

## CONTENTS

<i>Preface</i> .....	7
<i>Welcoming Address</i> .....	9
<i>K. Grjotheim</i> — A Review of Some Scientific and Technological Problems in the Electrolytic Production of Aluminium .....	13
<i>G. Callaioli</i> — The Anode in Aluminium Electrolysis. Technology and Development of Prebaked and Selfbaking Anodes .....	31
<i>R. Piontelli</i> — Considerations on the Anodic Phenomena in the Aluminium Cells .....	53
<i>J. Thonstad</i> — Reaction Mechanism and Wear of Anodes in Aluminium Electrolysis .....	75
<i>E. Barrillon</i> — Mechanism of Carbon Dust Formation in Aluminium Production Pots ...	87
<i>R. Bacchiega, S. Bianchi</i> — The Anode Carbon Consumption in Aluminium Electrolysis — Søderberg and Prebaked Anode Cells .....	95
<i>I. P. Gupalo, A. M. Tsiplakov, V. A. Drukaryev</i> — Control of Air Pollution and Improving of Working Conditions in Cell-Rooms .....	105
<i>A. A. Dimitriyev, N. A. Kaluzhsky, A. M. Tsiplakov</i> — Technological and Energy Characteristics of Anodes for Big Vertical Stud Reduction Cells .....	113
<i>I. Molnár</i> — Some Considerations about Heat-Losses of Søderberg Anodes with Vertical Studs .....	121
<i>N. A. Kaluzhsky, A. S. Derkach, A. I. Kulakov</i> — The Study on Energetic Peculiarities of Aluminium Reduction Cells of Different Types for 100—200 kA .....	139
<i>G. de Varda</i> — Report on Recent Developments in the Field of Multicell Furnaces for Aluminium .....	145
<i>T. Watanabe</i> — Some Factors Affecting Vertical-Spike Anode Performance .....	155
<i>R. Bacchiega, G. Paziienza, I. Sief</i> — Energy Balance and Thermal Losses in Aluminium Electrolysis — Comparison between Søderberg and Prebaked Anode Furnaces .....	171
<i>S. Wilkening</i> — Some Aspects of the Manufacture and Application of Big Anode Blocks for Aluminium Electrolysis .....	183
<i>P. H. Pinchbeck, P. R. Joy, C. R. Mason, O. Bowitz</i> — The Production and Future Availability of Binder Pitches for the Aluminium, Graphite and Carbon Industries .....	197
<i>E. A. Hollingshead, P. Rhedey</i> — Laboratory Evaluation of Binders for Carbon Anodes	223
<i>E. Balázs</i> — Characterization of Industrial Self-Baking Anodes by Laboratory Measurements .....	241
<i>F. Mosćci</i> — The Properties of the Coke Formed from the Pitch Binder of the Self-Baking Anode Compound .....	243
<i>I. Letizia</i> — The Influence of Raw Materials on Prebaked Anode Properties .....	245
<i>J. Dussardier</i> — Automation in Anodic Carbon Production .....	259
<i>Appendix</i> — “Guido Donegani” Gold Medal for Light Metallurgy-1971 .....	279