Newcastle Demonstration Plant Progress

May 2005 Update





Pilot Plant History

A large scale test facility is critical to demonstrate our technologies:

- In 1997, Austpac moved its equipment from Newcastle University into an existing process tower on Kooragang Island
- ERMS & LTR roasting, ERMS SR & EARS acid regeneration technologies have all evolved and been trialled here
- The former pilot plant was outdated, not integrated, and was not large enough to reduce the technology scale-up risk for a commercial ERMS SR plant

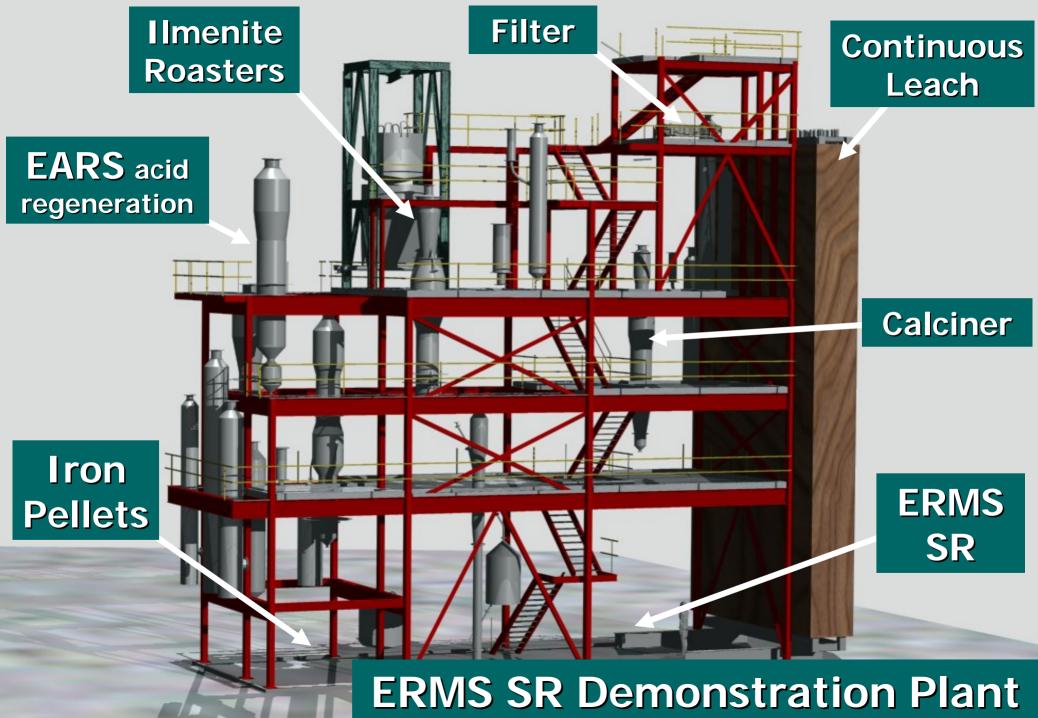
Old Pilot Plant



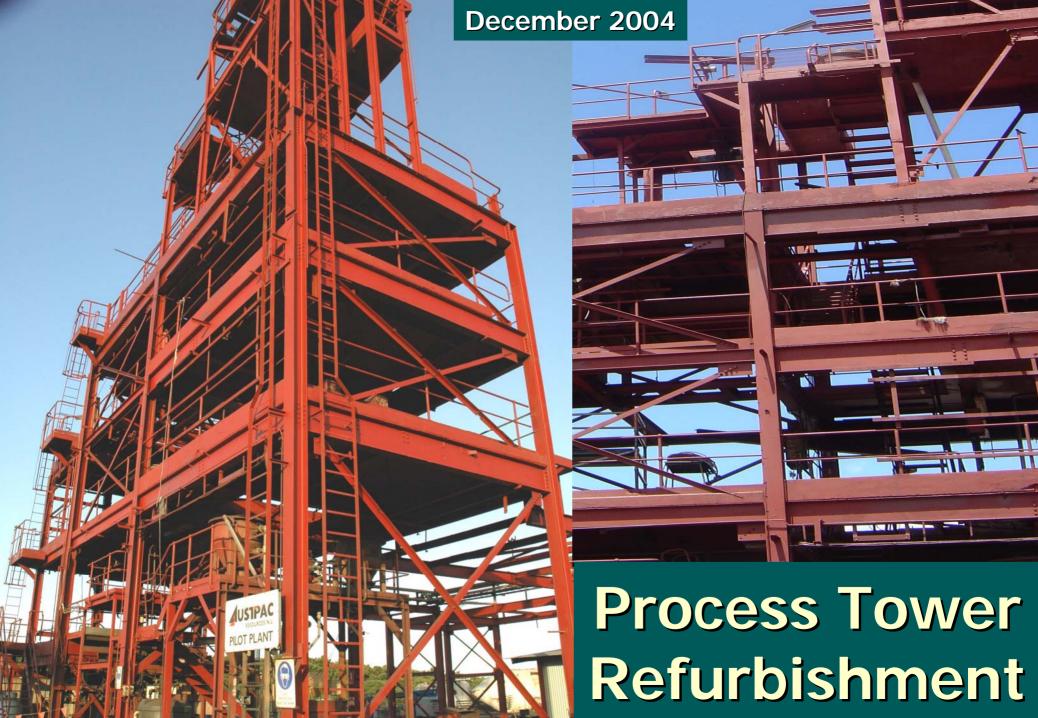
Our Plan

