



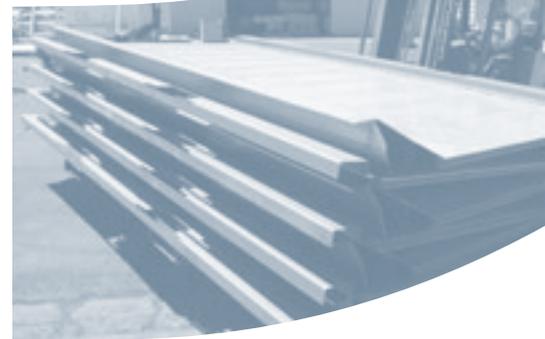
## Doric Engineering innovates its way to success

A Tasmanian engineering company which has been an innovator for 40 years has begun production of 2,000 purpose-built shipping containers for a major transcontinental minerals project.

Doric Engineering of Devonport beat local and overseas competition to win the container supply contract for BHP Billiton's Ravensthorpe nickel development.

The \$2 billion Ravensthorpe Project involves the development of a mine, treatment plant and associated infrastructure near Ravensthorpe, Western Australia and the expansion of the QNI Yabulu Nickel Refinery near Townsville in Queensland.

Work on both projects began in April 2004 and the first nickel production from the expanded Yabulu refinery is expected in late 2007.





**Top:** Doric Engineering founder, Jimmy Trambas with some of the 2,000 special shipping containers which the company has designed and fabricated.

Jimmy Trambas (pictured above), founder and Managing Director of Doric Engineering, led the team which designed and developed a shipping container system to transport up to 220,000 tonnes per annum of a mixed nickel and cobalt hydroxide intermediate product.

The intermediate product will be packaged into the Doric Engineering containers at the Ravensthorpe processing plant, transported by rail to the Port of Esperance then shipped by sea to Townsville for final refining at the QNI Yabulu Refinery. Each shipload will transport 660 containers.

“We are making 2,000 containers which have to be delivered within 12 months,” Jimmy Trambas said. “Without BlueScope Steel’s assistance we probably would not have won this contract. We wouldn’t have been able to get the steel in time.

“We have been formally working on this project for 14 months now and for almost two years before then we were providing information and discussing concepts with our customer. We had to go through proof of concept procedures and then quickly produce prototypes to demonstrate that we could deliver the product and that it would do what we promised.

“When we were given the preliminary go-ahead the customer was astonished to see such activity. In just a couple of weeks we went from concept to working prototypes. We’ve developed a complex container, with all the critical components made from 350 Grade XLERCOIL® steel.”

The magnitude of Doric Engineering’s success is best measured against this specialist company’s relatively small size. Its permanent workforce numbers just 40 employees, although it does have access to substantial sub-contracting arrangements when required.

“This would be one of the largest contracts we have handled,” Jimmy Trambas said. It will involve more than 4,000 tonnes of XLERCOIL® steel. The weight of the containers was extremely important to the transport solution. By using XLERCOIL® steel we were able to produce an extremely strong container structure while keeping the weight down.

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*Jimmy Trambas, Managing Director, Doric Engineering*



“In tests conducted by BHP Billiton our container was found to carry more product than any others, without exceeding the maximum allowable gross weight limit. We used 350 Grade XLERCOIL® steel in 3mm and 5mm thicknesses to fabricate structural elements of the containers which measure six metres in length, 2.4 metres in width and nearly three metres in height.

“Not only did we achieve the container capacity to outperform the others which were tested, but we also achieved the structural strength required. The container specification is for a life expectancy of 22 years, so durability is very important.

“Each of these fully laden containers is lifted at the Yabulu refinery and then inverted to empty its contents. That places a lot of stress on the structure. We also developed an automated system to remove and then replace the container lids so that filling and emptying takes place with maximum efficiency.

**Above:** Doric Engineering developed an automated system to remove and then replace the container lids.

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*Jimmy Trambas*



“Our design for the automation of the lid removal and replacement process was crucial in the competitive bidding process. Without it the construction of the 2,000 containers may well have gone offshore, to China or elsewhere.”

From its establishment 40 years ago, Doric Engineering has relied on steel supplied by BlueScope Steel. The company began by carrying out general fabrication work and then developed expertise to build purpose-built containers.

“In dealings with our own customers we like to create a relationship of trust, where we are regarded as a reliable supplier with outstanding technical support,” Jimmy Trambas said.

“That’s the same situation which BlueScope Steel has developed with us over the years. We have always found their technical and commercial support to be first rate. It is one of the things that has helped us to grow. My contacts on the technical side are excellent. If I have a problem they help me resolve it very quickly.

“I find them to be extremely responsive. Their deliveries have also been spot on and there is loyalty from both parties, so I don’t even have to think about where the steel I need will come from.

“Not long ago we completed production of 550 special rail containers for carrying cars. That was another example of a design where strength and light weight were equally important. For that project we used 350 Grade XLERCOIL® steel.

Despite the size of the project to supply 2,000 containers for the Ravensthorpe project over the next 12 months, Doric Engineering is by no means narrowing its focus to the exclusion of other business.

“It is rewarding to be able to lead BlueScope Steel’s interaction with such an innovative business as Doric Engineering,” State Sales Manager Victoria and Tasmania, Simon Fieldsend said. “It is their innovation that is at the heart of Doric’s success.”

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