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Iron ore players feature strongly in industry awards

By Nellie Reeves

It was accolades all round for the iron ore industry at the recent National Mining Awards with Fortescue Metals Group (FMG) taking out the "Producer of the Year Award". Fellow iron ore player Gindalbie Metals was awarded the "Deal of the Year".

THE PILBARA iron ore and infrastructure project team that helped get FMG's operation up and running, from WorleyParsons, was also recognised by the industry as "Manager of the Year".

And to top it off, a technology for the treatment of iron ore being developed by Austpac Resources was awarded as the "Applied Technology of the Year".

WorleyParsons: Manager of theYear

WorleyParsons managed to take the FMG iron ore and infrastructure project from design to completion within three and a half years.

"WorleyParsons was delighted to win this award and to be associated with this outstanding project", Mark Southey, managing director minerals and metals, told The Australian Journal of Mining.

FMG is one of the few companies that has been able to deliver a major iron ore project of this scale in the world, due in a large part to the strength of the project team – up to May this year, 180,000 tonnes of iron ore had been produced to meet the demand of Chinese steel mill customers.

"The project schedule was extremely tight and we are delighted to have been able to deliver this phase on time", said Southey.

The project reached completion in July 2008. It was awarded to WorleyParsons after it had completed a successful feasibility study and front-end engineering design. MaisonWorleyParsons provided the project distribution engineering, power generation, expediting services and rail car design.

According to the company's estimates, around nine million man hours were spent completing the $3 billion FMG project, including 200 permits, 13,000 engineering drawings, 330 contracts and 24,000 invoices.

The project challenges included time and budget constraints, the remote location, the geography, the demand for resources and the skills shortage. Mark Southey said the company was managing the skills challenge through initiatives such as workshare and better recruitment practices. FMG will inject $1.5m into training over the next two years and $1m per year after that, with a program that is designed to ensure a skilled workforce into the future.

FMG has awarded WorleyParsons with the $260m contract for the second phase contract expansion. Engineering, procurement and construction management is set to ramp iron ore production to 160 million tonnes per year from 55 tonnes. Southey said the goal for the future is to continue to exceed production expectations.

Applied technology for iron

Austpac Resources was recognised with an award for its ERMS SR process which can produce the highest grade synrutile, a preferred feedstock for making titanium metal, at the *2008 Excellence in Mining and Exploration Forum*.

At the time of the award, in September, the company was only days away from producing synrutile and iron at its 3,000 tonnes-per-annum Newcastle plant, following 15 months of planning and construction.

The company's synrutile process also produces a saleable iron metal co-product, rather than losing the iron as waste. ERMS SR is a continuous process that can upgrade any ilmenite, use any fuel, produces no liquid or solid wastes, emits the least CO_2 per dollar of revenue in comparison with other upgrading processes, is carbon capture capable, and uses waste heat to generate electricity.

Austpac's technologies can be also used for "green" recycling of steel industry waste (waste mill scale and spent pickle liquors are

converted to hydrochloric acid and saleable iron), and also to produce iron metal pellets (DRI) from iron ore fines.

Austpac's continuous DRI process has been demonstrated on BHP Billiton's Pilbara iron ore fines, and could offer significant environmental benefits to steel producers worldwide, says the company.

"This award couldn't have come at a more exciting time for Austpac. To get this kind of recognition really shows the innovation, dedication, and hard work put in by all the staff at Austpac." said managing director, Mike Turbott.

The ERMS SR production plant is environmentally friendly having no solid or liquid waste capturing its carbon dioxide. The plant runs on energy captured from its own heat from its thousand degree roasting temperatures – so the design is cost effective and energy efficient. What the wider community gets is a product recycled that would usually be thrown away.

"The project has been our dream for so long we're so pleased everything is working at the scale planned and we are looking forward to moving to a commercial application of the technologies," said Turbott.

The industry will potentially make millions from the technology with steel producers, locally and internationally benefiting says Austpac – a large steel mill would regenerate 25,000 tonnes of acid and 50,000 tonnes of DRI of out of 30,000 tonnes of pickle liquor a year.

"We want to make money out of waste and the steel mills want to save waste. [This will] save steel mills 5-10 million dollars per year," said Turbott.

"There are many other applications, I think the potential is huge. The next step of course is a 60,000 tonne synrutile (iron titanium oxide) plant. The plant will be the subject of engineering feasibility … as soon as we finish our current work next year," said Turbott. □

(CLOCKWISE FROM TOP LEFT) • AUSTPAC RESOURCES' 3,000 TONNES-PER-ANNUM PLANT FOR PRODUCING SYNRUTILE AND IRON, AT NEWCASTLE • DIRECT REDUCED IRON (DRI) • SYNRUTILE, A PREFERRED FEEDSTOCK FOR MAKING TITANIUM METAL • IRON ORE FINES