To establish a fully integrated ERMS SR facility capable of producing 1,500 tpa of high grade SR, including:

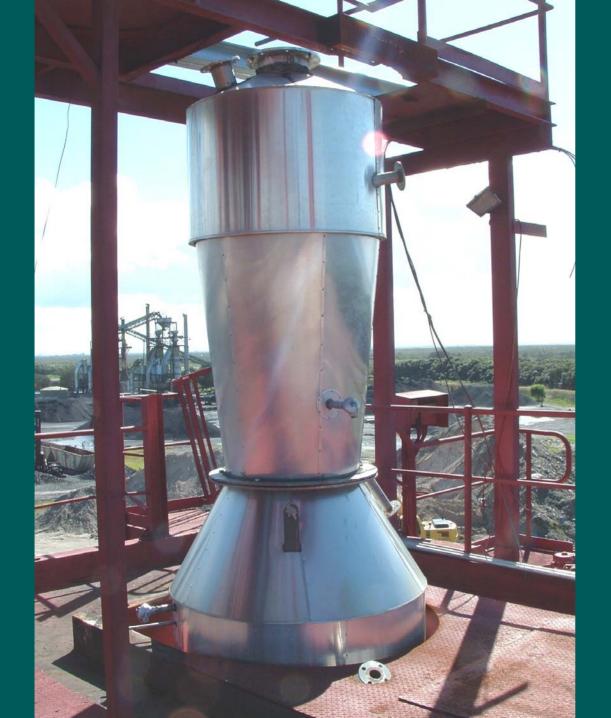
- Ilmenite roasters up to 400 kg/h capacity
- Continuous leach vessel up to 400 kg/h feed
- Filter/wash/calcine up to 200 kg/h ERMS SR product
- Acid regeneration 900 L/h 25% HCl & 150 kg/h iron pellets
- Once commissioned, the Demonstration Plant will confirm essential process parameters for a commercial ERMS SR plant
- This is an essential precursor to the detailed feasibility study
- The scale-up factor to a 30,000 tpa commercial plant is only ~20:1, so the technology risk will be minimal



