

— Company Notebook —

NAMAKWA SANDS: FULL PRODUCTION IN 2002

The Namakwa Sands project on the west coast of South Africa will comprise three separate activities: Mining at Brand-se-Baai and primary separation of heavy minerals by means of spirals and separation of a preliminary ilmenite concentrate by WHIMS. Further processing of the primary concentrate to produce three separate minerals, namely ilmenite, zircon and rutile, at a minerals separation plant located at an inland site north of Koekenaap. Smelting of the ilmenite to produce titania slag and pig iron at a smelter to be sited near Saldanha Bay export terminal. Production of saleable products will start at the end of 1994 with shipments starting early in 1995. Full production is scheduled for 2002 with production of 12 million tonnes taking place annually. The project will produce 195 kt of titania slag, 120 kt of pig iron, 120 kt of zircon and 35 kt of rutile. A contract worth about R7.5 million (US2.3 million) has been awarded to Halawat Holdings, a South African equipment company, for the supply, installation and commissioning of eight Readings WHIMS separators and 16 Readings induced-roll magnetic separators (IMR). The separator will have been completed by the end of December 1993 and should be installed and commissioned by mid-1994. Each WHIMS machine weighs 7.2 t and each IMR 4.1 t. Halawat Holdings supplies and manufactures magnetic separation equipment under licence from Readings of Lismore, Australia. Decision about the go-ahead of Phases 2 and 3 will be finalised once the smelter plant is commissioned.

A NEW MAGNETICS COMPANY IN THE CZECH REPUBLIC

A newly formed company Wagnermagnet which combines several decades-long expertise in magnetic separation, as developed in the Ore Research Institute in Prague, with sophisticated design and modelling is a successful product of privatisation in this ex-communist country. With an easy access to technically advanced manufacturing facilities, the company offers a wide range of magnetic separators for treatment of minerals and wastes. Wet and dry low-intensity drum magnetic separators are offered in lengths up to 3000 mm and drum diameters ranging from 600 mm to 1500 mm. Wagnermagnet also supplies suspended magnets, plate magnetic separators, roll magnetic separators with rare earth magnets, high-gradient magnetic separators and magnetic water conditioners.

THE MAGNET ORDER FROM CHINA

Six large electromagnetic overband separators supplied by GEC Alstom Engineering Systems have been delivered to the Shajiao 'C' power station in China. They will be used to remove tramp iron from the coal being supplied to

the power plant. This order is valued at about US\$0.42 million and follows earlier orders for similar equipment to Chinese power stations in the Canton region.

JAPANESE PRODUCERS OF RARE EARTH MAGNETIC MATERIALS

Company	Products
Santoku Kinzoku Kogyo (Kobe)	NdFeB alloys, Sm–Co alloys
Showa Denko (Tokyo)	Nd–Fe master alloys, Sm–Co alloys, Pr–Fe master alloys
Shinetsu Chemicals (Osaka)	Integrated production from raw materials to Sm and Nd magnets
Sumitomo Metal Mining (Tokyo)	NdFeB alloys, Sm–Co alloys
Sumitomo Light Metal Industries (Tokyo)	Nd–Fe master alloys, Dy–Fe master alloys
Sumitomo Polycorp (Tokyo)	NdFeB alloys
Nippon Yttrium (Mitaka)	Sm–Co alloys, Nd metal
Nippon Rare Earths (Tokyo)	Import Nd oxide and Nd fluoride raw materials
Mitsui Mining and Smelting (Tokyo)	Nd oxide raw materials
Mitsubishi Kasei Corp. (Tokyo)	Sm–Co alloys, Sm metal
Mitsubishi Materials	Nd–Fe master alloys, Dy–Fe master alloys (both products are sold only in the USA)

(Source: *Roskill's Letter from Japan, November 1993*)

END OF THE ROAD FOR THE TEXAS SUPERCOLLIDER

After months of uncertainty, the US\$11-billion superconducting supercollider was pronounced dead in October 1993. The US House of Representatives elected to cancel the project on which US\$ 2 billion had been spent effectively to create holes in the ground. Further \$640 million will have to be spent to refill the holes. SSC

Laboratory had dug 16 of the 86 kilometers of tunnel, razed a town inhabited by 400 people and imported thousands of physicists, computer scientists and engineers to the site. There is an abundance of theories to account for these events [1]. On one extreme, many members of Congress and prestigious scientists, largely from disciplines outside high-energy physics believed that the SSC was a vast pork barrel: inefficient, wastefully managed, with an ever-increasing price tag. Cancellation was essential to prevent further waste of resources. At the opposite extreme, other members of Congress believed that the SSC was a well-run project, within budget and on schedule. It was believed that both that spin-offs would be vital to the long growth of US technology and that termination would severely disrupt a tradition of scientific development. Physicists are now pinning their hopes on Europe to provide the answers to some of the most fundamental questions about the laws of nature.

[1] R. Mestel: *Nature* 366 (1993), 607

CARPCO EXPANDS ITS CRYOFILTER RANGE

Carpco Inc. (USA) has expanded its range of Cryofilter high-gradient magnetic separators with the introduction of the Cryofilter HGMS 5T/460 designed for use mainly by kaolin producers. It is claimed that this superconducting system reduces the energy cost by 95% compared to conventional magnets. The magnet generates 5 Tesla used uses the reciprocating canister train to achieve a near-continuous purification of kaolin and other fine minerals. The Cryofilter 460 has a throughput of 20 to 40 t/hour and weighs approximately 50 tonnes. Energy consumption is less than 10 kW under normal operating conditions. Liquid cryogens are not required on a continuous basis and liquid helium is designed to be added once a year. One of the new models was installed at a kaolin operation Brazil while a second filter was prepared for a European kaolin producer. A total of four of these machines were in operation at kaolin facilities at the end of 1993.