

8/193/60/000/011/004/022  
A004/A001

AUTHORS: Safronov, N. N., Matsyuk, L. R., Kolobkov, Yu. M.

TITLE: The MCII-1 (MSP-1), MCII-2 (MSP-2) and MCII-4 (MSP-4) Machines for the Heat-Bonding of Thermoplastic Films

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, 1960, No. 11, pp.9-11

TEXT: In 1960 one of the Institutes developed several types of machines for the heat-bonding of large-size articles of thermoplastic films by heat-transfer agents. The MSP-1 machine is designed for the heat-bonding of large-size polyethylene films of 25 to 150  $\mu$  thickness. The machine travels along the table on two guide rails and can produce rectilinear T-shaped and lap seams. To avoid the molten polyethylene sticking to the rolls, heat-bonding is effected through a cellophane or fluorplastic-4 film. The heating temperature of the rolls can be evenly controlled in the range of 100 - 300°C and maintained constant with the aid of the automatic ЭПА-12 (EPD-12) thermoregulator. The machine design makes it possible for the bonding head to copy a table unevenness in the range of  $\pm 50$  mm. The bonding speed can be regulated from 0.5 to 10 m/min, the network voltage is 220 v, the machine is lever-and push-button-controlled, its weight is 115 kg. ✓

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The **MCII-1** (MSP-1), **MCII-2** (MSP-2) and **MCII-4** (MSP-4) Machines for the Heat-Bonding of Thermoplastic Films

The machine can be also used for the bonding of other polymer films, e. g. polyvinyl chloride up to  $100\mu$  thickness, "ftorlon" [translator's note. most probably the commercial brand of a fluor polymer] up to  $30-40\mu$  thickness, etc. The MSP-2 machine is also intended for the welding of polyethylene films particularly of a thickness of less than  $60\mu$ . Bonding is effected by unilateral contact of the material with a gas heat-transfer agent, which is heated up to  $180 - 250^{\circ}\text{C}$  and gets on the material through a jet comb. The exact seam width is ensured by two endless steel strips. The superiority of the MSP-2 machine is characterized by the possibility of heat-bonding the films without intermediate layer between heat-transfer agent and material being bonded. A deficiency is the lower bonding speed of the machine - up to  $6\text{m}/\text{min}$ . The machine is stationary, i. e. the article being heat-bonded is moving. The MSP-4 machine is designed for the semi-automatic heat-bonding of fluorplastic films and can be successfully used for the bonding of fabric film materials up to  $400\mu$  thickness. The machine is a stationary installation with two bonding heads ensuring a continuous bonding process of rectilinear T-shaped and lapped seams by bilateral heating of the material. Two ✓

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The MCI-1 (MSP-1), MCI-2 (MSP-2) and MCI-4 (MSP-4) Machines for the Heat-Bonding of Thermoplastic Films

endless steel strips of the upper and lower bonding heads, synchronized by drive rollers grip the film being bonded and guides it between two slide heaters. A load which can be displaced by a lever makes it possible to regulate the pressure of the heaters on the material being bonded. After the heaters the material passes between two coolers ensuring the cooling of the seams under pressure. Steady temperature conditions are ensured by the EPD-12 thermoregulator. The heating temperature amounts up to 500°C, the bonding seam is 5 mm wide. The bonding speed can be evenly regulated in the range of 0.08 - 0.0 m/min; network voltage is 220 v; voltage of the electric heaters is 36 v; weight of machine - 205 kg; overall dimensions (length x width x height) - 1,450 x 1,000 x 1,240 mm. There are 2 figures.

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84633

15.8310 2209 1428 1581

S/135/60/000/011/007/016  
A006/A001

AUTHORS: Matsyuk, L.N., Candidate of Technical Sciences, Reytlinger, S.A.,  
Candidate of Chemical Sciences, Kolobkov, Yu.M., Engineer

TITLE: Welding of Polyethylene Films With Gas Heat Carriers

PERIODICAL: Svarochnoye proizvodstvo, 1960, No. 11, pp. 26-29

TEXT: Welding of polyethylene films with gas heat carriers excludes the necessity of using supports, thus presenting a considerable advantage over the heat resistance welding method. Optimum welding conditions were determined on an experimental laboratory machine, either fixed or portable, by one-sided heating by gas carriers of the material to be welded. One or several ГСМ-53 (GSM-53) burner nozzles were used. The experimental machine was used to design a model for welding large-size work under the supervision of N.N. Safronov (Figure 2). The investigation showed that when welding polyethylene films by heated gas, the quality of the joints and the welding speed depended on the distance between the nozzle tip and the material to be welded, the consumption and temperature of gas and on the pressure of the arresting strips on the material. When welding 60-micron thick films using air and or nozzle with a 1.5 mm diameter outlet aperture,

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A006/A001

**Welding of Polyethylene Films With Gas Heat Carriers**

best results were obtained when the distance between the nozzle and the work piece surface was 5 mm, the air temperature 290-320°C; air consumption - 3.5 to 4.5 l/min; pressure of the arresting strips - 0.5 to 1 kg/cm<sup>2</sup>, and welding speed 0.5 to 1 m/min. The tearing strength of such joints was 85-95% of the base material strength and shear strength equalled that of the base material. The strength of overlap joints was also equal to that of the base material. Best strength properties were obtained using inert gases (nitrogen or argon) as heat carriers. The welding speed can be increased using three consecutively arranged nozzles and attains under the described conditions 3 m/min. It can be increased still more by using more nozzle. X

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Welding of Polyethylene Films With Gas Heat Carriers

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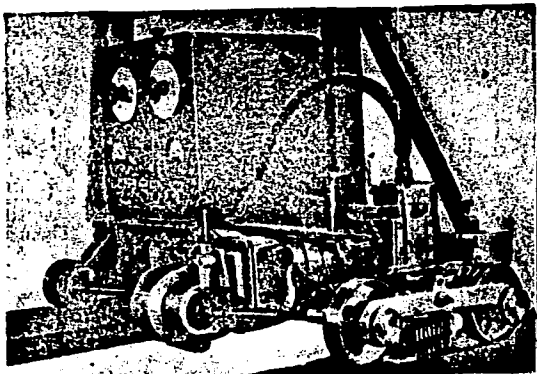


Figure 2. General view of a machine for welding large-size work by gas heat carriers.

There are 6 figures and 1 table.

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87649

158470 2109,2209

S/191/60/000/012/009/016  
B020/B066

AUTHORS: Matsyuk, L. N., Bogdashevskiy, A. V.

