

The Role of a Major Ash Producer in Ash R and D

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Abstract

Eskom is by far the major supplier of electricity on the African continent. With a nominal capacity of 42 000MW, Eskom uses approximately 94 million tons of coal in producing 181511Gwh. In the process of burning this volume of low-grade high-ash (29%) coal, Eskom produces approximately 27.3 million tons of coal ash (22 million tons of fly ash).

With each power station being supplied from a dedicated mine and with the implementation of advanced and sophisticated combustion techniques, Eskom produces among the highest quality ash in the world. Being extremely fine, almost devoid of residual carbon and consistent in its chemical and mineralogical composition, makes it a unique product whose attributes can be advantageously exploited.

This paper will discuss the development of an ash industry in South Africa. While it will describe current applications the bulk of the paper will address the role Eskom has played in as ash research and development programme. The paper will, inter alia, discuss current research activities ie waste encapsulation, agricultural utilization, rehabilitation, Acid Mine Drainage treatment and its use as a filler in paint.