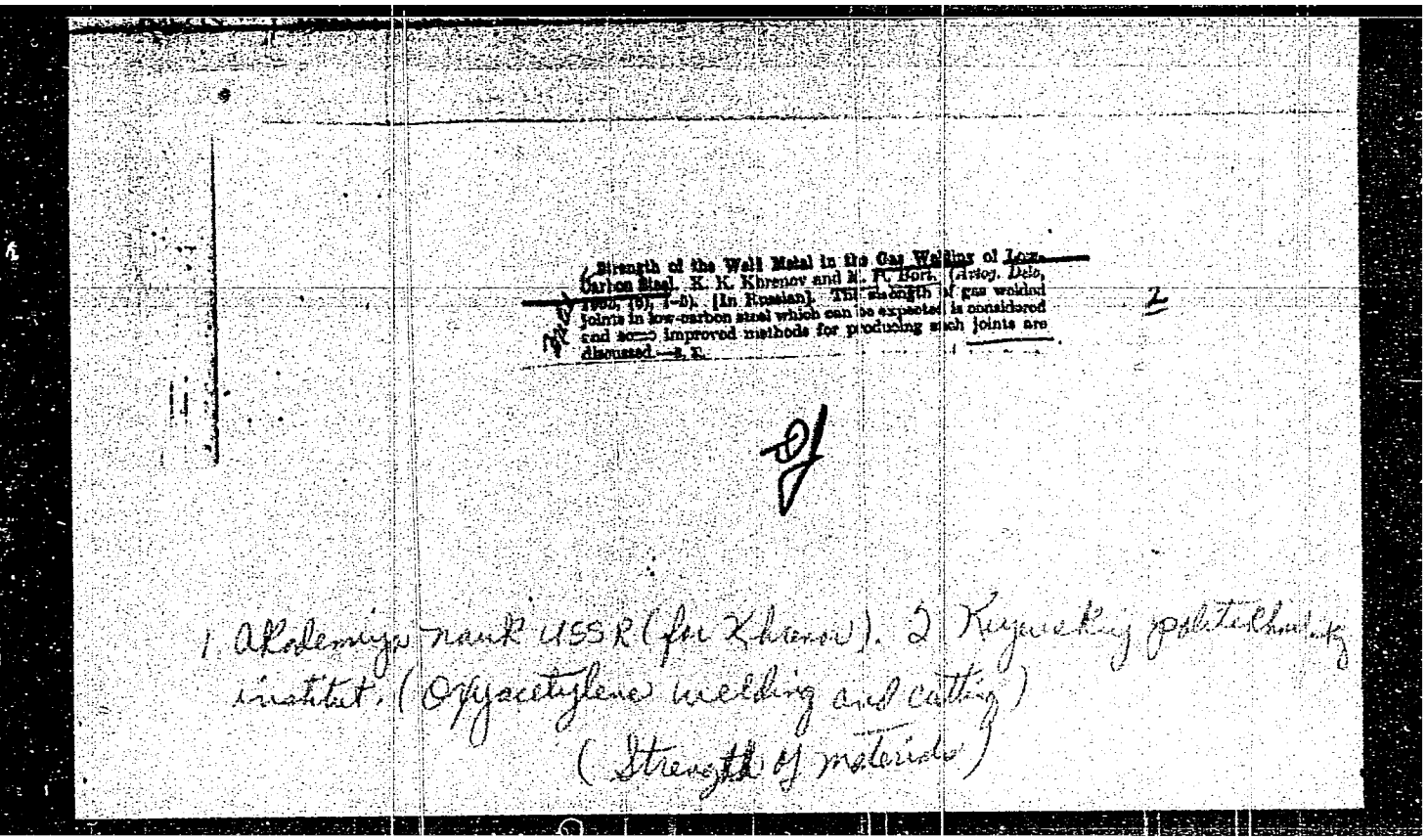
[Technology of making chemical apparatus of stainless steel] Tekhnologiia izgotovleniia khimicheskoi apparatury iz nerzhaveiushchei stali. Kiev, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1951, 145 p. [Microfilm] (MIRA 10:5)

(Chemical apparatus) (Steel, Stainless)

BORT, M.M.; KHRYENOV, K.K., diysnyy chlen.

Oxygen cutting of steel of considerable thickness. Dop.AN URSR no.4:259-262 '52. (MLRA 6:9)

1. Akademiya nauk Ukrayins'koyi RSR (for Khryenov). 2. Kyyivs'kyy politekhnichnyy instytut. (Oxyacetylene welding and cutting)



Strength of the Weld Metal in the Gas Welding of Low-Carbon Steel. K. K. Khrenov and M. F. Bori. (Avtog. Delo, 1950, (9), 1-5). [In Russian]. The strength of gas welded joints in low-carbon steel which can be expected is considered and some improved methods for producing such joints are discussed.—S. R.