TITLE: Ultrasonic Welding of Polymeric Materials

PERIODICAL: Plasticheskiye massy, 1960, No. 12, pp. 30 - 37

TEXT: The authors have been concerned since 1959 with the determination of optimum conditions for ultrasonic welding of plastics. Experimental work was done on a device which consisted of an acoustic unit which was loosely fastened to a bracket, a pressure-generating mechanism, and a holder (Fig.1). Magnetostriction vibrators for a working frequency of 20 - 30 kcps were used as converters of electric vibrations to ultrasonic waves. The vibrators were fed by a УЗГ-10 (UZG-10) generator. Waveguide concentrators were used for the transmission of mechanical vibrations from the magnetostriction vibrator to the weld, which do not only transmit vibrations but also increase their amplitudes. To obtain spot welds, waveguide concentrators with an amplification coefficient of 7 were used (Fig.2). Rectangular, knife-shaped, half-wave concentrators with uni- or bilateral tapering were used for the production of continuous weld seams. X

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Ultrasonic Welding of Polymeric Materials

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The experiments were made according to two methods. In the first method (МВТУ-МЭИ (MVTU-MEI)), the welded material is compressed between the concentrator and the passive reflector. The acoustic unit or the passive reflector exerts the pressure upon the welded material (Fig.3,a). A material which extinguishes ultrasonic waves (rubber, wood) is used as passive reflector. In the second method (Fig.3,b), a tuned reflector was used. Such a reflector consisted of a steel rod fixed onto a rubber base. Its height was determined experimentally, and was about  $1/4$  of the length of the wave propagating in the steel. To investigate the thermal processes occurring during welding, the maximum temperatures and their increase in dependence on the properties of the welded material were studied for the following compounds: polymethyl methacrylate (Fig.4,a), polytetrafluoro ethylene, and polyethylene (Fig.4,b) under the action of ultrasonic vibrations, as well as for polytetrafluoro ethylene under the action of ultrasonic vibrations and bilateral impulse heating of the material (Fig.4,v). Fig.5 illustrates the dependence of temperature of the weld seam on the pressure applied. The temperature distribution over the thickness of the welded material (Vinoplast 5 + 5 mm) is graphed in Fig.6, the effect of the resonance shift of the system on the strength of the weld seams in

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Ultrasonic Welding of Polymeric Materials

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B020/B066

various ultrasonic welding methods in Fig.7. There are 10 figures and 12 references: 5 Soviet, 5 US, 1 Dutch, and 1 Japanese.

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S/191/62/000/005/007/012  
B110/B10115.8/66  
AUTHORS: Matsyuk, L. N., Kolobkov, Yu. M., Kotovshchikova, O. A.,  
Grishchevich, V. A.

TITLE: Welding of fluoroplast films

PERIODICAL: Plasticheskiye massy, no. 5, 1962, 23-29

TEXT: Welding investigations were carried out on 200-300  $\mu$  thick films of: (1) polytetrafluoro ethylene (ftoroplast-4), (2) polytrifluoro chloro ethylene (ftoroplast-3) and (3) various fluorine containing copolymers (ftorlon). The MCT-1 (MSP-1) and MCT-2 (MSP-2) machines with nichrome bands 0.1 mm thick and 2 mm wide were used. Amperage was 8-15 a, temperature of the heating element 150-400°C, pressure 0.15-2 kgf/cm<sup>2</sup> and the working length of the heating element 300 mm. The following data were determined: (1) shear, (2) tear at monoaxial load, (3) strength of the "T" welded joint, (4) specific strength  $\sigma$  and (5) relative elongation. A tensile-testing machine with thermostat was used for this purpose.

(1) Results of the investigation of welded, non-oriented 60,100 and 200  $\mu$  thick polytetrafluoro ethylene films (TJM 549-56 (TUM 549-56)): Heating

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Welding of fluoroplast films

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B110/B101

at 360-380°C for 3-4 min is required for the welding. 13.5 a are necessary for 200 μ and less for thinner films. Pressures are 0.2-0.5 kgf/cm<sup>2</sup>. When cooled quickly, the welding seam was more transparent than the basic material. This proves a high content of amorphous phase, since the links of the macromolecules cannot crystallize completely during quick cooling. It is characteristic for fluoroplast-4 films that the tear strength of the weld increases with an increase of the amorphous phase. 70-75% of the strength of the basic material was the best tearing strength for 200 μ, and slightly more for 100 and 60 μ. In the light of these results, a stationary welding installation with two superimposed welding heads was developed for the continuous welding of fluoroplast films. Two endless belts carry the material to the strip heaters 25 cm long and then to the cooling device. Cooling and heating was done under pressure. The maximum heater surface temperature was 500°C, welding seam 5 mm, rate 0.08-0.9 m/min. X

(2) Investigation of welded polytrifluoro chloro ethylene films showed low strength due to the high crystallization rate of the polymer.

(3) Investigation of welded 60-120 μ thick fluorlon films with high degree of crystallization and high density of the amorphous phase showed that, without layer, maximum strength was obtained at 260-300°C and

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Welding of fluoroplast films

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B110/B101

1.5-2.5 kgf/cm<sup>2</sup>. For 100-110 μ thick films at 160°C, a rate of 1-2 m/min was best. Here the tearing strength was 70-75%, and the shear strength ≥ 90% that of the basic material. Two-sided heating permits welding of 95-110 μ thick films without layer at 180-190°C at a rate of 1 m/min, at 250-260°C at a rate of 4-5 m/min. A tearing strength of 85% was obtained. Harder conditions are required for aged fluorion films. Strengthening of the welding seams, which occurs in the course of aging, is caused by increase of intermolecular interaction owing to decrease of solvent content. 10 days' action of concentrated HNO<sub>3</sub> at 50°C does not change the strength of the basic material and welding seam. Fluoroplasts may be welded although they do not change into the viscous state during heating up to decomposition temperature. Practically all other polymers are welded in the state of plastic deformation. In the viscous state, the mobility of the molecule chain sections increases, diffusion of entire macromolecules is possible and welding takes little time (polyethylene: 2-3 sec). In the highly elastic state, however, only the diffusion on individual molecule chain sections is possible, and this requires longer welding time. There are 11 figures and 5 tables. X

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ACCESSION NR: AP4018164

S/0191/64/000/003/0030/0035

AUTHORS: Matsyuk, L.N.; Bogdashevskiy, A.V.

TITLE: Welding polymeric films by infrared irradiation

SOURCE: Plasticheskiye massy\*, no.3, 1964, 30-35

TOPIC TAGS: polymeric film, welding, infrared irradiation welding, polyfluoroethylene resin, polyolefin, polyvinylchloride, polyethylene terephthalate, polyamide, welding machine, welded seam strength, welding support, infrared irradiation absorption

ABSTRACT: Welding of polyfluoroethylene resins, polyolefins, polyvinylchloride, polyethylene terephthalate, polyamides and pentaplast by infrared irradiation was investigated. Infrared irradiation welding is suitable for all polymeric films which turn into the viscofluid state on heating and which do not require high welding pressures. The support for the film has a significant influence on welding by infrared irradiation; the rate of heating, connecting layers of the materials and seam formation depend on it. The support should be a flexible material which absorbs infrared rays and has adhesion to the

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ACCESSION NR: AP4018164

melt, i.e., the melted polymer does not flow much. Carbon, white and black rubber, microporous rubber, offset linen (rubber), "Porolon", glass wool and glass cloth supports were examined, as were the temperature requirements for welding; each type of polymer. The rate of welding polymeric materials depends on the intensity and density of the irradiation energy, the extent of infrared irradiation absorption by the materials, its thickness, and the support used. The absence of direct contact between the molten polymer zone and the heat source leads to production of stronger welded joints than are obtainable with heated elements. With infrared irradiation welding it is possible to weld monolayer packets whose thickness is limited by the intensity of the radiation source. "Machine (for infrared irradiation welding of polyethylene film) was constructed by K.A. Lashkov." Orig. art. has: 12 figures and 2 tables.

