

# A change of scale

**BWA Water Additives** has several important innovations ready for the market, as well as changing ownership. We spoke with the COO **Paul Turgeon**

It has been another busy year for BWA Water Additives. In the past few months, the company went through a change of ownership and has also made important progress in several product innovations, including the first ever fully biodegradable anti-scalants, a family of industrial biocides that have become the first in years to receive approval from the US Environment Protection Agency and a new product for reverse osmosis (RO) desalination.

BWA, which emerged from Chemtura in 2006, mainly supplies scale, corrosion and microbiocide products and services to the industrial water, desalination and oilfield markets. It does not manufacture them, however; rather it develops its own IP and processes, then concludes royalty-free manufacturing licences with a network of producers world-wide.

The firm was originally financed by Close Brothers Private Equity, passing in 2008 to United International Bank, the private equity arm of an investment bank based in Bahrain that is now called Seera. Middle Eastern ownership was highly attractive to BWA, since a big part of its market is here, with the huge ongoing investment in desalination plants to supply water to a growing population and industry base and the huge global oil and gas industry, plus there was a huge amount of money there available for investment.

Originally, Seera was looking at a five-year ownership timeframe but this lasted less than three. In June, it sold BWA to the Philadelphia-based investment firm Berwind, which had approached them via a third party. Quite simply, says COO Paul Turgeon, Seera got a good offer, one that also suited BWA.

"We want to continue with our current strategy, doing exactly what we have been doing all along. To do that we need access to capital to develop new products," he says. Whilst acquisition by an industry player was always a theoretical possibility, Berwind made an offer that precluded a later sale process.

Berwind is not a private equity firm but more like a conglomerate holding, along the lines of Berkshire Hathaway, which recently acquired Lubrizol. It owns its portfolio companies for the long-term - it has owned one since 1978 - and looks for companies with a strong strategy and strong capabilities that will continue to drive growth in niche areas. It does not look to integrate the businesses it buys.

Berwind itself says that it looks for internationally focused companies, generally turning over \$100-300 million/year. These companies must be leaders within their niches, deliver high gross margins consistently and have the potential to grow faster than the markets they serve. These must be in industries that will support sustainable organic growth, where future growth is driven by steady demand.

Among its nine US-based portfolio companies are several others in the chemicals field. Colorcon, for example, supplies modified release technologies, excipients and film coatings for pharmaceutical applications, coatings, polishes, colorants and inks for food and confectionery and non-toxic printing inks and functional coatings, while CRC Industries makes speciality chemicals for maintenance and repair professionals in the marine, electrical, industrial, aviation and automotive aftermarkets. Elmer's Products makes consumer adhesives.



There was no great fanfare in publicising the change of ownership. "It's business as usual, there will be no changes in the strategy or for employees, suppliers or customers," says Turgeon. BWA will continue to develop and market new products for the same markets, often to customer-specific requests and using others for commercial manufacturing.

Ironically, the ending of Middle Eastern ownership came exactly as BWA was opening its first office in Dubai for the Middle Eastern and North African markets. This now employs three people and the company wants to increase it to six in due course, supported, as before, by others working out of different locations in the region, some of them from their own homes.

"We had a strong position in the Middle East in Ciba-Geigy days, when our PMA technology was first developed for thermal desalination," Turgeon says. "In fact we have been the market leader for desalination additives in the Gulf for 20 years. We have very strong regional agencies and for many years didn't need our own office. Now we have reached the point where we need infrastructure on the ground to manage future growth, though we will still work with the agencies."

The company has averaged 20% year-on-year growth since it began and it was turning over \$130 million/year by 2008. 2009, inevitably, was tougher with the industrial downturn as customers closed or mothballed certain plants and consequently bought less in Q2-3, though desalination and potable water demand still grew.

As the upward trend in the industrial water treatment market resumed strongly in Q4 2009, so BWA managed to hit its targets then and again in 2010. Turgeon says that the company is already ahead of its plan for this year and should hit the general target of 20% growth this year, despite continued weakness in the world economy.

