

Content

Foreword	7
General Reports	9
Current Developments and Outlook in Energy Markets <i>Cecilia Tam, Co-Autor Laura Cozzi</i>	10
Developments in the Global Cement Market <i>Joachim Harder</i>	12
Modern Cement: Requirements as seen from the Construction Industry <i>Andreas Schaab</i>	20
Technology Developments in the Cement Industry <i>Martin Schneider</i>	28
Theme Session: Future Challenges and Visions of Cement Process Technology	35
How will the Industry move ahead in Cooperation with the Equipment Suppliers? <i>Sten Stoltze, Co-Autor Kevin Happ</i>	36
Customer Focused Clean Technology <i>Jouni Salo, Co-Author Heiko Schürmann</i>	42
A Chinese Solution to Change Investment Return Model <i>Wang Wei</i>	50
ThyssenKrupp Resource Technologies: A New Company Rich in Tradition <i>Frank Ruoss</i>	56
Theme Session: Environmental Technology	63
High Efficiency SNCR for Non-Calcliner Kilns: Potentials and Limits <i>Rüdiger Matheis, Co-Authors Bernward Goedecke, Dietrich Locher, Markus Pohl</i>	64
High-Dust SCR Technology: Operational Experience with Catalytic NO _x Abatement <i>Detlef Edelkott</i>	69
Semi-Dust SCR: Lafarge Plant Mannersdorf (Austria) <i>Bernhard Köck</i>	74
Tail-End SCR Technology for the Mitigation of NO _x and NH ₃ : Operational Experience at Rohrdorfer Zement <i>Helmut Leibinger</i>	78
The New Regenerative Thermal Oxidation (RTO) with Integrated NO _x Reduction at the Cement Plant Wopfing, Austria <i>Gerhard Philipp</i>	84
Mercury Emissions and Abatement Measures <i>Daniel Crowley</i>	90
Theme Session: Sustainability, Use of Energy and Resources	95
Protection of Biodiversity in Quarries: A Contribution to the Long-Term Sustainability of Natural Resources <i>Michael Rademacher</i>	96
Experiences with Waste Heat at Plant Untervaz <i>Fabio Wider</i>	102
Waste Heat Recovery and Power Generation in Cement Clinker Production: An Energetic Comparison <i>Andreas Werner, Co-Author Helmut Leibinger</i>	108
Energy Efficiency of Cement Production: Levers, Potentials and Limitations <i>Gernot Kirchner, Co-Author Volker Hoenig</i>	112
Motivating, Efficient and Flexible: VDZ's Enhanced Cement Training <i>Stefan Schäfer, Co-Autor Ludger Thomas</i>	118
Mill Audits: Tools to Increase Grinding Efficiency <i>Philipp Fleiger</i>	124

Theme Session: Grinding Technology	131
OK Mill: The Optimized and Versatile Grinder <i>Jesper Havn Eriksen, Co-Autor Luis Petersen</i>	132
Operational Experience from India's First MVR Vertical Roller Mill for Cement Grinding <i>Robert Schnatz, Co-Authors Caroline Woywadt, V.K. Jain</i>	138
VRM Grinding Technology: A Comprehensive Approach <i>Daniel Strohmeyer</i>	144
QUADROPOL RD: The World's First Vertical Roller Mill with Driven Rollers <i>Thomas Schmitz</i>	150
Production of Slag-Containing Cements by Separate Grinding of the Components Portland-Cement and GGBF Slag and Subsequent Mixing <i>Anton Kollmann</i>	154
HFCG Roller Press Grinding Systems and their Applications <i>Bao Wei, Co-Autors Gao Lin, Ding Hao</i>	162
Theme Session: Burning Technology	169
From Municipal Solid Waste (MSW) to Energy <i>Sandro Buzzi</i>	170
Improved RDF Quality and Combustion due to the Drum Drier, Chelm, Poland <i>Jaroslav Sawecki</i>	176
New 3000 tpd Line in Rezzato, Italy: Innovation for Sustainable Production <i>Giovanni Cinti, Co-Autor Joys Riva</i>	178
How to Protect the Kiln Shell against Corrosion <i>Marcel Bieri</i>	185
Low Temperature Corrosion in Cement Plants <i>Christian Suchak, Co-Author Volker Hoenig</i>	188
Theme Session: Cement and Concrete	193
Low Clinker Ternary Cements: Performance and Standardization <i>Michel Delort</i>	194
10 Years of Nanocem: Research Highlights <i>Karen Scrivener</i>	197
Belite Calciumsulfoaluminate Ternesite (BCT): A New Low Carbon Clinker Technology <i>Wolfgang Dienemann, Co-Authors Mohsen Ben Haha, Frank Bullerjahn, Dirk Schmitt</i>	204
Belite Rich Portland Cement and Concrete <i>Sui Tongbo, Co-Authors Fan, Lei, Wang, Jing, Wen Zhailun</i>	213
Celitement: Where do we stand? <i>Hendrik Möller</i>	219
Durability Requirements for Concrete Today and in the Future <i>Christoph Müller</i>	223