ASSOCIATION: None                      DATE ACQ: 27Mar64                      ENCL: 00  
SUBMITTED: 00                      NR REF SOV: 000                      OTHER: 000  
SUB CODE: MA

Card 2/2

MATSYUK, L.N.; BOGDASHEVSKIY, A.V.; ZHAROVA, L.K.; KOLOKOV,  
Yu.M.; KOTOVSI-CHIKOVA, O.A.; VOLKOV, R.A., inzh.,  
retsenzent

Welding of polymer films] Svarka polimernykh plenok.  
Moskva, Mashinostroenie, 1965. 76 p. (MIRA 18:5)

**ACCESSION NR:** AP4041786

**S/0191/64/000/007/0055/0059**

**AUTHOR:** Bogdashevskiy, A. V., Matsyuk, L. N.

**TITLE:** Investigation of polymer films over wide ranges of temperature and velocity

**SOURCE:** Plasticheskiye massy\*, no. 7, 1964, 55-59

**TOPIC TAGS:** Polymer, polymer film, static tensile strength, RIP-10 tester, RIP-15 tester, polyethylene, low pressure polyethylene, high pressure polyethylene, tensile strength, uniaxial tensile load, biaxial tensile load, fluoroplast

**ABSTRACT:** The RIP-10 device, which gives accurate experimental data in the uniaxial static tensile testing of polymer films between -70 and +300C in air or in liquid media, and which is supplied with a special self-tightening clamp for gripping the samples during the test is described in detail (see Fig. 1 of the Enclosure). The RIP-15 device, used at higher rates of loading, is also described and illustrated (Fig. 2 of the Enclosure). On this machine, the loading velocity can vary between 100 mm/min. and 3 m/sec., with a limit of 15 kg. For testing polymer films biaxially over a wide temperature range, a third special device has been developed, which is also described and illustrated schematically (see Fig. 3 in the Enclosure). Stress-strain curves obtained with this device for low-pressure and high-pressure polyethylene films (SEP-10 and fluoroplast-4) tested

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**ACCESSION NR: AP4041786**

in two directions at rates of 0.12-90 cm/sec. are given. The RIP-10 tester makes it possible to accelerate testing considerably and obtain reproducible results at high loading rates where the yield point is increased and the character of destruction approaches that of brittle fatigue. This apparatus thus makes it possible to determine peculiarities of materials which could never be detected by other kinds of testing and which are very important for the determination of serviceability in constructions. An example is shown in Fig. 4 of the Enclosure. Orig. art. has: 7 illustrations and 3 graphs.

**ASSOCIATION: None**

**SUBMITTED: 00**

**ENCL: 04**

**SUB CODE: MT**

**NO REF SOV: 004**

**OTHER: 000**

3/0

Card

ACC NR: AP7001405

(A)

SOURCE CODE: UR/0413/66/000/021/0107/0108

INVENTOR: Lashkov, K. A.; Klimova, T. N.; Pomichev, V. A.; Matsyuk, L. N. Kolobkov, Yu. M.

ORG: none

TITLE: Device for heat-pulse welding of polymer films. Class 39, No. 187991

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 107-108

TOPIC TAGS: polymer film, polymer ~~film welding~~, *heat resistance,* heat pulse welding ~~device~~ *equipment*, ~~closed~~ ~~contour article~~, ~~curvilinear lap weld~~

ABSTRACT: An Author Certificate has been issued for a device for heat-pulse welding of polymer films. The device consists of two insulation blocks, heating elements

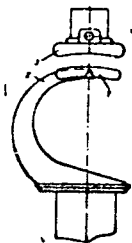


Fig. 1.

1 - Bottom block; 2 - S-shaped support; 3 - top block.

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UDC: 621.791.46.052.2.037

•ACC NR: AP70001405

in the form of metal strips with copper inserts, and a support. To obtain closed-contour articles with a curvilinear lap weld, the blocks have a surface curvature corresponding to that of the articles to be welded, and the bottom block is mounted on an s-shaped support. Orig. art. has: 1 figure. [B0]

SUB CODE: 11, 13/ SUBM DATE: 15Aug63/ ATD PRESS: 5109

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COUNTRY: USSR  
 CROP: CULTIVATED PLANTS. Grains. Leguminous Grains.  
 ARG. COLL: Tropical Cereals  
 REF. JOUR: BILOGIYA, NO. 4, 1959, 15619  
 AUTHOR: Matsyuk, I.S.  
 INST: Koshinev Agric. Inst.  
 TITLE: Effect of Presowing Seed Treatment on the  
 Crop Yield.

OPT. REF.: V. sb.: Kul'tura kukuruzy v USSR. M. "Sov.  
 nauka", 1957, 30-36

ABSTRACT: Findings of the Kislincevskaya Agricultural  
 Institute. Not only in the northern districts  
 of USSR but also in the conditions of Moldavia  
 air-heat varding is an important method of  
 raising the crop-yield both of dented and  
 siliceous sorts of corn. various sorts of corn  
 reacted differently to wetting of seeds with  
 dry off. In all concentrations studied, the  
 solutions of mineral salts and majority of  
 growth substances, apart from 2,4-D, did not  
 cause appreciable changes in the growth and  
 development of plants. The preparation 2,4-D,

WORDS: 1/2

ОУЛЕТЫ :

СЕРИЯ : АКТИВИРОВАННЫЕ РАСТЕНИЯ

АВТОР : И. П. ДУБОВИЧ, БИОЛОГИЯ, № 4, 1959.

№ 1, 1960

АВТОР :

НАУКА :

ТИТУЛ :

ОУЛЕТЫ :

especially in heightened concentrations, sharply depressed field germination; sprouted plants lagged in growth behind the control. With vernalization of seeds ( temperature 250) of siliceous and dented sorts, the crop yield of seed was lowered, the quantity, leaf weight, size of ears was reduced.

-- A.F. Khlyatova

СЛОВО:

2/2

COUNTRY : USSR  
CATEGORY : Cultivated Plants. General Problems. M  
AUTHOR : ~~Matynuk, L. S.~~  
TITLE : Contribution of the Scientists of Moldaviya to the  
Development of Agriculture.  
SOURCE : Agricultura shi viteritul Moldovey, 1957, No. 10, 11-14  
ABSTRACT : No abstract.

Card: 1/1

8

~~MATSYUR, I. S.~~

Development of biological and agricultural sciences in the Moldavian  
S.S.R. [with summary in English]: Izv. AN SSSR, Ser. biol. nauch. 4:471-478 J1-Ag  
'58. (MIRA 11:8)

1. Moldavskiy filial Akademii nauk SSSR.  
(MOLDAVIA--AGRICULTURAL RESEARCH)

KOVARSKIY, A.Ye., doktor sel'skokhozyaystvennykh nauk; MATSIUK, L.S., kand.  
sel'skokhozyaystvennykh nauk.

