

MATRIX: A CLEAR VISION FOR AUSTRALIAN INDUSTRY

The success of the company selected as the winner of Western Australia's 2010 Large Advanced Manufacturer Export Award - Matrix Composites and Engineering Ltd – is built on a clear vision of future opportunities for Australian industry in the petroleum sector.

At the company facility in Malaga, a metropolitan industrial area, Chief Executive Officer Aaron Begley examines a newly produced marine riser buoyancy module, a pale blue, foam half cylinder, 1.4 metres wide and 4.5 meters long.

"These are the best in the market," he says.

His confidence is justified, not only by Matrix's growing share of the market for buoyancy equipment for deep sea petroleum exploration and production, but also by the results of the company's rigorous testing that ensures the reliability of its products against high industry standards.

The modules are made of syntactic foam with a composite shell; the materials, the design and the production process have been developed by the company's engineers and industrial chemists.

They will be shipped globally, to encase the steel risers that contain drill strings through the kilometres of seawater between vessels on the surface to a

drill site on the sea bed.

"At these depths, kilometres below the surface, the pressure is enormous and that length of risers can weigh up to 4000 tonnes," Mr Begley said.

"To support this massive weight and withstand extreme conditions, our modules have to be light, but strong."

The company's computer-controlled, automated facilities operate 24 hours, seven days per week, each month generating production worth more than A\$13 million.

A substantial investment in research and development has produced a wide range of new and better materials, technologies and products for the petroleum sector.

As well as the modules, Matrix produces a wide range of standard and custom built products to support marine drilling, and floating and subsea oil and gas production.

The company employs more than 400 people across seven facilities throughout the metropolitan area and generates a steady stream of truck movements, most destined for Fremantle Port with nearly 80 per cent of its production being exported.

Mr Begley says the company has built its reputation for innovation and reliability

in the deepwater buoyancy market over more than a decade since its foundation in 1999.

However, over the past three years, demand for Matrix equipment has seen the company's export earnings more than quadruple, and Mr Begley estimates the company now supplies about 40 per cent of a global market for new build buoyancy equipment worth A\$400- \$500 million annually.

Matrix-produced equipment is used throughout Asia and Oceania, in the Gulf of Mexico and increasingly in waters off Brazil and West Africa.

He said a major investment in testing equipment, building the largest hydrostatic testing facility in the Asia Pacific region, which included a chamber 6.5 metres long and capable of duplicating pressures experienced in water three kilometres deep, was critical to this growth.

One in every 20 buoyancy modules Matrix produces is tested against the conditions in which it will operate.

In addition, the company's systems and processes have Quality Assurance accreditation ISO 9001:2008 (SAI Global) and Matrix is seeking Q1 accreditation from the American Petroleum Institute.

Mr Begley said the advanced testing capacity is a strong advantage and quality accreditation is essential, for success in an industry, where equipment failure can have disastrous consequences in human and environmental terms, as well as financially.

The Matrix Composite and Engineering group includes three operating subsidiaries: Matrix, Begley International which has extensive heavy oilfield engineering capabilities and Torque Engineering which specialises in offshore winch and reeler construction.

Mr Begley said the growing dominance of advanced materials manufacturing in the group's operations, is a reflection of a changing market.


"Our heavy engineering operations, which began in 1980, have to transform from manufacturing and fabrication, to highly skilled and mobile engineering service providers," he said.

"They still produce high quality equipment and components for the petroleum and mining sectors, but increasingly we can't compete on price with suppliers in Asia."

"On the other hand, our buoyancy modules are shipped to Asian engineering yards and included as part of equipment destined for use around the world."

"This is the challenge facing Australian engineering firms – having high standard production processes is not enough, we need to use our skills and experience differently, either developing unique and better products, or providing mobile repair and maintenance services to operators throughout the region."

Mr Begley is confident about the future for Matrix. The company is close to completing construction of, and opening a new A\$60 million first stage of a purpose built, 20,000 square metre manufacturing facility at the Australian Marine Complex at Henderson, south of Perth.



"The new facility will allow us to double our output and consolidate five operating sites into one, it will also include a testing facility with an even bigger pressure chamber," he said.

"The AMC is a fantastic location, we'll be the only deepwater buoyancy manufacturer with a dockside facility and there is a substantial cluster of subsea technology and petroleum logistics operations, so we'll get great exposure."

"From here, we will be well placed to service the increase we expect to see in local activity and markets in Asia, Oceania and West Africa which we expect to become increasingly significant."

"In the longer term, as sales to customers in the strongly expanding deepwater activity off Brazil grow, we may need to develop some offshore production facilities."

Equipping Matrix's new facilities has also given Mr Begley stronger confidence about the future of Australian industry.

"We looked for the best technology available from the automotive, aerospace and chemical processing sectors and I'm pleased that between 80 and 90 per cent of the equipment we chose was made in Australia," he said. ■

Western Australian company Matrix Composites and Engineering Ltd specialise in buoyancy equipment for deep sea petroleum exploration and production.