2

1 Akademiya nauk USSR (for Khrenov). 2 Kuybyshev politekhnicheskiy institut. (Oxyacetylene welding and cutting) (Strength of materials)

BORT, M.M., kandidat tekhnicheskikh nauk; BYALOTSKIY, L.A., assistant; VASIL'YEV, G.V., assistent; GAPCHENKO, M.N., kandidat tekhnicheskikh nauk; GREBEL'NIK, P.G., kandidat tekhnicheskikh nauk, otvetstvennyy redaktor; TROCHUN, I.P., kandidat tekhnicheskikh nauk; SERDYUK, V.K., vedushchiy redaktor; inzhener; RUDENSKIY, Ya.V., tekhnicheskiy redaktor.

[Electric welder's reference book] Spravochnik elektrosvarshchika. Izd. 2-e, perer. Kiev, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1954. 515 p. [Microfilm] (MLRA 8:1)
(Electric welding)

USSR.

/12402* Arc Welding of Brass. **Dugovaia svarka latuni.** (Russian.) M. M. Bört. *Svarochnoe Proizvodstvo*, 1955, no. 6, june, p. 18-21.

Mechanical properties and micro-structure of specimens arc-welded, with and without heat treatment; chemical composition of base metal and welded-on metal; welding procedures; comparison with gas-welding results. Tables, micrographs, photographs.

BORT, Mikhail Mikhaylovich

BORT, Mikhail Mikhaylovich; VASIL'YEV, Grigoriy Vasil'yevich; GORPENYUK, Nikolay Antonovich; KOTVITSKIY, Anatoliy Dmitriyevich; ASNIS, A.Ye., kand.tekhn.nauk, retsenzent; KHRENOV, K.K., akademik, red.; SOROKA, M.S., red.izd-va; RUDENSKIY, Ya.V., tekhn.red.

[Gas welder's handbook] Spravochnik gazosvarshchika. Pod red. K.K.Khrenova. Kiev, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1957. 275 p. (MIRA 11:1)

1. AN USSR (for Khrenov).
(Gas welding and cutting)

Bort, M.M.

SUBJECT: USSR/Welding 135-3-17/17

AUTHORS: Khrenov, K.K., Academician, Bort, M.M., Candidate of Technical Sciences, and Kotvitskiy, A.D., Candidate of Technical Sciences.

TITLE: On the Problem of Cutting Thick Sections by Low-Pressure Oxygen. (K voprosu o reske bol'shikh tolshchin kislorodom nizkogo davleniya).

PERIODICAL: "Svarochnoye Proizvodstvo", 1957, #3, pp 30-31 (USSR)

ABSTRACT: Critical review of the article "Investigation of Cutting thick steel sections by low-pressure oxygen" ("Issledovaniye razdelitel' noy rezki stali bol'shikh tolshchin kislorodom nizkogo davleniya" by S.C. Guzov, and O.Sh. Spektor (1).- "Trudy VNIIAvtogen, ed. III, Goskhimizdat, 1955.

The authors consider erroneous and contradictory the evaluation results given in the criticized work concerning the effect of oxygen pressure, the losses of oxygen depending on the various shapes of nozzle, the pressure existing inside the nozzle, and the way the nozzle shape affects the oxygen stream. ....." It is regretable that the authors made a considerable effort to study the staged cylindrical nozzles which are known to be of the

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TITLE: On the Problem of Cutting Thick Sections by Low-Pressure Oxygen. (K voprosu o rezke bol'shikh tolshchin kislorodom nizkogo davleniya).

least satisfactory nozzle design, but made no use of the correct calculation and production method of smooth nozzles with continuous expansion of bore and impactless stream of gas, and completely ignored the smoothly-narrowing nozzles which have considerably better gas-dynamic flow properties as compared to the simple cylindrical nozzles chosen by the authors as the best".

The article contains 3 references (two of them by the criticized authors, all Russian).

ASSOCIATION: Kiyev Polytechnical Institute (Kiyevskiy politekhnicheskiy institut)

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress.

Card 2/2

BORT, M.M., kand.tekhn.nauk

Oxygen cutting torch. Svar.proizv. no.8:35-39 Ag '60.
(MIRA 13:7)

1. Kiyevskiy politekhnicheskiy institut.
(Gas welding and cutting--Equipment and supplies)

BORT, Mikhail Mikhaylovich, kand. tekhn. nauk; SHEVCHENKO, Viktor Prokov'yevich, inzh.; GLUSHCHENKO, Andrey Semenovich; VASILENKO, V.P., red.; TIMOSHEVSKAYA, A.A., tekhn. red.