A good handbook on plant culture ("Plant culture" by P.I. Podgornyi.  
Reviewed by A.E. Kovarskii, L.S. Matsiuk). Zemledolie 6 no.7:93-94  
Jl '58. (MIRA 11:6)

(Field crops) (Podgornyi, P.I.)



MATSYUK L.S.

30-1-33/39

**AUTHOR:** Kosenko, I. Ye. , Candidate of Agricultural Sciences

**TITLE:** The Tasks of Biological Research in the Moldavian SSR  
(Zadachi biologicheskikh issledovaniy v Moldavskoy SSR)  
**Out-of-Town Session of** the Department of Biological Sciences (Vyvezdnaya sessiya otdeleniya biologicheskikh nauk)

**PERIODICAL:** Vestnik AN SSSR, 1958, Vol. 28, Nr 1, pp. 125 - 126 (USSR)

**ABSTRACT:** From September 16, to September 21, 1957 the congress took place in the branch of the AN in the Moldavian SSR, which was organized together with VASKhNIL. The congress was intended to discuss the results of biological research in this field and to give precise information concerning the tasks to be performed in future. It was attended by 400 representatives of the branch of the AN and other scientific factory institutions, as well as by representatives of the Moscow and Leningrad Institutes. The following reports were delivered:

- 1) L. S. Matsyuk: The principal results and problems in the development of the Biological Sciences in the Moldavian SSR.
- 2) A. Ye. Kovarskiy: Innovation in the selection and the hybridization of maize.

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The Tasks **OF** Biological Research in the Moldavian SSR.  
**Out-of-Town Session of** the Department of Biological Sciences

- 3) Ya. I. Prints: The present stage of the phyloxera problem, ways and problems of further research.
- 4) D. D. Verderovskiy: The immunity of plants against infectious diseases and ways of their practical utilization.
- 5) M. A. Dima: The soils of Moldavia and their main characteristic features.
- 6) N. A. Krasil'nikov: On the part played by microorganisms in plant nutrition.
- 7) P. A. Genkol: The importance of quiet in the life of plant organisms.
- 8) M. Kh. Chaylakhyan: The chemical stimulation of the growth and blossoming of plants.
- 9) M. I. Sidorov: On the problem of the agricultural system in Moldavia.

The following sections were active: agriculture, botanics, agrochemistry, microbiology of the soil; plant physiology, plant biochemistry, selection and genetics of plants; plant structure and agriculture; protection of plants, zoology, hydrobiology and ichthyology; physiology of plants. It was recommended to extend the treatment of methodical problems connected with the investigation of

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The Tasks of Biological Research in the Moldavian SSR.  
Out-of-Town Session of the Department of Biological Sciences

soils, and to take measures for the further development of work tending to explain the origin of the soils of Moldavia, to find new ways of increasing the yield of soils and to struggle against erosion, etc. Furthermore, the necessity of the research of the flora was stressed, as well as of work connected with introduction and acclimatization, on the investigation of spore plants and with experimental botanics. The following suggestions were further made: to map agrochemical charts of the soils of fields with successive crops and many years of planting; the investigation of the microorganisms of various types of soil, the supplying with organic and mineral fertilizers and microelements, the increase of theoretical investigations on plant physiology and biochemistry; the determination of measures for the struggle against diseases and plant vermins, the increased treatment of physiological problems in order to increase the productivity of agricultural animals, and, lastly, an increased introduction of scientific achievements in practice.

AVAILABLE: Library of Congress

Card 3/3

1. Biology research-USSR
2. Biology reports-USSR

GRIMAL'SKIY, V.L., prof.; CHETYRKIN, V.S., prof., red.toma; RUD', G.Ya.,  
kand.sel'skokhoz.nauk, red.; SUBEDTOVICH, A.S., kand.sel'skokhoz.  
nauk, red.; KOLESNIK, L.V., doktor sel'skokhoz.nauk, red.; SEME-  
NOV, A.N., doktor tekhn.nauk, red.; KOVARSKIY, A.Ye., doktor sel'-  
skokhoz.nauk, red.; FROLOV, N.P., doktor ekonom.nauk, red.; MATSYUK,  
L.S., kand.sel'skokhoz.nauk, red.; GUSAK, I.V., kand.tekhn.nauk,  
red.; URSUL, D.T., kand.filos.nauk, red.; LEGAS', I.Ye., kand.  
istor.nauk, red.; SHEVCHUK, I.F., kand.ekonom.nauk, red.; KACHANO-  
VA, N., red.; TIMOSHENKO, A.G., kand.sel'skokhoz.nauk, zamestitel'  
red.; SHPANER, V., tekhn.red.

[Bodies of water of the Reut Basin, their hydrobiological conditions  
and the outlook for their utilization in commercial fishing.]  
Vodoemy basseina reki Reuta, ikh gidrobiologicheskii rezhim i per-  
spektivny rybokhoziaistvennogo ispol'zovaniia. Kishinev, Izd-vo  
sel'skokhoz. lit-ry, 1962. 191 p. (Kishinev.Sel'skokhoziaistvennyi  
institut im. M.V.Frunze. Trudy, vol.29). (MIRA 17:2)

DMITRIYENKO, Yu.I., inzh.; IVASHIN, V.M., inzh.; KUZNETSOV, V.P., inzh.;  
MATSYUK, M.F., inzh.; YAKOVLEV, N.A., inzh.

The "Lugansk Hour" competition in the mines of Luganskugol' Combine.  
Ugol' Ukr. 6 no.5:23-26 My '62. (MIRA 15:11)  
(Donets Basin—Coal mines and mining)  
(Socialist competition)

DMITRIYENKO, Yu.I., inzh.; IVASHIN, V.M., inzh.; MATSYUK, M.F., inzh.;  
PANIN, G.G., inzh.; SMIRNOV, N.D., inzh.; YAKOVLEV, N.A., inzh.

Ways of increasing the labor productivity of miners at the  
mines of the "Luganskugol'" Combine. Shakht. stroi. 8 no.2:  
2-7 F '64. (MIRA 17:3)

1. Normativno-issledovatel'skaya stantsiya kombinata  
Luganskugol' (for all, except Yakovlev). 2. KommunarSKIY  
gorno-metallurgicheskiy institut (for Yakovlev).

MATSYUK, V.G., inzhener.

New technical specifications on tunnel work and rules on safety  
measures. Transp. stroi. 7 no.3:32 Mr '57. (MLRA 10:6)  
(Tunneling) (Industrial safety)

MATSYUK, V. G.

