

# Packing a punch in a variety of fields

Since Perth-based IPI started its own packer assembly in 2001, it has gone on to develop its own products and technologies, attract key clients and open offices in new markets

**I**NFLATABLE Packers International Pty Ltd (IPI) is effectively a spin-off from AGE Developments, which was founded in 1985 by Andy Giacometti in Perth, Western Australia. Clem Rowe joined in 1988 as engineer, while a teenage Dave Knell had already joined as an apprentice in 1986.

Mr Rowe became a director of AGE and all three people played leading roles in the development of the business, including the design and construction of what have probably been the world's largest inflatable packers (see box).

In 1999 Mr Rowe and Mr Giacometti decided upon an amicable split, along the lines that the latter wished to concentrate on the Australian market and the former wanted to develop potential overseas markets, especially in Europe. Thus, Mr Rowe formed IPI in July 1999 and initially subcontracted all the production back into AGE.

In July 2001, Mr Knell moved over and, with a small team, IPI started its own packer assembly, working under licence from AGE. Since then, IPI has gone on to develop some of its own products and technologies, and has grown into a company of 15 staff.

## BUSINESS DIFFERENCES

The difference between AGE and IPI was, and still is, more than just market geography. AGE always had a high degree of site service in its business, including well video inspection, while IPI simply offers the design and manufacture of packer systems, such as coalbed methane (CBM) exploration tools.

From its inception, IPI has relied on internet marketing, which helps as Perth is said to be the most geographically isolated city in the world. Mr Rowe's initial website (with the programming assistance of a student) won a local award, and a laptop and internet connection are now an essential part of his global travels.

Belgium packer specialist Geopro SA helped to fund the initial move into manufacturing by buying in as a minor shareholder, viewing IPI's inflatable packers as complementary to its Bimbar line. This allowed it to offer a more complete range than its competitors.

During this period, another key European client was Zurich-based geotechnical specialist Solexperts. It used IPI packers extensively for tasks such as Alpine tunnel-construction surveys and potential nuclear waste site investigation – usually with specially built packer systems – and the company remains a key client to this day.

The third member of the management team, Howard Kenworthy, joined in late 2005 with a brief to assist IPI's expansion. Over the past 18 months the business has approximately doubled in terms of



*The IPI Perth-based team, with two 184 mm CBM packer elements*

sales, staff and production capacity. Mr Kenworthy has a general management background in finance and distribution, and relocated from the UK. His duties include developing a programme of trade fair attendance, redeveloping the website and marketing. The main challenge, he says, has been to market more of IPI's range as standard, rather than custom-made.

## INDEPENDENT EXPANSION

By 2006, IPI had developed to the stage that it was independent of AGE and other key suppliers. With the acquisition of key plant and equipment – including an Okuma CNC lathe and an autoclave – it

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had most of its supply-chain under direct control. IPI also opened a European office in Sofia, Bulgaria, with a team that includes local engineering staff and Mr Rowe is often based there. Last year also saw the appointment of a North American agent in Montana – Joel Adams, previously of Solexperts.

Inflatable packers can be versatile down-hole tools, working at up to 10,000 psi and temperatures up to 150°C. IPI products are found in many sectors:

- **Water wells:** IPI, from its roots in this industry, has a complete range of products for the construction, rehabilitation and operation of water wells. A flagship item is the riserless pump system, which can be found in the deep (800 m) wells around Perth's arid environment. Other systems include screen-placing, grouting and hydrofracture packers. IPI sees great potential.
- **Geotechnical:** developed with Solexperts, this range includes tools to determine strata permeability and rock stress-testing, using dilatometer and hydrofracture techniques. Clients include universities and government research departments.
- **Mining:** permeability testing was boosted by the standard wireline-packer system (SWPS) that works with standard Boart Longyear coring systems, but it has the potential to be adapted to work with others. SWPS is particularly attractive for deep holes (over 500 m) as, being water-inflated, it avoids the complexity of having separate gas systems and can work at high pressures. IPI is also involved with new mining techniques such as block caving (using hydrofracture).
- **CBM:** IPI initially developed its water-well drill stem test (DST) product with Reliance Industries

of India. Other products for CBM include a range of inflatable bridge plugs and hydrofracture packers.

