Another feather in the cap for Austpac technology

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AUSTPAC Resources' Enhanced Roasting and Magnetic Separation synthetic rutile (ERMS SR) demonstration plant in Newcastle, New South Wales, has achieved its ultimate goal with the production of high-grade synthetic rutile.

Austpac's pilot Enhanced Roasting and Magnetic Separation SR plant in New South Wales

The company has already reached its earlier goals of proving the direct reduced iron (DRI) process at the plant, and hydrochloric acid has been regenerated from steel mill pickle liquor waste.

Austpac said its patented continuous leach reactor (CLR) – the only one of its kind in the world – was used to leach the Murray Basin ilmenite that Austpac had roasted earlier this year.

The leached ilmenite was then dried, calcined and passed over a rare earth roll magnet to remove traces of non-titanium minerals from the synthetic rutile (synrutile) product.

"The bulk synrutile produced at the plant contained over 97 per cent titanium dioxide," managing director Mike Turbott said

"This ultra-high grade product indicates the leaching efficiency of the CLR equipment and exceeds expectations based on previous bench-scale leaching of the same ilmenite."

The company reported the synrutile also contained low levels of iron and other impurities and negligible amounts of uranium and thorium, thus confirming it is a superior product for titanium metal manufacture.

Large samples are being dispatched for testing to various international end users.

Turbott said this breakthrough confirms the ERMS SR process is the world's only continuous synrutile process, and the only one that produces saleable iron metal pellets instead of disposing of the iron as chloride or oxide waste.

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The company is taking steps to upgrade the acid regeneration section of the 3000 tonnes per annum demonstration plant to ensure it can operate continuously to treat steel mill wastes.

Turbott added the information and experienced gained during construction, commission and operation of the demonstration plant will now be used to prepare the front end engineering design package for a detailed feasibility study – the first stage of a bankable feasibility study into a proposed 60,000 tonnes per annum ERMS SR plant.

“Austpac’s immediate priority is to advance and finalise various agreements with local and international groups necessary that will underpin a commercial ERMS SR plant, as well as facilitate the planned commercial steel waste recycling operations to generate a cash flow,” Turbott said.

Austpac shares rose as high as 8.4c today before cooling to 8.2c, an 0.4c or 5% gain.