Foreword

The ‘Southern African Pyrometallurgy 2011’ conference provides an opportunity for people from southern African pyrometallurgical operations to present their work, and provides a forum for the exchange of ideas between people from southern Africa and from elsewhere around the world. Papers from ten countries are presented here, covering a wide variety of topics of pyrometallurgical interest. Unsurprisingly, electric arc furnaces feature strongly in the programme, but there is also good coverage of upstream and downstream processes, as well as of refractories. A wide range of processes is covered, including steel, ferro-alloys, silicon, PGMs, nickel, and copper.

The previous ‘Pyro 2006’ conference began a collection of ‘Pyrometallurgy in Southern Africa’ papers, published on the pyrometallurgy.co.za website, that describe plant operations (as well as some history, and highlights of current work), thereby providing valuable and useful reference material. The ‘Pyro 2011’ conference provides some further contributions towards the goal of eventually having a description of every smelter in the region.

This conference has a significant focus on the properties of slags, and a particular highlight is the one-day short course on ‘The estimation of slag properties’ by Professor Ken Mills from Imperial College in London.

Pyrometallurgy has played a very important role in southern Africa for at least four centuries, and continues to do so. The ‘Cradle of Humankind’ world heritage area, about 40 km from Johannesburg, contains the site of the earliest evidence of the deliberate controlled use of fire by human beings (about 1.3 million years ago), and this is obviously a necessary precursor to pyrometallurgy. It is hoped that the venue, as well as the social and cultural activities, will help to make the conference a memorable one for those able to attend. I trust that the ongoing value of the papers and presentations will make all the hard work of the many contributors most worthwhile.

Rodney Jones
Convenor
Organizing Committee

Rodney Jones, Mintek (Convenor)
Paul den Hoed, Anglo Research
Quinn Reynolds, Mintek
Isabel Geldenhuys, Mintek
Andrie Garbers-Craig, University of Pretoria
Lloyd Nelson, Anglo Platinum Ltd
Nick Dawson, Xstrata Alloys

International Advisers, and Referees

Adam Luckos, Sasol, South Africa
Adrian Deneys, Praxair, USA
Albert Schoukens, University of the Witwatersrand, South Africa
Arthur Barnes, Xstrata Process Support, Canada
Buks Kruger, HotWorks, South Africa
Carlos Diaz, Consultant, Canada
David Robertson, Missouri University of Science and Technology, USA
David Tisdale, Xstrata Nickel, Canada
Ender Vardar, Tenova Pyromet, South Africa
Eric Grimsey, Western Australia School of Mines, Australia
Florian Kongoli, Flogen Technologies, Inc., Canada
Glen Denton, Mintek, South Africa
Herman Lagendijk, Mintek, South Africa
Hurman Eric, University of the Witwatersrand, South Africa
Ian Barker, University of the Witwatersrand, South Africa
Jacques Eksteen, Lonmin Platinum, South Africa
Johan Nell, Hatch, South Africa
Kabwika Bisaka, Mintek, South Africa
Masud Abdellatif, Mintek, South Africa
Maurits Van Camp, Umicore, Belgium
Merete Tangstad, NTNU, Norway
Mike Shapiro, Bateman, South Africa
Nic Barcza, Oriel Resources, UK
Norman Lotter, Xstrata Process Support, Canada
Phillip Mackey, PJ Mackey Technology Inc., Canada
Rodney Hundermark, Anglo Platinum Ltd, South Africa
Steve McCullough, Mintek, South Africa
Tom Curr, Mintek, South Africa
Wolf Meihack, Consultant, Australia