[Metal cutting with oxygen at low pressure] Rezka metalla kislorodom nizkogo davleniia. Donetsk, Donetskoe knizhnoe izd-vo, 1961. 29 p. (MIRA 15:9)
(Gas welding and cutting)

PHASE I BOOK EXPLOITATION SOV/5730

Bort, M. M., Candidate of Technical Sciences, L. A. Byalotskiy, Engineer, G. V. Vasil'yev, Engineer, K. P. Voshchanov, Engineer, M. N. Gapchenko, Candidate of Technical Sciences, N. A. Gorpenyuk, Candidate of Technical Sciences, P. G. Grebel'nik, Candidate of Technical Sciences, V. I. Dyatlov, Candidate of Technical Sciences, I. P. Trochun, Candidate of Technical Sciences, and K. K. Khrenov, Academician, Academy of Sciences UkrSSR.

Spravochnik elektrosvarshchika (Electric Weldor's Handbook) 3rd ed., rev. Moscow, Mashgiz, 1961. 748 p. 75,000 copies printed.

Resp. Ed.: P. G. Grebel'nik, Candidate of Technical Sciences; Ed.: M. S. Soroka; Chief Ed. (Southern Dept. Mashgiz): V. K. Serdyuk, Engineer.

PURPOSE : This handbook is intended for weldors. It may also be useful to foremen, designers, and process engineers.

Card 1/13

Electric Weldor's Handbook SOV/5730

COVERAGE: The book deals with processes and techniques of manual, semiautomatic, and automatic arc welding and with the surfacing of ferrous and nonferrous metals. Electroslag and gas-shielded electric welding are also discussed. Detailed characteristics of electrodes are given, and the compositions of fluxes are considered. Attention is given to the metals used in the industry, the weldability of these metals, and welding equipment, devices, and tools. Stresses and distortions occurring in welding and the possibilities of their elimination are analyzed. Weld-inspection methods are described. The appendixes contain conventional weld-specification symbols and the codes for qualification tests of electric and gas weldors. No personalities are mentioned. There are no references.

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Electric Weldor's Handbook SOV/5730

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Electric Weldor's Handbook

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Electric Weldor's Handbook SOV/5730

AVAILABLE: Library of Congress (TK4660.S645 1961)

Card 13/13

VK/wrc/jw
12/13/61

RYABOKON', Nikolay Grigor'yevich; BORT, M.M., kand. tekhn. nauk, retsenzent; RUDENSKIY, Ya.V., tekhn. red.

[Mechanization and the automatic control of technological processes in welding] Mekhanizatsiia i avtomatizatsiia tekhnologicheskikh protsessov svarochnogo proizvodstva; elementy avtomatiki. Moskva, Mashgiz, 1963. 275 p. (MIRA 16:10)
(Welding--Equipment and supplies)
(Automatic control)

BORT, M.M.

About the cutting centers. Avtom. svar. 16 no.6:83-85 Je '63.
(MIRA 16:7)

1. Kiyevskiy politekhnicheskiy institut.
(Gas welding and cutting)

GLUKHOV, Lev Nikolayevich; SHUL'MAN, Mark Vladimirovich; BURTAKOVSKIY, Sergey Yakovlevich; SOLGANIN, G.Ya., vedushchiy red.; MUKHINA, E.A., tekhn.red.

[Underground reservoirs for light petroleum products] Podzemnye rezervuary dlia svetlykh nefteproduktov. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1960. 129 p. (MIRA 13:3)

(Petroleum products--Storage)

BORTEL, E,

3

PRZEMYSL CHEMICZNY
Vol XIII, Nr 11, 1957

Phenol-Formaldehyde Ion Exchangers — by F. Polak and E. Bortel

Summary

A method is described of preparing cation exchanger of phenol sulphone type by the reaction of phenolsulphonic acid with formalin in acid medium at ambient temperature. The influence of some parameters on the trend of reaction has been investigated, including: (1) the concentration of phenolsuphonic acid, (2) the phenol formaldehyde ratio, (3) the duration of heating at higher temperature the product obtained at ambient temperature (the gel), (4) the phenol sulphuric acid ratio, and (5) additional sulphonation. The exchange value for the acclimatized substance ranged from 0.9 to 2.7 mval depending on the conditions of reaction.

POLAK, Feliks; BORTEL, Edgar

Phenol-formaldehyde ion exchangers. IV. Synthesis of esters in higher temperatures with the defeciency of formaldehyde. Przem chem 39 no.7:446-448 Jl '60.