■ **Oil and gas:** this sector uses a lot of packer types that IPI does not produce, but there are several niche systems that IPI provides quickly and cost-effectively. As well as DST and bridge plugs, IPI has a slimline swage-casing patch system that can repair casing as small as 2 in ID. The bridge plug range includes a special version used for offshore well abandonment; again, a product developed for a specialist operator.

■ **Construction:** IPI does not compete with local packer manufacturers in the provision of certain grouting packers, but it does offer the occasional specialist system for larger or more complex jobs.

■ **Geothermal:** probably a long-term market of considerable scale, IPI has provided packers for the hydrofracture of geothermal wells in Japan.

### DISTRIBUTION STRATEGY

Having a wide product range and market has influenced IPI's distribution strategy. An internal review of the firm's distributor network highlighted several non-productive 'exclusive' arrangements that have now been discontinued, and IPI now expects a lot more from its partners, including the ability to directly or indirectly provide client site support.

Given IPI's broad market range, it is not always feasible for a single distributor to support every product. Distributors include: Geopro (Belgium, France, Spain); Comdrill (Germany), and Cosmos Shoji (Japan). IPI also recently appointed QSP Packers (US), H&F Drilling Supplies (UK), OGE Technologies (Singapore), Australasian Diamond Tools (New Zealand) and Hiland Overseas (India).

IPI also recognises that some of its range form key components of certain specialist products or services. The firm believes these clients value its relatively short lead and replacement times, helped by IPI's policy of keeping a reserve stock of key components.

### PRIORITY TARGETS

At present, the priority targets are mining and CBM as these products are more likely to become standard. This channel is assisted by the support of the Australian government trade office, Austrade, and the booming Australian mining industry. The oil and gas business is targeted around specific

### THE BIGGEST PACKERS EVER MADE?



Clem Rowe and Dave Knell have undertaken many special inflatable packer projects at IPI and previously at AGE Developments.

While at AGE Developments, they played leading roles in the design and fabrication of the pile-reforming packers (pictured), which played a critical role in a major offshore gas project that had suffered an unforeseen setback.

For what was a somewhat unusual operation, AGE designed and built what may be the largest high-pressure, inflatable packers in the world.

The operation involved the opening up of

*A pile-reforming packer*

*Photo: AGE Developments*

2.5 m-diameter piles that had partially collapsed during driving. Apart from the structural need for opening, these piles had to be drilled through for the installation of secondary insert piles.

The inflatable packers created for the project were 1.83 m (72 in) in diameter with a 6 m (20 ft) rubber length, rated for 15 MPa (2,000psi) inside 2.56 m (100 in) ID piles. The overall element weight was approximately 26 t.

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products, such as swaging and DST. IPI expects the business to grow as it further develops its technology, although it says it is difficult to see any real pattern in the market.

The resources boom has triggered a 'catch-up' situation in mining exploration, so the development of SWPS as a standard product is well timed. There is currently a similar growth spurt in the CBM market, for which IPI is developing packer technology and

techniques. IPI sees tremendous future potential in swage repair of a whole range of well types, and the use of better technologies in the construction and repair of water wells.

The World Bank is funding improved water supply for developing countries and the EU is also regulating in this area.

### RAISING STANDARDS

At present, water-well standards can be very poor, even within developed countries, and water contamination – even fatalities – from poorly constructed and maintained aquifers are not unknown. Both municipal water companies and bottled water manufacturers are realising that wells need to be better engineered, or at least kept in a better stage of repair.

As a small- to medium-sized enterprise, IPI finds that product development tends to be client-driven through specific jobs. IPI may then see an opportunity that it can develop and promote. Consequently, the firm does not identify and isolate where specific R&D expenses occur.

Currently, there are three areas in which IPI is focusing development: a higher temperature capability; a more advanced swaging capability, and the hydrofracture area.

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