

# SPOTLIGHT

## on 100 years of coal mining in Witbank

by K.W. FALCONER\*

The Witbank-Middelburg Branch of The South African Institute of Mining and Metallurgy celebrated 100 years of coal mining in the Witbank area with a function held at Douglas Colliery on the 5th December, 1989.

Two hundred guests associated with the industry attended the occasion, at which Mr A.A. Sealey, Chairman of Rand Mines, Coal and Base Minerals Division, unveiled a plaque presented to the municipality.

### History

Dr Horsfall, Shell Professor of Coal Studies at the University of the Witwatersrand, spoke on the early history of the area. He noted that the Witbank coalfield was the last of South Africa's coalfields to be developed, although the exact date that mining commenced is not certain.

Thomas Baines saw coal in the district in 1872, and mentioned that local farmers exploited the outcrops. The Government Mining Engineer's report refers to the production of coke in 1890, which would suggest that coal-mining operations were well established by that time. However, the first certain record of a company dates from only 1895, when the Home Coal Estates Company was formed to take over the Maggies Mine.

According to the records, four mines commenced production in the Witbank area in 1889. These were Brugspruit Adit, Maggies Mine, Steenkoolspruit, and Douglas Mine (at Balmoral).

Coal was certainly mined prior to 1889, although not on an established commercial scale. Woolf Harris, originally from Eastern Europe and educated in geology at a Scottish technical college, visited South Africa in 1872. He identified coal in the Vandyksdrift region, and it is thought that he started the Maggies Mine around 1873.

Initially, the demand for coal was limited by high transport costs. Wood was plentiful, and it was not until the discovery of gold on the Witwatersrand that coal mining received the necessary impetus for expansion.

### The Future

The future of the industry was examined in a paper by Mr D. Peatfield, Consulting Metallurgist: Coal, Johannesburg Consolidated Investment Co. Ltd. He said that the major proportion of the coal from the Witbank coalfield is consumed by the power stations of the world, and warned of the need to counter the 'greenhouse effect'. The ultimate challenge would be the removal of

the ash and sulphur at the coal-preparation stage, before they became pollutants. This would require a better understanding of the surface properties of coal as froth-flotation, oil-agglomeration, and selective flocculation processes are developed for superfine coal. A spin-off from this achievement would be the increase in the delivered heat value per ton of coal, which would reduce transport costs.

Regarding future market trends, Mr Peatfield said that it was likely that an increased amount of coal would be used to produce liquid fuels as world oil reserves declined.

### Geology

Mr Roger Whittaker, speaking on the geology of the Witbank coalfield, mentioned that 45 per cent of the country's export sales of coal are derived from the 46 mines in the region. There are a total of 107 coal mines countrywide.

Production had grown from 498 thousand tons in 1893 to 81,4 million tons in 1988, 62 per cent of this being produced from opencast operations. Present recoverable reserves of coal in the region are estimated at 12 500 million tons. At current production levels, there is enough coal in the area to see South Africa into the 22nd century.

### Mining

Mr Brian Bell reviewed the mining history of the area, and mentioned some of its more colourful characters, including Winston Churchill, who was hidden underground in the T & DB Colliery during his escape from the Transvaal during the Anglo-Boer War.

The growth of Witbank itself can be directly attributed to coal mining. The settlement was classified as a village in 1896.

### Progress

Leading the way with innovations in the industry were T & DB Colliery, who in 1904 installed a belt in an inclined shaft. By 1915 coal was being cut by electric coal-cutter. During the 1920s it was reported that all mines had installed ventilation fans. In 1947 Klipfontein Colliery saw the introduction at South Witbank of the first continuous miner. The first large dragline was introduced at Optimum Colliery in 1971.

In the hundred years since its early beginnings, when coal was hand-hewed and hoisted by steam, coal mining has progressed a long way to become the large and modern industry of today.

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