1. Katedra Technologii Chemicznej, Uniwersytet Jagiellonski, Krakow

POLAK, Feliks; BORTEL, Edgar

The ion exchanger in the column The exchange zones. Przem chem 40 no.10: 591-595 O '61.

1. Katedra Technologii Chemicznej, Uniwersytet Jagiellonski, Krakow.

S/080/62/035/004/006/022
D267/D301

5.2100

AUTHORS: Davankov, A. B., Laufer, V. M., Bortel', E. and Teplyakov, M. M.

TITLE: Sorption and subsequent desorption of ytterbium and europium on granular ionites in an electric field

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 4, 1962, 769-773

TEXT: The successful application of redox processes for the concentration and desorption of noble metals on granular ionites in an electric field prompted the authors to use these processes in the case of some lanthanides endowed with variable valency. Having chosen Yb and Eu as the elements to be tested, the authors intended first to check the possibility of desorption in the electric field of tervalent cations adsorbed on ionites, and then to try to reduce them to divalent ions and utilize the low solubility of sulphates for the purpose of concentration. Conditions have been studied of extracting and concentrating Eu and Yb from dilute solutions by means of the cationite KY-2(KU-2), and a method has been

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developed for achieving complete (> 95%) desorption of Eu ions from the adsorbent and for obtaining concentrated solutions of Eu by amalgamation. Yb did not form amalgams with Hg. The method of desorption in the electrical field with the use of a Hg cathode can be used to separate Eu from Yb and other rare-earth elements. Electrochemical desorption of Eu and Yb in the presence of H_2SO_4 solutions as electrolyte did not ensure a complete extraction of these elements. There are 3 figures, 2 tables and 28 references: 18 Soviet-bloc and 10 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: K. S. Spiegler, Techn. Rev., 100, 1953, 303; A. H. Creer, A. B. Hindler and V. P. Tevmine, Industr. Engng. Chem., 1958, 166; R. S. Stamberg, J. Seidl and J. Rahm, Polymer Sci., 31, no. 122-123, 1958, 15-24; R. Kunin, Ion exchange resins, New York, 1958.

SUBMITTED: April 13, 1961

BORTEL, Edgar, dr

Practical aspects of sea water desalination by electrodialysis on board ships. Tech gosp morska 13 no.6:175-177 Je '63.

1. Katedra Technologii Chemicznej, Uniwersytet Jagiellonski, Krakow.

ADAMICHA, J., doc. Mgr. [deceased]; B[illegible], S. Mgr. Inz.

Dressing copper ores from the new deposit in the Lubin Glogow area. Rudy 12 no.7/8:311-312 Jl-Ag'64 (MIRA 17:8)

1. Institute of Nonferrous Metals, Gliwice, Poland.

BORTEL, Vladimir, inz.

Summary evaluation of the National Conference on Gradual Shelterwood Cutting. Les cas 9 no.4/5:500 '63.

1. Ustav pre hospodarskou upravu lesov, Zvolen.

BORTFEL'D, S. A.

Bortfel'd, S. A. "The peculiarities of walk in children suffering from Little's disease", Sbornik nauch. trudov (L-vo zdravookhraneniya RSFSR, Resp. nauch.-issled in-t vosstanovleniya trudosposobnosti fiz. defektivnykh detey im. prof. Turnera), Leningrad, 1948, p. 198-210.

SO: U - 3042, 11 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 7, 1949).

BORTFEL'D, S. A.

BORTFEL'D, S.A.; GOLOVINSKAYA, N.V.; REGO, S.I.

Characteristics of the state of muscles in children in chronic spastic paralysis according to tonometric and chronaximetric investigations. Trudy LSGMI 29:277-288 '56. (MLRA 10:9)

1. Fiziologicheskaya laboratoriya (zav. - prof. Yu.M. Uflyand) i Otdeleniye lechebnoy fizicheskoy kul'tury (zav. - prof. A.B. Gandel'sman) Instituta im. Turnera
(PARALYSIS, in infant and child,
spastic congen., tonometry & chronaximetry of musc. (Rus))

BOYKOVA, O.S., metodist lechebnoy fizicheskoy kul'tury; BORTFEL'D, S.A., kand. ped. nauk; GANDEL'MAN, A.B., prof., doktor med. nauk; GOLOVINSKAYA, N.V., kand. biol. nauk; GONCHAROVA, M.N., prof., doktor med. nauk; MIRZOYEVA, I.I., red.; KHARASH, G.A., tekhn. red.

[Exercise therapy in the pediatric orthopedic clinic] Lechebnaia fizicheskaia kul'tura v detskoi ortopedicheskoi klinike. Leningrad, Medgiz, 1961. 191 p. (MIRA 15:4)
(EXERCISE THERAPY) (ORTHOPEDIC NURSING)

BORTFEL'D, Serafima Aleksandrovna; GOLOVINSKAYA, Nadezhda Vasil'yevna; VILENSKIY, B.S., red.; BUGROVA, T.I., tekhn.red.

