Biotech tackles water shortages

A Dorset chemical supplier is hoping its unique technology can make a real difference to the lives of millions in developing nations for whom water is in short supply.

'It would be great if a small family-run company in Dorset could play its part in making a difference to millions of lives in India.'

Wessex Chemical Factors of Three Legged Cross, near Wimborne, has developed a new method of helping to maintain membrane bioreactors – a type of water recycling equipment commonly used in submarines and cruise ships. With backing from Business Link in Dorset who introduced the firm to the Passport to Export scheme, a representative from the firm has already joined a UK Trade & Investment export mission to Bombay and Calcutta to assess the potential for the new process in India, and to investigate distribution options.

"Membrane bioreactors - or MBRs can recycle waste water so it can be used for washing or irrigation, saving vital fresh water for human consumption," says Wessex managing director, Mike Borowski.

"MBRs filter water using a process of reverse osmosis, but the plastic semi-permeable membranes involved can quickly become clogged with contaminants which dramatically reduce their efficiency."

He explains that the traditional way of dealing with this has been to clean the membranes with aggressive agents such as caustic soda, but that this actually shortens the life of the membrane as well as producing environmentally damaging waste.

Initially working for a client in the marine sector, Mike and the team at Wessex came up with a softer, biological solution which makes MBRs cheaper and easier to maintain.

"Essentially we came up with a group of microbial spores - bugs if you like - which produce enzymes to break down the contaminants on the membrane. This is kinder to the membrane, and is self-managing to an extent in that the more contaminants there are, the more the bugs reproduce."

Although more expensive than caustic agents, Wessex's bug solution ends up being much cheaper to use because the solution is re-useable and, crucially cleaning can be more frequent allowing the membranes themselves last longer and work more efficiently, thus making plants of this type more economically viable. The solution is also fully biodegradable.

"We are very excited about the potential for this process which experts in the field tell us is unique,"

Mike Borowski, of Wessex Chemical Factors ... taking his technology to the other side of the world.

says Mike. "It would be great if a small family-run company in Dorset could play its part in making a difference to millions of lives in India."

Mike founded Wessex Chemical Factors in 1983, and the firm now employs 13 staff. Over the past two years turnover has grown by 40% to £450,000 - thanks in part to a Knowledge Transfer Partnership with Bournemouth University.

Admits Mike: "In the past we have been very good at coming up with bespoke solutions for our customers, but less good at realising the wider potential of the products we invent.

"The KTP with Bournemouth has helped us address that issue, and we are much more aware than before of the importance of marketing our products wherever they are required.

"And now, thanks to the Passport for Export Scheme - which has paid some of the air fares to India - we also have help in taking our technology to a part of the world where it is desperately needed and where it could actually save lives."

Wessex Chemical Factors
t: 01202 823699
e: info@wessexchemicalfactors.co.uk
w: www.wessexchemicalfactors.co.uk