Overview of Mintek’s research and development

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The mandate of Mintek is set out in the Mineral Technology Act, which is to serve the national interest through Research, Development and Technology Transfer, to promote mineral technology, and to foster the establishment and expansion of industries in the field of minerals and products derived there from. Mintek is a Research and Development (R&D) organisation that specialises in applied research in various scientific and engineering fields and we are publicly (50%) and privately (50%) funded. Mintek provides world class research and development expertise, testwork, and process optimization for the mining industry locally and internationally. The activities range from initial bench-top investigations to full process flow sheet development and the design, construction, commissioning, and optimization of industrial plants. The ultimate measure of Mintek’s success is the extent to which R&D activities contribute towards enhancing productivity, economic growth and socio-economic development of South Africa using minerals. This paper present some of Mintek’s biggest achievements which include the commissioning of the rare earth pilot plant, Cynoprobe cyanide analyser, completion of the nanotechnology clean room facilities, dry sorting technology, rehabilitation of derelict and ownerless mines, etc.

Biography

Makhapa Makhafola is currently the General Manager: Research & Development at Mintek. He worked as Lecturer in Analytical Chemistry at Technikon Northern Gauteng (now called Tshwane University of Technology) and University of Venda. In 2004 he was appointed Director: Quality Assurance at Border Technikon (now called Walter Sisulu University). He was the Director: Quality Assurance at the University of Venda until he joined University of Kwa-Zulu Natal as the Director Quality Promotion & Assurance in July 2010, part of his responsibility was to lead the World University Rankings project. He served as member of Umalusi Council and also as Chairperson of Lovedale FET College Audit Committee. He is currently the Chairperson of DST/MINTEK Nanotechnology Innovation Centre Steering Committee. He served as a member of the Higher Education Quality Assurance Manager’s Forum and also chaired and facilitated various workshops on quality assurance in higher education. He is also serving as an academic committee member of QS World Ranking Universities. He did the post-doctoral training in Analytical Chemistry at Indiana University. He presented his research work in more than 19 international conferences and published in credible journals.

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