[Medical gymnastics in the restorative period of poliomyelitis in children] Lechebnaia gimnastika v vosstanovitel'nom periode poliomielita u detei. Leningrad, Medgiz, 1962. 63 p. (MIRA 16:6)
(POLIOMYELITIS) (EXERSISE THERAPY)

BELOUSOV, Pavel Il'ich; BORTFEL'D, S.A., red.

[Exercise therapy for the prevention and elimination of postamputation contractures] Lechebnaia gimnastika dlia profilaktiki i ustraneniia posleamputatsionnykh kontraktur. Leningrad, Meditsina, 1965. 106 p. (MIRA 18:3)

LYANDRES, Z.A., prof.; BORTFEL'D, S.A., starshiy nauchnyy sotrudnik; GOLOVINSKAYA, N.V., starshiy nauchnyy sotrudnik; ZAKREVSKIY, L.Z., starshiy nauchnyy sotrudnik; ZAYDEL', O.P., nauchnyy sotrudnik; MANUKHINA, Z.P., nauchnyy sotrudnik; BOYKOVA, O.S., nauchnyy sotrudnik

Concepts of the abnormalities of posture and scoliosis in children. Ortop., travm. i protez. 25 no.11:81-85 N '64. (MIRA 18:11)

1. Iz Detskogo ortopedicheskogo Instituta imeni G.I. Turnera (dir. - prof. M.N. Goncharova), Leningrad. Adres avtorov: Leningrad M-136, Lakhtinskaya ul., d.10/12, Detskiy ortopedicheskiy institut Turnera. Submitted January 27, 1964.

BORTKEVICH, A.; DIKOV, YU.

Socialist Competition

Speeding up in sections and shops. Tekh. molod. no. 3, 1952.

9. **Monthly List of Russian Accessions**, Library of Congress, August 1952 x1953. Unclassified.

ACC NR: AP7004144 SOURCE CODE: UR/0051/67/022/001/0159/0160

AUTHOR: Bortkevich, A. V.; Sokolova, O. G.; Tsenter, M. Ya.; Bobovich, Ya. S.

ORG: none

TITLE: Influence of solvents on the generation threshold of the 992 cm^{-1} line in the stimulated Raman scattering of benzene

SOURCE: Optika i spektroskopiya, v. 22, no. 1, 1967, 159-160

TOPIC TAGS: [redacted] Raman scattering, stimulated emission, benzene, laser application, organic solvent, Raman spectrum, ruby laser, optic filter/KS-19 optic filter

ABSTRACT: To eliminate the effects of the reaction of the investigated radiation on the operation of the master generator, the authors have investigated the generation thresholds of the 992 cm^{-1} of the stimulated emission of benzene in different binary mixtures inside the resonator under the assumption that this reaction can be neglected at low conversion coefficients of the scattered radiation. The spectra were excited with a Q-switched ruby laser having a power of approximately 5 MW and a pulse duration of 75 nsec. The optical shutter was a filter of KS-19 glass. The spectra were recorded photographically with a diffraction grating. The chosen measure of the generation threshold of the 992 cm^{-1} line was the effective thickness of the benzene layer in the tested solution at fixed laser operation mode and fixed cell length. This thickness was 15 mm for pure benzene, increasing to 25 mm for benzene dissolved in toluol and carbon tetrachloride, to 30 mm for solutions in hexane, cyclohexane,

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UDC: 535.375 + 532.73.0

ACC NR: AP7004144

chloroform, acetone, and nitromethane, and to 35 mm for doddecane, bromoform, and methylcyclohexanon. The results are interpreted as meaning that in all solvents the generation threshold is nearly double compared with pure benzene, and that the threshold is approximately the same (within ±15%) for almost all solvents. No explicit connection could be discerned between the observed quantities and the intermolecular interaction. The difference between the pure benzene and its solutions may be due to the interaction between modes or to resonant parametric interaction. Additional experiments are necessary for a full clarification. Orig. art. has: 1 table.

[WA-14] [02]

SUB CODE: 20/ SUBM DATE: 22Jul65/ ORIG REF: 003/ OTH REF: 005

Card 2/2

BORTKEVICIUS, A.

On the treatment of trophic ulcers and burns by applications of blood. Sveik. apsaug. 8 no.5:54 '63.

1. Pabrades apylinkes ligonine.
(BURNS) (ULCER) (SEROTHERAPY)

BORTKEVICH G.S.