SERGEYEV, A.A., red.; ANPILOGOV, I.M., red.; ASSONOV, V.A., red.; BABAYANTS, N.A., red.; BABOKIN, I.A., red.; BALAMUTOV, A.D., red.; BOGORODSKIY, N.N., red.; BOLOHENKO, D.N., red.; BUCHNEV, V.K., red.; VAKHMINTSEV, G.S., red.; VORONKOV, A.K., red.; GARKALENKO, K.I., red.; GORBATOV, P.Ye., red.; GOLOVLEV, V.Ya., red.; DOKUCHAYEV, M.M., red.; DUBNOV, L.V., red.; YEVTEYEV, A.D., red.; YEREMENKO, Ye.K., red.; ZENIN, N.I., red.; KRIVONOGOV, K.K., red.; KUPALOV-YANOPOLK, I.K., red.; MATSYUK, V.G., red.; NIKOLAYEV, S.I., red.; ONISHCHUK, K.N., red.; PETROV, K.P., red.; PILYUGIN, B.A., red.; PLATONOVA, A.A., red.; POLBSIN, Ya.L., red.; POKROVSKIY, L.A., red.; POMESTUN, D.Ye., red.; POLYUSHKIN, A.Kh., red.; REYKHER, V.P., red.; SEDOV, N.A., red.; SIDORENKO, I.T., red.; FIDKELEV, A.A., red.; CHAKHMAKHCHEV, A.G., red.; CHEMODUROV, M.Ya., red.; SHUMAKOV, A.A., red.; YAREMENKO, N.Ye., red.; PARTSEVSKIY, V.N., red.izd-va; ATTOPOVICH, M.K., tekhn.red.

[Standard safety regulations for blasting operations] Edinye pravila bezopasnosti pri vzryvnykh rabotakh. Izd.2. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1958. 318 p. (MIRA 15:1)

1. Russia (1923- U.S.S.R.) Komitet po nadzoru za bezopasnym vedeniyem rabot v promyshlennosti i gornomu nadzoru. (Mining engineering--Safety measures)



14(2)

PHASE I BOOK EXPLOITATION

SOV/2700

Karasev, Nikolay Fedorovich, V.G. Matsyuk, V.I. Razmerov,  
P. A. Chasovitin, and N.Ye. Cherkasov

Novaya tekhnika v stroitel'stve tonneley metropolitenov SSSR (New Techniques  
in Subway Tunnel Construction in the USSR) Moscow, Transzheldorizdat, 1959.  
139 p. 5,000 copies printed.

General Ed.: P.A. Chasovitin, Candidate of Technical Sciences; Ed.:  
Ye.A. Velichkin, Engineer; Tech. Ed: P.A. Khitrov.

PURPOSE: The book is intended for subway construction workers.

COVERAGE: The authors discuss earth-moving equipment, mechanized tunnel shields,  
and loading and hauling equipment for tunnel constructions. Also discussed  
are tunnel constructions and methods of producing and assembling segments of  
tunnel lining made from reinforced-concrete blocks or tubing. Modern methods  
of constructing shafts, escalators, through and station tunnels, and means of  
mechanizing individual construction operations are presented.

Card 1/3

New Techniques in Subway Tunnel (Cont.)

80W/2700

The authors thank Academician A.I. Baryshnikov for suggestions. There are 25 references, all Soviet.

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Ch. II. Surface Equipment and Operations in Subway Tunnel Construction	11
Ch. III. Mechanized Tunneling Shields	21
Ch. IV. Loading and Underground Transport of Rock	59
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Card 2/3

Techniques in Subway Tunnel (Cont.)

SOV/2700

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AVAILABLE: Library of Congress (TF847.R9C45)	

Card 3/3

GO/gmp  
12-9-59

TUREVSKIY, A.A.; MATSYUK, Ya.R.

Alkaline phosphatase activity in epithelial cells of the  
forestomach of small ruminants. *TSitologia* 5 no.6:682-  
685 N-D '63. (MIRA 17:10)

1. Kafedra gistologii L'vovskogo sooveterinarnogo instituta.

SOV/124-58-8-9117 D

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 8, p 114 (USSR)

AUTHOR: Matsyulyavichus, D.A.

TITLE: ~~Stresses and Forces~~ Due to Transverse Impact (Napryazheniya i usiliya pri poperechnom udare)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Technical Sciences, presented to the in-t mashinoved. AN SSSR (Institute of Machine Construction, Academy of Sciences, USSR), Moscow, 1955

ASSOCIATION: In-t mashinoved. AN SSSR (Institute of Machine Construction, Academy of Sciences, USSR), Moscow

Card 1/1

MATSYULYAVICHYUS, D.A. [Maciulevicius, D.]

Vibration spectrum of a bar under the influence of transverse impulse of short duration. Liet ak darbai B no.3:201-213 '60. (EKAI 10:3)

1. Institut energetiki i elektrotehniki Akademii nauk Litovskoy SSR  
(Vibration) (Rods)

MATSYULYAVICHYUS, D.A. [Maciulevicius, D.]

Calculation of a transverse elastic stroke with the help of  
electronic-calculating machines. Liet ak darbai B no.3:215-228  
'60. (EBAI 10:3)  
(Electronic calculating machines)  
(Vibrations)

WATKINS, J. W. (author)

Simulation of an elastic body under impact conditions. Problems of impact with an elastic body using computer. AN Lit. Div. Ser. 61-1114-1-1. 1961. 18p.

1. Institut energetiki i elektromekhaniki S. S. S. S. R.



14-00000

ACCESSION NR: AR5016332

DR/0044/65/000/006/007/0027  
512.25/.264519.31330.35

SOURCE: Ref. zh. Matematika, Abs. 6V/78

AUTHOR: Matsevilyavichyus, D. A.

TITLE: Algorithms of linear programming for synthesis of rod statics of determinable constructions of minimal weight

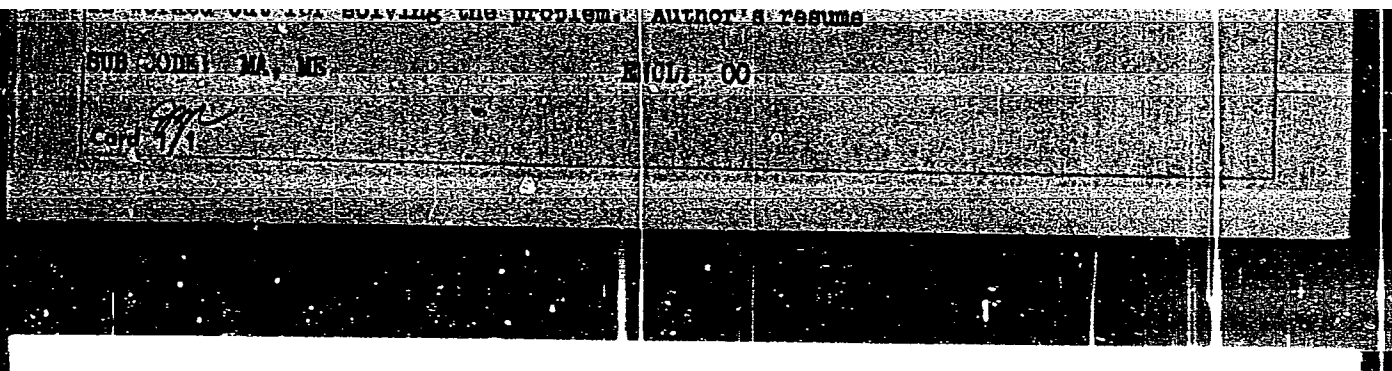
ORIG SOURCE: Sb. Stroitel'mehan. i konstruktivn. Yilinyus, 1964, 33-49

TOPIC TAGS: linear programming, statics

TRANSLATION: The problem of constructing a rod of minimal weight combining arbitrarily assigned node-points on a plane, in which constant exterior forces are

"APPROVED FOR RELEASE: 06/14/2000

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APPROVED FOR RELEASE: 06/14/2000

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MATSYULYAVICHUS, D.A. [Maciulevicius, D.] (Vil'nyus)

Synthesis of the configuration of statically determinable rod  
constructions with minimum weight. Izv. AN SSSR. Tekh. kib.  
no.1:114-117 Ja-F '65. (MIRA 18:4)

MATSYURA, P.Kh.

