

Miners Dig Hydrosmart

Hydrosmart water conditioning is being used more often by mining companies as a simple and sustainable method of treating water high in calcium, salt or iron levels. Domestic, agricultural, industrial users and councils now use it for irrigation and water softening/scale prevention.. Hydrosmart has been used to treat entire townships' water supplies; and in mining communities around Australia want to get away from chemical methods of dealing with hardness and problems caused by mineral compounds in their bore water.

The Hydrosmart System harnesses research from an aerospace project in Europe which wanted to prevent corrosion at high pressure in high heat.

In its early days, Hydrosmart set about assessing the wider impacts of bond-breaking by solving problems for local commercial growers: hundreds of vineyards including Pikes, Grant Burge, Geoff Hardy and d'Arenberg's have been using the system for almost a decade.

In successfully treating problems to do with salinity, scale hardness and oxidised iron, the Hydrosmart team applied the technology to new and different markets such as golf courses and council irrigation projects. Currently, approximately 15 Golf Courses (Bunbury, Manly, Cromer) and 25 councils (Walkerville, Rockhampton, Exmouth, Ararat, Pittwater) are successfully utilising the approach and solving diverse bore water or recycled effluent issues in each instance.

Based in Adelaide, Hydrosmart's aim is to highlight their ability to solve water issues for both domestic and corporate clients at a fraction the price of comparable older treatments using membranes, filters or chemicals.

By using a unique computerised ionic bond breaking approach, Hydrosmart utilises virtually no power, needs no consumables and costs under \$10 annually to run. The no-maintenance, no-operational cost approach now has

mining companies such as Rio Tinto, BHP and Crocodile Gold utilising it as a tool with which to treat various water issues. The Hydrosmart System is being used to soften calcium-rich bore water at one mine site's 600-person village while protecting Rio Tinto's camp's kitchens and ablutions. It's also protecting BHP's new housing development of 90 homes against bore water scale, hardness and corrosion issues in Newman and Port Headland.

Meanwhile, Crocodile Gold used it to protect dewatering pipe work, where a slurry of salts and compounds well above 100,000 ppm (nearly 3 x seawater) in the water, caused swift lining and blockage of the pipes, regardless of the preventative chemicals in use. Applying Hydrosmart technology meant the company was able to pump the slurry without the problem recurring or the need to use expensive additives. Algae and bad odour management was achieved by Thiess mining using mineralised water in its truck wash-down bay sump after years of issues using chemical treatments which did not satisfactorily meet their needs.

The product is increasingly finding acceptance in the commercial world based on a range of potential sustainable outcomes obtained from 13 years of wide-ranging applications.

Hydrosmart is currently undertaking further research with trials to be published on the mechanisms by which beneficial changes are made as they recognise the requirement for chemists, engineers and corporate policy-makers to be more confidently able to embrace their technology's application for larger scale projects where removal of consumables and toxic reject streams offers both exciting environmental potential and large financial long term gains.

More information:

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