SERGEYEV, M.A., inzhener; BLYUMBERG, V.A., kandidat tekhnicheskikh nauk; BORTKEVICH, G.S., tokar'-novator, laureat Stalinskoy premii; TRUTNEV, V.N., tokar'-novator laureat Stalinskoy premii; ANSEROV, M.A., kandidat tekhnicheskikh nauk, dotsent; OGLOBLIN, A.N., redaktor, dotsent

[Experience of innovator lathe operators in machining standard parts] Opyt tokarei-novatorov po obrabotke tipovykh detalei. Pod obshchei redaktsiei M.A.Anserova. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. i sudostroit. lit-ry, 1953. 124 p. (Bibliotechka tokaria-novatora, no.8) (MLRA 7:7)
(Turning)

BORTKEVICH, G.S.

USSR/Miscellaneous - Industrial Processes

Card 1/1

Authors : Iofinov, I. A., Berezovskiy, V. N., and Bortkevich, G. S.

Title : High-speed guiding chuck

Periodical : Stan. i Instr., No. 5, 23 - 24, May 1954

Abstract : The development and construction of effective high-speed driving centers, which meet all industrial requirements, are described. The function of driving centers is explained. Drawings, table.

Institution : ...

Submitted : ...

BORTKEVICH, G. S.

Plant laboratory. Nauka i zhizn' 23 no.1:23-25 Ja '56.(MLRA 9:4)

1.Zaveduyushchiy tekhnologicheskoy laboratoriyey Leningradskogo stankostroitel'nogo zavoda imeni Sverdlova.
(Leningrad--Machine-tool industry) (Engineering laboratories)

Bortkevich, N. I.
P. 4

25(2) PHASE I BOOK EXPLOITATION SOV/2967

Akademiya nauk SSSR. Institut mashinovedeniya. Seminar po teorii mashin i mekhanizmov

Trudy, tom XIX, vyp. 74 (Transactions of the Institute of Machine Science, Academy of Sciences, USSR. Seminar on the Theory of Machines and Mechanisms, Vol 19, No. 74) Moscow, Izd-vo AN SSSR, 1959. 66 p. Errata slip inserted. 2,500 copies printed.

Scientific Supervisor of the Seminar: I. I. Artobolevskiy, Academician; Ed. of Publishing House: G. B. Gorshkov; Tech. Ed.: I. F. Koval'skaya; Editorial Board: I. I. Artobolevskiy, Academician (Resp. Ed.); G. G. Baranov, Doctor of Technical Sciences, Professor; V. A. Gavrilenko, Doctor of Technical Sciences, Professor; V. A. Zinov'yev, Doctor of Technical Sciences, Professor; A. Ye. Kobrinskiy, Doctor of Technical Sciences; N. I. Levitskiy, Doctor of Technical Sciences, Professor; N. P. Rayevskiy, Candidate of Technical Sciences; L. N. Reshetov, Doctor of Technical Sciences, Professor; and M. A. Skuridin, Doctor of Technical Sciences, Professor.

Card 1/4

PURPOSE: This book is intended for engineers interested in the theory of machines and mechanisms.

COVERAGE: The book consists of five scientific papers dealing with machines and mechanisms. The topics covered include dynamic principles of shockproof screens, electrical simulation of dynamic loads acting in mine hoisting equipment, dynamic loads in spur gears, an analytical method of designing cam profiles, and the analysis of forced vibrations in a system with a nonlinear restoring force. No personalities are mentioned. References follow several of the articles.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

VK/jmr
2-1-60

SHLYAKHTIN, A.V.; BORTKEVICH, N.I.

Determining forced vibrations of a system with a nonlinear regenerating force. Trudy Inst. mash. Sem. po teor. mash. 19 no.74:58-67 '59. (MIRA 13:2)
(Vibration)

1. PRIGOROVSKIY, N. I., Prof.; BORTKEVICH, V. I.; MISCHNIKOV, V. M., Eng.

2. USSR (600)

4. Deformation (Mechanics)

7. Determination of stresses in upset forging by the tensometer method, Vest. mash., 32, No. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February, 1953. Unclassified.

. Bortkevich, V.I.

SOV/124-57-5-6120

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 5, p 156 (USSR)

AUTHORS: Prigorovskiy, N. I., Vasil'yev, A. A., Bortkevich, V. I., Daychik, M. L.