Design of a small single-phase transformer. Politekh.obuch.  
no.10:59-61 0 '58. (MIRA 11:11)

1. Novoroshdestvenskaya srednyaya shkola, g. Tikhoretok.  
(Electric transformers)

**ALEXANDROVSKIY, Vladimir Vladimirovich; MASYUNO, Aleksandr Fedorovich;**  
**GANOV, A.G., redaktor; VOLCHIK, K.M., tekhnicheskiy redaktor;**  
**UKHOV, K.S., professor, retsènsent**

[Collection of problems and exercises in navigation] Sbornik zadach  
i uprazhnenii po navigatsii. Leningrad, Gos. izd-vo vodnogo trans-  
porta, Leningradskoe otd-nie, 1954. 323 p. (MIRA 8:1)  
(Navigation--Problems, exercises, etc.)

MATSYUTO, Aleksandr Fedorovich; GAMOV, A.G., redaktor; PETERSON, M.M.,  
tehnicheskii redaktor

[Correction of navigational charts and manuals aboard ship]  
Korrektura navigatsionnykh kart i posobii na sudne. Lenin-  
grad, Izd-vo "Morskoi transport," 1955. 36 p., supplement.  
(Charts) (MLRA 9:2)

MATSYUTO, Aleksandr Fedorovich; GANOV, A.G., red.; SANDLER, N.V., red.  
isd-va; VOLCHOK, K.M., tekhn.red.

[Principles of handling seagoing ships] Osnovy morskogo sudovoshdeniia. Leningrad, Isd-vo "Rechnoi transport," 1958. 192 p.  
(Navigation) (MIRA 12:1)

SHCHETININA, A., dotsent; MATSUOTO, A.

Tide tables not corresponding to the needs of the fleet.  
Mor.flot. 20 no.8:15-16 'Ag '60. (MIRA 13:8)

1. Kafedra sudovozhdeniya Leningradskogo vysshego  
inshenernogo morskogo uchilishcha im. admirala Makarova  
(for Shchetinina). 2. Glavnyy shturman Baltiyskogo  
parakhodstva (for Matsuyuto).  
(Tides—Tables)



BYKOV, Vladimir Ivanovich, kand. tekhn. nauk; NIKITENKO, Yuriy Ivanovich, dotsent, kand. tekhn. nauk; MATSYUTO, A.F., retsenzent; SEMIKOV, I.T., red.; KHACHATUROV, V.V., red.; ~~LEVINOV, N.B.~~, tekhn. red.

[Phase radio navigation system, Decca-Navigator] Fazovaya radionavigatsionnaya sistema "Decca-Navigator." Moskva, Izd-vo "Morskoi transport," 1961. 150 p. (MIRA 14:8)

1. Glavnyy shturman Baltiyakogo gosudarstvennogo morskogo parokhodstva (for Matsyuto)

(Decca navigation)

ALEKSANDROVSKIY, V.V.; MATSYUTO, A.F.; GAMOV, A.G., kapitan dal'nego  
plavaniya, inzh.-dirograf, spets. red.; FRISHMAN, Z.S., red.  
izd-va; KOTLYAKOVA, O.I., tekhn. red.

[Collection of problems and exercises in navigation] Sbornik  
zadach i uprazhnenii po navigatsii. Izd.2., perer. Leningrad,  
Izd-vo "Morskoi transport," 1961. 318 p. (MIRA 15:3)  
(Navigation—Problems, exercises, etc.)

BRYZGIN, Nikolay Yakovlevich, kapitan dal'nego plavaniya: MATSYUTO,  
Aleksandr Fedorovich, kapitan dal'nego plavaniya;  
FAKTOROVICH, Veniamin Isayevich, kapitan dal'nego plavaniya;  
MATYUSHINA, S.P., red; KLAPTSOVA, T.F., tekhn. red.

[Use of radar for the prevention of ship collisions] Ispol'zovanie  
radiolokatora dlia preduprezhdenia stolknovenii sudov. Moskva,  
Izd-vo "Morskoi transport," 1962. 101 p. (MIRA 15:5)  
(Collisions at sea--Prevention) (Radar in navigation)

D'YAKONOV, Vasilii Fomich; MATSYUTO, A.F., kapitan dal'nego plavaniya, red.

[Nautical astronomy] Morekhnodnaia astronomia. Izd.2., perer. i dop. Leningrad, Izd-vo "Morskoi transport," 1963.  
587 p. (MIRA 17:4)

TSAREVA, V.Ya.; MATT, T.S.D.; BAYGULOVA, S.A.

Control of helminthiasis in Kazan (1951-1959). Kaz. med. zhur.  
no.1:89-92 Ja-F '62. (MIRA 15:3)

1. Kafedra infektsionnykh bolezney (zav. - dotsent N.P. Vasil'yeva) Kazanskogo gosudarstvennogo instituta dlya usovershenstvovaniya vrachey imeni Lenina i parazitologicheskii otdel gorodskoy sanitarno-epidemiologicheskoy stantsii (glavnyy vrach - A.I. Krepyshva).  
(~~KAZAN~~-WORMS, INTESTINAL AND PARASITIC)

TSAREVA, V. Ya., dotsent (Kazan'); MATT, TS.D. (Kazan')

Conference of the All-Union Society of Helminthologists. Kaz.  
med. zhur. 4:92-93 JI-Ag'63 (MIRA 17:2)

YEVDOKIMOV, V.G.; ROZENBERG, L.I.; SKIRKO, S.F.; MATTER, I.M.,  
dots., red.

[Physics textbook; collection of problems with solutions]  
Uchebnoe posobie po fizike; sbornik zadach s reshaniemami.  
Leningrad, Leningr. elektrotekhn. in-t svyazi. 1964. 173 p.  
(MIRA 18:7)

MATTERN, J. ; PASEK, A.

Machinery Repair Shops, national enterprise. p. 79.

Vol. 3, no. 3, Mar. 1954 (Mechanisare)  
INZENYRSKE STAVBY  
Praha, Czechoslovakia

SO: Eastern European accession Vol. 5 No. 4 April 1956



MATPERN, V., master respunkta (g.Kansk, Krasnoyarskiy kray).

Prolongation of the service of portable loudspeakers. Kinomekhanik no.5:  
35-37 Jo '53.

(MLRA 6:8)

(Loud speaker:)

**MATTEUS, V., master respunkta (g. Kanak, Krasnoyarskiy kray)**

**Regulation of the sound-head lens in projectors should be carried  
out only at the factory. Kinomekhanik no.12:31 D '53. (MIRA 6:12)  
(Motion-picture projectors)**

MATTES, E.

Assistance given by machine-tractor stations to newly founded collective farms.

p. 413 (Mechanisace Zemedelstvi) Vol. 7, no 10, Sept. 1957 Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, no. 1, Jan. 1958

MATTES, H.

