



SANEA

The South African National Energy Association
Energy People Working Together

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SANEA ENERGY AWARDS 2010

2010 Award Winner

SANEA ENERGY PROJECT CATEGORY

Award

Babcock International Group – Engineering Division

Represented by David Brook



Babcock was the principle contractor on the Mondi Merebank Multi Fuel Boiler (MFB) Contract. This contract pioneered a number of locally developed world class technological innovations with international application.

Mondi Business Paper is a large paper and pulp manufacturer with a range of waste product streams that are today regarded as environmentally unfriendly and consequently expensive to dispose of, a total of 170,258t per annum and a volumetric capacity of 315,000m³, the equivalent of a rugby field buried 30m deep! Mondi recognised the potential existed to minimise the mass and volume of its waste streams by utilising these as a renewable energy feed stock and, in so doing, generate much needed steam and electrical power for the mill -

provided they could source a cost effective technology capable of combusting these waste materials.

The combustion of the seven waste fuels has resulted in a massive 81% reduction in the plant's mass to landfill and a 75% volumetric reduction for the total plant (including the additional ash from the auxiliary coal required to provide the additional energy for co-generation of power). Additionally, gaseous and solid emissions have been substantially reduced for the steam and power generation plant which, combined with the implementation of de-SO_x on the old coal-fired boiler plant, has resulted in significant environmental benefits for the whole site and the Merebank Basin in general.

The total plant and the MFB in particular, is working very well, having now completed the guarantee period and Mondi indicating that a three year payback will have been achieved. This is an exceptional performance for a South African conceived and designed project. It is also the only known plant that combusts such a mixture of wide ranging fuel characteristics.