TITLE: Wire Strain Gages (Provolochnyye tenzometry)

PERIODICAL: V sb.: Izmereniye napryazheniy i usiliy v detalyakh mashin. Moscow, Mashgiz, 1955, pp 5-43

ABSTRACT: A description is given of the properties of wire-type strain-gage pickups; experimentally plotted curves are given for hard and annealed constantan and Nichrome wire, curves showing the dependence of the stress and of the relative change in the electrical resistance on the relative elongation ϵ (for elongations ϵ up to 0.8%). The authors examine the actual process of transmission of the strain-producing forces from a metal specimen or machine part to a strain gage that has been glued to it, making due allowance for the stiffness of the glue used. The matter of selecting for the strain-gage pickup the gage of wire, current, and electrical resistance most compatible with the type of electrical meter being used is analyzed, and formulas and graphs are given to facilitate that selection; analyzed also are various methods of moisture-proofing the strain-gage pickups, and

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experimentally plotted curves are given showing the relationship between the amount of creep exhibited by the glue that is used and the temperature of the strain-gage pickup wire. Included,too, are: a) data on the varying degrees of error due to mechanical hysteresis exhibited by different strain-gage pickups pasted on with different types of glue; b) formulas permitting calculation of the maximum allowable length of a pickup intended for recording strains induced by high-frequency dynamic loads; c) a brief listing of the properties of the metals employed to make the strain-sensitive wires used as pickups; and d) a number of glue recipes. A description is given of the techniques and equipment used in the manufacture of wire strain-gage pickups; described also is a design for pickups capable of functioning at temperatures of up to 800°C. Describing, in addition, three types of electron-tube equipment suitable for use with wire pickups, the authors give: 1) a full circuit diagram for and essential data on all the elements of, the ISD static-strain gage developed by the Institut mashinovedeniya AN SSSR (Institute of Machine Construction, Academy of Sciences, USSR) [ISD = izmeritel' staticheskikh deformatsiy = static-strain gage; Transl. Note]. Operating either on 6N2P, 6Kh2P, or 6Ts4P radio tubes or on 6N1P television tubes and having a 50-cps measuring-bridge power supply, this instrument is sensitive to strains as small as 10^{-5} cm/cm. (Reviewer's Note: In the circuit diagram given for this instrument an error

appears; the indicated anode connection points of the 6Kh2P radio tube should be reversed); 2) a full circuit diagram of an automatic strain recorder that makes strain recordings at 120 different points in the course of 80 seconds; included is a diagram of the instrument's 120-point switch; 3) a summary account of the full-beam-deflection parameters on 2-500 μa current loads of the high-sensitivity frame-type vibrators put out by the "Geofizika" plant [Geofizika = geophysics; Transl. Note], plus a detailed description of a UD-3 type strain-testing laboratory capable of recording dynamic strains of frequencies up to 1,500 cps. A brief description is given also of a cathode-ray oscillograph specially designed to record impact strains.

P. V. Novitskiy

SOV/124-58-5-6248

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 5, p 164 (USSR)

AUTHORS: Prigorovskiy, N.I., Bortkevich, V.I., Grigor'yev, L.Ya.

TITLE: A Method of Stress and Force Investigation of Components of Impact-type Mechanisms (Metodika issledovaniya napryazheniy i usiliy v detalyakh mekhanizmov udarnogo deystviya)

PERIODICAL: V sb.: Izmereniye napryazheniy i usiliy v detalyakh mashin. Moscow, Mashgiz, 1955, pp 188-213

ABSTRACT: A description of measuring, amplifying, and recording devices is given for measuring impact parameters as applied to the investigation of an electric hammer. The recording was performed on an oscillograph with a mechanical tape-transport attachment with speeds of up to 10m/sec and filmed cinematographically. Test results for an OMG-10-type hammer are given.

N.P. Rayevskiy

1. Power hammers--Stresses 2. Power hammers--Impact shock 3. Power hammers--Testing equipment 4. Motion picture photography--Applications

Card 1/1

SOV/124-58-1-1236

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 1, p 154 (USSR)

AUTHORS: Prigorovskiy, N. I., Preyss, A. K., Daychik, M. L., Bortkevich, V. I., Kustanovich, M. S., Komov, N. N.

TITLE: Full-scale Measurements of the Stresses and Pressures Exerted on Component Parts of the Hydraulic Turbines of the Hydroelectric Power Station on the River Dnepr (Napryazheniya i davleniya na detalyakh gidroturbiny Dneprovskoy GES po dannym naturnykh izmereniy)

PERIODICAL: V sb.: Gidroturbostroyeniye. Nr 4. Moscow-Leningrad, Mashgiz, 1957, pp 103-126

ABSTRACT: Measurements of the actual values of the strains and pressures at a number of points of the runner and of the forces acting on various shaft sections as obtained for the fundamental operational regimes of the turbine.

From the résumé

Card 1/1

IZRAITEL', N.A.; KRASIL'NIKOV, A.P.; FAYNSHTEYN, B.A.; DAVYDOV, O.V.; BORTKEVICH, V.S.

