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SA set for \$1.2bn rare metals refinery

The Industrial Development Corporation and the National Empowerment Fund are working with US-Russian consortium Magnesium and Metals to build a US\$1.2-billion (about R9.2-billion) rare metals refinery in South Africa.

According to a statement by the IDC, the plant will be used to beneficiate the country's natural ores, which are currently mostly exported in raw form. Once complete, it will be the world's first integrated titanium-zirconium-magnesium-silicon plant.

The partners have set aside R40-million for a pre-feasibility study, to be conducted by SMW Engineering, a Russian company that carries out research and engineering activities in the field of magnesium, zirconium, titanium and rare earth metals' production and related technologies.

"This is a major step forward in developing a strong titanium metal beneficiation cluster which will be underpinned not only by its natural abundance in SA, but as a metal that is increasingly becoming a resource of choice," NEF project manager Donovan Chimhandamba said in a Business Day article this week.

Rare metals reserves

South Africa has the second largest reserves of titanium in the world (behind China) at 16.9%, and produces over 1 100 kilotons per year, or 19.5% of global production - second only to Australia.

Titanium is used in the production of alloys for aerospace applications, offshore oil and gas exploration, petrochemicals, prosthetics, and jewellery and sporting equipment, and has an annual export value of up to \$500-million.

South Africa also has the second largest reserves of zirconium in the world (behind Australia) at 19.5%, and produces just over 400 kilotons per year, or 32.7% of global production - second again only to Australia.

Zirconium is used in nuclear reactors, in surgical appliances, in lab crucibles, in ceramics, in refractory material and in jewellery, and has an annual export value of up to \$400-million.

Creating new industry

According to the IDC, the development of the plant is important to South Africa, as it is an investment in new fixed capital, creates a new manufacturing and industrial capacity, unlocks potential downstream beneficiation activities, creates new employment opportunities, and will also ensure the involvement of broad-based black economic empowerment groups in early project stages

It will also increase South Africa's export earning potential and reduce import dependency, while also increasing co-investment and linkages with foreign direct investment.

The partners are currently looking at Richards Bay, East London, Port Elizabeth and Saldanha Bay as possible sites for the plant to be constructed at. Key to location selection will be its proximity to raw materials, accessibility to a bulk container port for exports, and quality infrastructure to support further downstream beneficiation clusters.

"We expect the project will generate at least 2 800 skilled jobs during construction and in excess of 5 000 permanent jobs once the plant is fully operational in 2014," Chimhandamba told Business Day.

"Additionally, much-needed skills transfer is likely to occur through our Russian partnership."

SAinfo reporter