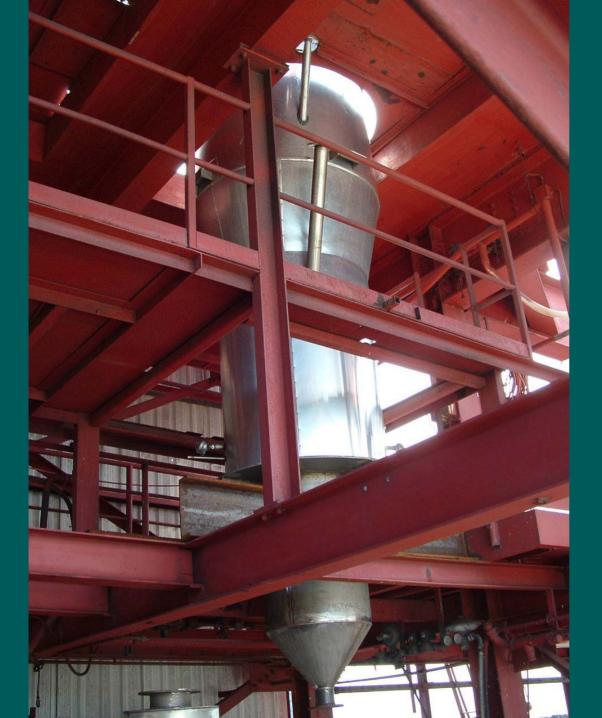








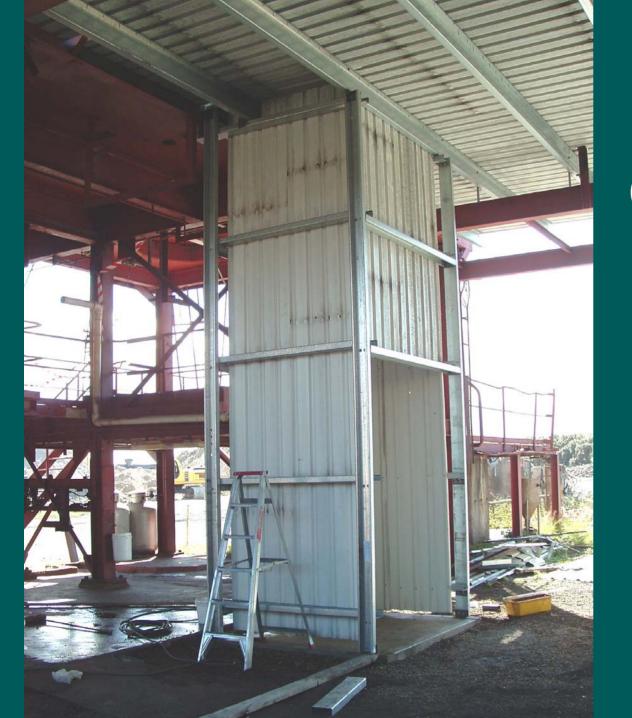
Pre-heater Installed



Oxidation Roaster Installed

Reduction Roaster Installed





Construction of Raw Materials Hoist Enclosure



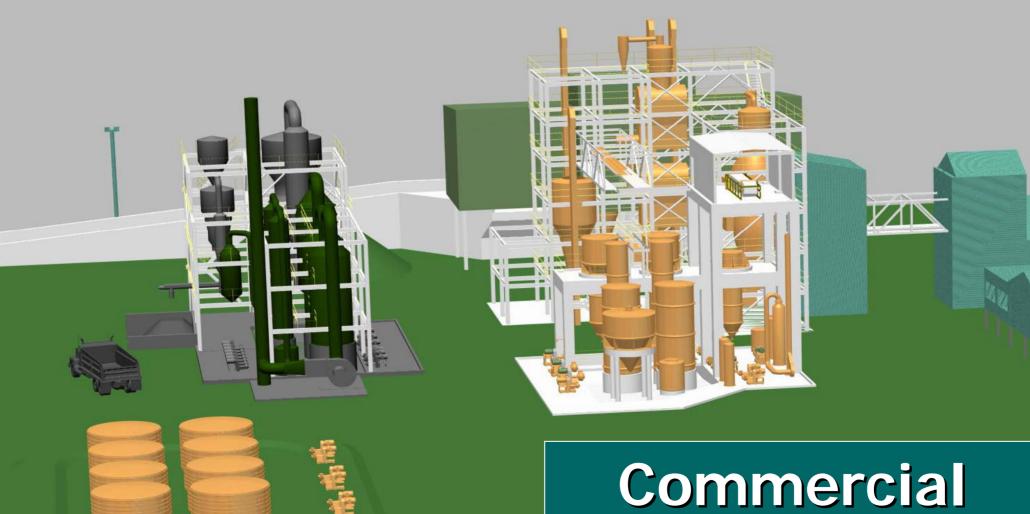


View from Western Side of Demonstration Plant (May 2005)

Upgrade Progress (May 2005)

ITEM	ACTIVITY	COMPLETE
Process Tower	Obsolete equipment removed, painting completed, structural modifications essentially complete	98%
Ilmenite Roasters	Preheater, oxidation & reduction roaster completed and installed, fabrication of cooler & afterburner completed and being installed	70%
Continuous Leach Reactor	Fluid flow modelling complete, design complete, detailed package for tender in preparation	20%
Filter/Calciner	Filter sourced, calciner designed and awaiting quotation	20%
EARS Section	Mass & energy balance complete, roasters designed, gas absorption system ready for fabrication, pump section complete	15%
Ancillary/Services	Services building & magnetic separation building complete, control rooms installed, electrical design & wiring instrumentation diagrams complete, materials handling system under construction	30%

Austpac's Objective:



Commercial ERMS SR Plant



END OF MAY UPDATE