The membrane desalination market has been exceptionally strong in 2011. Thermal desalination has taken a step back because of fewer installations being built as a result of the recession; here, BWA is expecting only 8-10% year-on-year

growth this year. Industrial water treatment and oilfield chemicals remain strong.

Partly, of course, the general growth reflects the facts that people will always need water, that mega-trends favour increased use of water treatment chemicals and that industrial demand does not really go down unless plants shut. However, says Turgeon, it is also down to the "strong position we have with our business model and the strong suite of new products we are bringing on over the next 12-18 months".

One of these is the first ever fully biodegradable anti-scalants, which BWA has launched onto the market as Belclene 800 and 810. These were developed and tested at BWA's Manchester site in the UK. Typically in this field, says Turgeon, there is a trade-off between the biodegradability that is increasingly demanded for environmental and regulatory reasons and the ability to operate in severe service conditions. In fact, the two are often almost diametrically opposed.

BWA was always stronger in developing products for severe service conditions and its products achieved decent but increasingly inadequate biodegradability. The new product has been tested and proved to achieve more than the 40-50% biodegradability in a 30-day window that is laid down by the OECD, without losing its predecessors' severe service credentials.

Meanwhile, Bellacide 303 was granted EPA approval in Q1, the first new industrial biocide to do so in several years. It is now going through the process of gaining approvals in individual US states, while also undergoing the customer trials at bench and then field scale that are the norm in this industry and which can take several years in total. The feedback has been very positive to date, Turgeon says.

This is the second generation version of Bellacide 350, which has been on the market since 2007. It claims a broad spectrum of operation, is non-oxidising and is said to be particularly effective against hard-to-treat sulphur-reducing, slime-forming and anaerobic bacteria, *Legionella* and *Pseudomonas fluorescens*.

These bacteria can all cause significant problems for end-users because of their resistance to traditional biocides. They generally form colonies that lead to biomasses that biocides cannot penetrate, under which they can cause severe pitting and corrosion. They are commonest in oilfields and other areas vulnerable to process contamination of cooling water. The options for dealing with them are currently rather limited.

**Testing new bioedgradable anti-scalants at BWA's Manchester site**



The new product has also been approved in Mexico, though this took longer than the US. BWA is now examining its options in Europe. The company sees this as a promising market for Bellacide 350, but, says Turgeon, until all the protocols of REACH compliance testing are fully confirmed, it will not move forward with its application for registration.

"This is not a wait-and-see approach, we are actively engaging with the authorities while working on our testing and background data to ensure that we have a REACH-ready and approvable product," he says. "It is more that our regulatory people feel that we need more confirmation before going ahead. It is planned from an investment point of view and we are prepared internally. The issue is timing."

On Flocon 885, the new product for RO desalination, Turgeon is more definite. He announced it to the global market during the first week of September via a presentation at the IDA conference and exhibition, the largest event in the water purification field, in Perth, Australia. This was also tested in Manchester, coming out of the R&D programme on biodegradable anti-scalants, and subsequently with customers from lab to full industrial scale. It has been fully approved.

RO desalination products have traditionally been either threshold inhibitors - which are effective up to a certain concentration, beyond which they decline dramatically in effectiveness - or crystal distortion agents, which change the way that salts come out of solutions and crystallise in a way that stops them from causing problems.

Flocon 885 is both: beyond its inhibition threshold it functions as a crystal distortion agent. This is not a complete first, Turgeon admits, but he says that the product has the same credentials of biodegradability with severe condition performance as Belclene 800 and 810. It is also not phosphorus-based, which is a distinct advantage for environmental reasons.

A few other products are in the pipeline, though nothing that can yet be put into the public domain. With those that are, however, BWA believes that it will be kept busy enough for the foreseeable future. As well as being on course for 20% growth this year, it is still expecting to reach sales in the region of \$250-300 million/year, possibly more, by 2014-16.

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