



POLISH TECHNICAL REVIEW



ZAKŁADY
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ELECTRONIC
WORKS

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● computer systems ● microcomputers ● software ● calculators ● automation systems and equipment ● measuring equipment for natural environment preservation



CONTENTS

ELECTRONICS	Page
Temperature-compensated reference diodes . . .	2
A multifunctional glow discharge lamp	3
CONTROL AND MEASURING EQUIPMENT	
An eddy-current flaw detector	5
Equipment for measuring the rate of corrosion. .	7
A light pipe-based measuring set	7
A strain gauge-type membrane pressure transducer (patent)	8
A dynamic torque measuring instrument	9
MATERIAL ENGINEERING	
Viscoelastic POLASTOSIL ABM silicone plastics	11
TKP CONSULTANTS LTD.	11
POLCOR process - an air-hardened sandmix . .	12
BUILDING INDUSTRY	
Foundations of buildings to be erected on non-cohesive subsoil	14
A method of constructing large size water channels in concrete.	16
METAL MACHINING	
Flow turning and spinning	18
Hot-dip aluminizing in POZEN-type furnaces by the ALUZAN method	20
ENVIRONMENTAL PROTECTION	
Reclamation of mineral soils	22
A biological-type floating waste treatment plant. .	23
MEDICAL EQUIPMENT	
An electrophonocardiograph	24
PATENTS	25
ECONOMIC SURVEY	11, 15, 21
BRIEF NEWS	10, 26-28, VIII
BOOKS	17
PRESS SERVICE	I-VII

A multifunctional glow discharge lamp

The main advantages of the glow discharge lamp developed at the Institute of Nuclear Chemistry and Technology, Warsaw is its increased versatility which makes it possible to use various cathode/anode systems and different glow discharge excitation techniques i.e. with the use of cold flat cathodes, cold recessed cathodes, hot recessed cathodes and hot or cold recessed microcathodes. The lamp can be connected with various types of spectrographs, spectrometers and monochromators. The article reviews various applications of this glow discharge lamp, especially for the direct analysis of high purity materials. For details see p. 3.

An eddy-current flaw detector

The principle of operation of the flaw detector built at the Institute of Electrical Engineering, Warsaw consists in the utilization of the eddy-current phenomenon. This flaw detector is designed for detecting and measuring cracks, structural changes, type of material and the nature of heat treatment applied. In addition to a technical description the article brings many examples of applications. See p. 5.

Viscoelastic POLASTOSIL ABM silicone plastics

This plastic material has an ability to elastically absorb energy similarly to a spring or rubber. It also flows under load (like a highly viscous liquid) and is capable of dissipating the energy absorbed (evolution of heat). This makes possible the application of the POLASTOSIL ABM silicone plastics instead of metal springs (1 kg of POLASTOSIL ABM can replace up to 200 kg of metal springs) while playing additionally the role of a hydraulic damper. Details on p. 11.

POLCOR process - an air-hardened sandmix

The POLCOR process used in the foundry practice entails appropriate sandmixes for core moulding and the necessary equipment. Advantages of the POLCOR sandmix comprise the ease of making the sandmix, the possibility of utilizing any type of material as matrix, the long-lasting availability of the sandmix for moulding, the short hardening times of POLCOR-based products, the high strength of the hardened sandmix, very good knock-out properties, low toxicity factor and low price. See article on p. 12.

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