Development and organization of electric industries in Great Britain.

p. 79. ELEKTROPRIVREDA. (Savet za energetiku i ekstraktivnu industriju)

Beograd. Vol. 9, no. 2, Feb. 1956.

So. East European Accessions List Vol. 5, No. 9 September, 1956

MATTES, H.

Nikola Tesla, inventor of the rotating magnetic field and polyphase system. p. 974. TEHNIKA (Savaz inzenjera i tehnicara Jugoslacije) Beograd. Vol. 11, no. 5, 1956

SOURCE: East Europe Accessions Lists (EEAL),  
Library of Congress, Vol, 5, no. 11, Nov. 1956

MATTES, H.

A report on the work of the Third Conference of the Yugoslav National Committee,  
International Conference on Large Electric Systems. p. 432.  
(Tehnika, Vol. 12, no. 3, 1957, Yugoslavia)

SO: Monthly List of East European Accessions (EEAL) L5, Vol. 6, no. 7, July 1957, Uncl.

MATTES, Herman, ing.

Foreword to the first issue of "Elektrotehnika." Elektrotehnika  
Hrv 1 no.1-2:3 '58.

1. Predsjednik Elektrotehnickog drustva Hrvatske; direktor  
Instituta za elektroprivredu; clan Redakcionog odbora,  
"Elektrotehnika"

MATTAS, H.V., doktor tekhn.nauk

Ship vibration in areas where machinery is located. Trudy  
FTO sud.prom. 7 no.2:261-282 '57. (MIRA 12:1)  
(Ships--Vibration)



AI'AMOV, V.V., kand.tekhn.nauk; AGEYEV, D.V., doktor tekhn.nauk, prof.;  
BAMDAS, A.M., doktor tekhn.nauk, prof.; VERKHOVSKIY, A.V., doktor  
tekhn.nauk, prof.; GOLINKEVICH, N.A., kand.tekhn.nauk, dots.;  
DERTEV, N.K., doktor tekhn.nauk, prof.; MATIS, N.V., doktor tekhn.  
nauk, prof.; RYZHIKOV, A.A., doktor tekhn.nauk, prof.; PASYNKOV,  
O.N., otv.sa vypusk

[New method for calculating thermal stresses] Novyi raschetnyi  
metod vychislenia termicheskikh napriasheni. Gor'ki, 1958.  
57 p. (Gorkiy.Politekhicheskii institut. Trudy, vol.14, no.3)

(MIRA 13:7)

(Thermal stresses)

DAVYDOV, Vadim Vasil'yevich, prof.; ~~MATTES, Nataliya Viktorovna~~, prof.;  
SIVERTSEV, Ivan Nikolayevich, prof.; PERLEE, A.A., inzh., red.;  
VITASHKINA, S.A., red. izd-vo.; GORCHAKOV, G.H., tekhn.red.

[Study manual on the resistance of ships in inland navigation]  
Uchebnyi spravochnik po prochnosti sudov vnutrennego plavaniia.  
Izd. 2., perer. i dop. Moskva, Izd-vo "Rechnoi transport," 1958. 754 p.  
(MIRA 11:12)

(Ship resistance)

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

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

(MIRA 12:2)

(Shimanski, Iulian Aleksandrovich, 1883-)

DAVIDOV, Vedia Vasil'yevich, prof., doktor tekhn.nauk; MATTES, Natal'ya Viktorovna, prof., doktor tekhn.nauk; CHUVIKOVSKIY, V.S., kand. tekhn.nauk, retsentsent; BOVITSKIY, D.I., dotsent, red.; VITASHKINA, S.A., red.isd-va; YERMAKOVA, T.T., tekhn.red.

[Structural mechanics of a ship. Dynamic stress calculations]  
Stroitel'naya mekhanika korablia. Dinamicheskie raschety.  
Moskva, Izd-vo "Rechnoi transport," 1959. 378 p. (MIRA 13:2)  
(Marine engineering) (Ships--Hydrodynamics)

MATTES, N.V., doktor tekhn.nauk, prof.

Determining stresses in ship hulls under the impact of waves.

Trudy GPI 15 no.1:53-65 '61 [i.e. '59]. (MIRA 15:11)

(Ships—Hydrodynamic impact) (Strains and stresses)

YAKOVLEV, M.S., inzh., starshiy prepodavatel'; MATES, N.V., doktor  
tekhn.nauk, prof. otv.red.; KOZYULINA, R.M., red.

[Methods for determining the ability of river vessels to pass  
through ice] Metodika opredelenia ledoprechodimosti rechnykh sudov.  
Gor'kii, 1961. 23 p. (Gorkiy. Politekhnikheskii institut. Trudy,  
vol. 17, no.1). (MIRA 16:3)

1. Gor'kovskiy politekhnikheskiy institut imeni A.A.Zhdanova,  
kafedra sudostroyeniya (for Yakovlev).  
(Inland navigation) (Ice-breaking vessels)

SEGAL', Valentin Frantsevich; MATTES, N.V., prof., doktor tekhn. nauk, retsenzent; KURDYUMOV, A.A., prof., doktor tekhn. nauk, retsenzen; MAKSIMAD-ZHI, A.I., nauchnyy red.; SOSIPATROV, O.A., red.; TSAL, R.K., tekhn. red.

[Diploma project on the course in the structural engineering of ships]  
Kursovoe proektirovanie po stroitel'noi mekhanike korablia. Leningrad,  
Gos. soiuznoe izd-vo sudostroit. promyshl., 1961. 131 p. (MIRA 14:8)  
(Naval architecture)

DAVYDOV, Vadim Vasil'yevich; MATTES, Natal'ya Viktorovna;  
KURDYUMOV, A.A., doktor tekhn. nauk, retsenzent;  
CHUVIKOVSKIY, V.S., doktor tekhn. nauk, retsenzent;  
TRYANIN, I.I., kand. tekhn. nauk, dots., red.;  
VITASHKINA, S.A., red.

[Dynamic strength calculations of ship structures] Dina-  
micheskie raschety prochnosti sudovykh konstruksii.  
Izd.2., perer. i dop. Moskva, Transport, 1965. 316 p.  
(MIRA 18:5)



ACC. NR. AM5019634

Monograph

UR/

Davydov, Vadim Vasil'yevich; Mattes, Natal'ya Viktorovna

Dynamic calculations of the strength<sup>76</sup> of ship structures (Dinamicheskiye raschety prochnosti sudovykh konstruktsey) 2d ed., rev. and enl. Moscow, Izd-vo "Transport," 1965. 316 p. illus., biblio. Errata slip inserted. 4000 copies printed.

TOPIC TAGS: shipbuilding engineering, vibration, calculation

PURPOSE AND COVERAGE: This is a textbook for advanced students studying ship-building and for ship-building engineers. It deals with calculations of the vibrations and dynamic strength of ship structures, mainly of vessels for inland waterways. Dynamic calculations of hydrofoil vessels are also included. The general theory of small vibrations of systems with one, several, and an infinitely large number of degrees of freedom, practical methods for calculating the vibration of ship structures, causes of vibrations and remedial measures, and permissible vibration rates are presented.

