



POLISH TECHNICAL REVIEW



20 Years of CeMat'70

Electronic Materials Research and Production Centre
Producer of Advanced Electronic Materials





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SIGMA

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CONTENTS

CeMat '70

CeMat '70 — an advanced materials and technology centre 2

THE CeMat '70 CENTRE TODAY

Monocrystals and Silicon Wafers Production Department 7

Metals for Electronics and Electrical Engineering Production Department 9

High-alumina Ceramics Production Department 10

Ceramic-metal Junctions and Ceramic-metal Encapsulations for Power Diodes and Thyristors Production Department 11

Electronic Conductive Pastes Production Department 12

Glass Substrates and Chromium Masks Production Department 13

Surface Acoustic Wave-based Filters Production Department 14

Synthetic Quartz Production Department 14

BRANCHES OF CeMat '70

The Electronic Materials Production Plant at Skawina 15

The Electronic Materials Production Plant at Osieczany 15

The Production Equipment Manufacturing Plant at Zielona Góra 16

PAPERS ON SCIENCE AND TECHNOLOGY

Advanced glass optical fibers 18

Semiconducting ceramics: grain boundary effects 22

Selection of composite contact material for switch operating conditions 28

Development of silicon technology in Poland and in the world 30

From the editor

The present issue of PTR is entirely devoted to one enterprise — the Electronic Materials Research and Production Centre CeMat '70. This enterprise is a multi-plant integrated centre of science and industry specialized in the production of various materials and products mainly for the electronic and electroengineering industries.

In his editorial, the Director of CeMat '70, Professor Andrzej Szymański, D.Sc. (Eng.) is presenting the origins, present state and the development policy of his enterprise. The article on p. 2 presents the various production departments of CeMat '70 together with its three branch plants localized outside Warsaw. Each manufacturing department has its own technology and technical and organizational problems. All the departments are equipped with up-to-date production installations as well as control and measuring equipment. Part of CeMat '70 achievements is discussed in four articles on scientific and technical subjects.

In the line of waveguides, work is now being conducted on a new generation of waveguides for medical and industrial applications, e.g. endoscopes with ultra-thin diameters, optical fibers with an increased mechanical strength and elasticity. For details see p. 18

The article on p. 22 is devoted to semiconducting ceramics whose resistance is voltage dependent and which are used for the manufacture of metal oxide varistors (MOV) and also materials whose resistance is temperature dependent, i.e. the PTCR thermistors.

Contact tips used in switchgear are made of a special material guaranteeing a long service life. The two-phase W-Ag composite material made by CeMat '70 meets these requirements. See p. 28

Silicon is the dominant material in semiconductor technology. Quantitative consumption of silicon has been taken as an indicator of semiconductor technology development. CeMat '70 has considerable achievements in the development of the silicon manufacturing technology. For details see article on p. 30

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