Role of a scleroma patient in the distribution of the disease. Zhur. ush., nos. i gorl. bol. 23 no.5:43-47 S-O'63 (MIRA 17:3)

1. Iz kafedry mikrobiologii (zav. - prof. B.Ya. El'bert) Minskogo meditsinskogo instituta.

BORTKIEWICZ, K.

Lakes in April. p. 18. Vol. 8, no. 4, Apr. 1956 Warszawa

GOSPODARKA RYBNA

SOURCE: East European Acession List (EEAL) Library of Congress
Vol. 5, no. 8, August 1956

BORTKIEWICZ, K.

Bortkiewicz, K. June and July on the lakes. p. 16

GOSPODARKA RYBNA

Vol. 8, no. 6, June 1956 Warszawa, Poland

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 10 Oct. 56

BORTKIEWICZ, K.

BORTKIEWICZ, K. The reorganization of the higher fishing studies. p. 17.
Vol. 8, no. 8, Aug. 1956. GOSPODARKA RYBNA. Warszawa, Poland.

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957

BORTKIEWICZ, Olga, mgr inz., asystentka

Proportions of architecture in the light of the theory of angle denominators. Problemy 19 no.8:503-511 '63.

1. Katedra Projektowania Zakladow Przemyslowych, Politechnika, Warszawa.

BORTKIEWICZ, S.

TECHNOLOGY

PERIODICAL: NAFTA, Vol. 14, no. 11, Nov. 1958.

BORTKIEWICZ, S. Petroleum storehouses; their capacity and rate of conveying. p. 302

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Quantitative relationships between the transport of water, heat, and salts in the ocean. Trudy Inst. okean. 52:171-179 '61. (MIRA 14:6)

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The technique of calculating the heat balance elements of the ocean surface. Okeanologiia 1 no.3:512-521 '61. (MIRA 16:11)

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AUTHOR: Bortkovskiy, R.S.

TITLE: The averaging of results of hydrological and meteorological observations at sea

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy. no. 127. 1962. Fizika prizemnogo sloya vozdukha, 104-111

TEXT: By the method of iterations applied to a system of equations, the so-called 2/3 law and the law of first degree are established. Optimal macro- and microscales of spatial averaging are considered in order to evaluate more precisely the mean values of hydrometeorological observations at sea. The expression $B_\theta(l) \approx 1.3 \cdot 10^{-2} l$, where B_θ - the structural functions of the temperature of sea surface and l - scale in nautical miles, was used for the determination of water temperature. The mean square error is estimated of the linear interpolation of water temperature, depending upon the number of points and the distance between them. There are 4 tables.

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Methods of calculating the heat and salt fluxes in the ocean as exemplified by selected areas of the Atlantic Ocean. Trudy Inst. okean. 56:130-228 '62. (MIRA 15:10)

(Atlantic Ocean—Ocean temperature)
(Atlantic Ocean—Salinity)

KLEVANTSOVA, V.A.; BORTKOVSKIY, R.S.; [illegible]

Methods for gradient observations in the sea. Trudy GOIN no.150: 85-98 '64. (MIRA 17:7)

L 14173-66 EWT(1)/FCC GW

ACC NR: AT6004161 (N) SOURCE CODE: UR/2531/65/000/167/0171/0177

AUTHOR: Bortkovskiy, R. S.; Preobrazhenskiy, L. Yu.

ORG: Main Geophysical Observatory, Leningrad (Glavnaya geofizicheskaya observatoriya)

TITLE: Some data from gradient observations over the sea

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 1, 1965. Fizika pogranichnogo sloya atmosfery (Physics of the boundary layer of the atmosphere), 171-177

TOPIC TAGS: radiation balance, anemometer, wind, water, meteorology, temperature gradient

ABSTRACT: The authors report on gradient observations made over the Black Sea in 1962 and 1963. Contact anemometers were used for measuring the wind velocity at altitudes of 1, 2, 3, 5 and 7.1 m above the surface of the water. The radiation balance and reflected radiation were continuously recorded throughout the observation period. A comprehensive table is given showing gradient observations for the wind

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ACC NR: AT6004161

velocity at various altitudes, the direction of the wind, the temperature of the water and of the air at altitudes of 2, 4 and 5.5 m, the humidity, the height of the waves and period of the swell, and the direction and velocity of the current at a depth of 2.5 m. It is found that the characteristics of agitation and surface friction should be taken into account when studying the mechanism of air motion above the surface of the water. This requires simultaneous measurement of the spectral characteristics of wind, waves and water current. Orig. art. has: 2 figures, 1 table, 1 formula.

SUB CODE: 08/ SUBM DATE: 00/ ORIG REF: 009/ OTH REF: 004

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