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Systems with several degrees of freedom -- 57

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Local vibrations (oscillations of hull structures) -- 149

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UDC: 629.128:(075.0)

ACC NR: AM5019634

Combined <sup>26</sup>vibration of the ship -- 200

Generating vibration forces -- 239

Prevention and <sup>26</sup>reduction of vibration -- 256

Strength under wave impact -- 287

SUB CODE: 13/ SUBM DATE: 27Mar65/ ORIG REF: 018

Card 2/2

L 39581-66 GD

ACC NR: AP6000906

(A)

SOURCE CODE: GE/0040/55/000/010/0297/0301

AUTHOR: Matthee, A. (Graduate engineer)

ORG:none

TITLE: Packaging of fine bake products and confectioner's ware in individual portions for retail sale

SOURCE: Backer und Konditor, no. 10, 1965, 297-301

TOPIC TAGS: food technology, packaging technique

ABSTRACT: The article discusses the various methods and procedures and the materials used (tin foil, plastic sheets and paper, parchment, etc) in packaging fine bake products and confectioner's ware in individual portions for retail sale. Packaging in large quantities for shipment is not discussed. The concepts at the basis of the packaging techniques described here were worked out, developed and standardized under the direction of the Institute for Packaging and Paper Products manufacture, Dresden (Institut fur Verpackung und Papierverarbeitung) which in part have previously been published and declared as obligatory standards. Orig. art. has: 26 figures.

SUB CODE: 06

SUBM DATE: 00

ORIG REF: 013

OTH REF: 001

Cord 1/1 11b

KERSTAN, Johannes (Jena, G.D.R.); MATTHES, Klaus (Jena, G.D.R.)

Generalization of a theorem of S Iwnjak. Rev math Roum 9 no.9:  
811-829 '64.

AUTHOR: Mattias, B. T. 29-4-5/20  
TITLE: Superconductivity (Sverkhprovodimost')  
PERIODICAL: Tekhnika Molodezhi, 1958, Nr 4, pp. 7-8, 39 (USSR)  
ABSTRACT: This is an abbreviated translation from English of an article published in "Scientific American", 1957, number 11, pp. none given.  
AVAILABLE: Library of Congress  
1. Superconductivity 2. Periodicals-Scientific American

Card 1/1

SOV/136-58-8-3/27

**AUTHOR:** Mattila, P.

**TITLE:** Self-Grinding of Ore at the Dressing Plant of the "Vikhanti" Mine (Samoizmel'cheniye rudy na obogatitel'noy fabrike rudnika "Vikhanti").

**PERIODICAL:** Tsvetnye Metally, 1958, Nr.8, pp.10-14 (USSR)

**ABSTRACT:** Following an investigation by L. Kosmaa at the laboratory of the "Outokumpu" company on the abrasive properties of various ores from the "Vikhanti" mine, and measurements of time required for self-grinding (Table 1), provision was made for the adoption of this method in the designs of the dressing plant at that mine. In 1956 one of the ball-mills was converted to self-grinding, the results agreeing with those of the laboratory investigations. At the suggestion of engineer Tanner the productivity-loss of the mill through the adoption of self-grinding was compensated for by increasing the diameter of its cylindrical part from 2200 to 2750 mm and the length from 2200 to 3200 mm (Fig.). The change-over was effected in the summer of 1957, and the author

Card 1/2

SOV/136-58-8-3/27

Self-Grinding of Ore at the Dressing Plant of the "Vikhanti" Mine.

gives details and comparative performance data (Tables 3 and 4) for the old and new practice. The results have been entirely satisfactory, but further work with better sizing and to find the optimal speed of rotation is to be carried out. There is 1 figure and 4 tables.

ASSOCIATION: Rudnik "Vikhanti", Finlyandiya ("Vikhanti" Mine, Finland).

1. Ores--Processing
2. Ores--Properties
3. Machines--Performance
4. Abrasion

Card 2/2

MATTING, A., prof., ing. habil.

The stress of glued metal connections. Gop 16 no.1:31-37 Ja '62.



RODIONOV, G.V.; VLADIMOROV, V.M.; CHAYNOVSKIY, E.G.; MATTIS, A.R.

Principle layouts and basic elements of earthmoving machines, using  
the effect of soil caving. Trudy Inst. gor. dela Sib. otd. AN SSSR  
no.7:14-24 '62. (MIRA 16:9)

MATTIS, A.R.

Taking the parameters of the working face into account in designing a rotary working part, using the soil caving method. Trudy Inst. gor. dela Sib. otd. AN SSSR no.7:25-42 '62.

Experimental studies of a single-rotor working part of a caving excavator. 43-48 (MIRA 16:9)

VASHUKOV, I.A.; PESOCHINA, L.T.; MAYKOV, O.A.; ~~MATTIS~~, G.P.

Effect of antimony on the structure and properties of gray  
cast iron. Lit. proizv. no.1:19-22 Ja '63. (MIRA 16:3)  
(Cast iron—Metallography)  
(Antimony)

ISHIN, D.P.; MATTIS, G.Ya.; ZHELTIKOVA, T.A.; PAVLENKO, F.A.;  
KRYLOVA, V.I., red.; OKOLELOVA, Z.P., tekhn.red.

[Growing planting stock for shelterbelt afforestation]  
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(CATALASE,

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B104/B102

AUTHORS: Matkhiz, Z., Neudachin, V. G., and Smirnov, Yu. F.TITLE: The lower levels of  $O^{17}$  and  $F^{17}$  in the  $\alpha$ -nuclear model

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 8, 1962, 1060 - 1069

TEXT: The  $O^{17}$  nucleus is considered to be a tetrahedron having  $\alpha$ -particles in its four corners there and with the last neutron moving in its field.

The Hamiltonian of this system has the form  $H = H_{rot} + H_{vibr} + H_p + H_{v-p}$ ,

where  $H_{rot} = \frac{\hbar^2}{2Y} (\vec{J} - \vec{j} - \vec{L})^2$  is the rotation energy of the nucleus,  $J$  the total angular momentum in the given state,  $j$  the angular momentum of the neutron,  $\vec{L}$  the mean angular momentum of the  $F_2$  vibrations of the  $\alpha$ -particles of the core;  $H_{vibr}$  is the vibration energy of the core,  $H_p$  the single-particle Hamiltonian.

$$H_{v-p} = V_0 \delta(r - R_0) \sum Q_{\beta\alpha} Y_{\beta\alpha}^{l-2}(\theta, \varphi).$$

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(A) gives the

The lower levels of  $O^{17}$  and ...

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binding energy between nucleons and vibrating core. A nuclear level diagram (Fig.) is plotted, and the level shifts due to core vibrations are examined. The quadrupole moment of the  $O^{17}$  ground state with a coupling constant  $\delta = 0.7$  is determined to be  $-0.027$  barn. The lifetime of the first excited state ( $1/2^+$ ) is  $1.6 \cdot 10^{-10}$  sec. These data agree well with experimental results (Ref. 9, F. Ajzenberg-Selove, T. Lauritsen, Nucl. Phys., 11, 1 (1959); R. A. Kamper et al., Proc. Phys. Soc. A, 70, 897 (1957)). The nucleon is weakly coupled with the core. There are 1 figure and 1 table.

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