



Deltawater
solutions

Solutions for the mining industry



**DELTAwater solutions are
technical experts in
solving water quality
problems such as scale,
salinity, iron and corrosion.**

Their products have 20 years of proven success in solving mining, industry, agriculture and household water-associated problems all over Australia and overseas. All DELTA products can treat unlimited volumes of water, are easy to install and are attracting worldwide attention.

The company is based in the industrial hub of Newcastle. The range of DELTA products are 100% Australian designed and manufactured.



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DELTAwater “solutions” for mining

In many mines across Australia, DELTA products are:

- > Reducing maintenance costs and time
- > Improving efficiency of machinery, pumps, reverse osmosis water treatment plants and washing and screening equipment
- > Improving the efficiency of pipes delivering water across mine sites
- > Improving efficiency of mine camp facilities such as dishwashers, showers, washing machines and toilets

How it works

DELTAwater solutions technology treats water problems such as scale, salinity, iron and corrosion – all problems which impact on the efficiency and maintenance needs of mine sites.

Mining equipment

The DELTA technology treats the problems that high levels of minerals such as calcium, hardness and magnesium create. They:

- > Stop scale buildup in pipelines – reducing friction loss and decreasing pumping costs
- > Prevent blockage of spray bars on belting systems
- > Stop scale buildup on solenoid valves – no more jamming or sticking
- > Stop scale buildup in pumps – no more pump failure
- > Stop scale buildup in motor cooling jackets and cooling towers
- > Stop scale buildup on screening and crushing equipment eg coal washeries
- > Improve dust suppression

Amenities blocks, laundries and kitchens

The DELTA technology prevents scale buildup in pumps, pipes, hot water systems and water-using appliances such as dishwashers and washing machines. It also “softens” the water, leading to improved performance of soaps, shampoos, detergents and cleaning products.

Mines where DELTAwater solutions technology is making a real difference:

Centennial Coal, Mandalong, NSW



Before DELTA

- Scale in pipelines leading to recurring shutdowns
- High scale buildup on water cooling jackets on mining machinery, leading to overheating



After DELTA

- Breakdown of scale in pipelines allowing water to flow freely and reducing shutdowns
- No more overheating on water cooling jackets due to reduction in scale buildup

Leighton Contractors, Dewatering at mines including Karlgoolie



Before DELTA

- Ongoing shutdowns due to restrictions and blockages in mine dewatering pumps and pipes



After DELTA

- Mine dewatering pumps and pipes clear of blockages and restrictions – no more shutdowns

Baal Bone Colliery, NSW

Before DELTA

- Scale build-up blocking solenoid valves, with ongoing sticking and jamming resulting in continual maintenance and excessive shutdowns

After DELTA

- Reduced maintenance and shutdowns due to a reduction in scale buildup



Hot Water Heat Exchangers
Before DELTA After Delta



Dishwasher
Before DELTA After Delta



Submersible Pump
Before DELTA After Delta

Mine type Zinc

Location Xtrata McArthur River Mine, Northern Territory

Solution Reduced maintenance at wheel wash



Installation of a DELTA on groundwater supply to the wheel wash immediately slashed maintenance hours at the facility, freeing staff for essential maintenance elsewhere at the Northern Territory plant. The wheel wash is a crucial part of the mine's operation. All vehicles, from light utes to heavy trucks, must go through the wheel wash for cleaning before leaving the site. Up to 200 vehicles use the facility a day. The maintenance staff had to change jets fortnightly or more at certain times of the year and the DELTA conditioner made an immediate difference. It paid for itself quickly. The mine doesn't have to do maintenance and doesn't have to touch the wheel wash infrastructure for anywhere between three to six months now.

Mine type Gold

Location Karlgoolie WA

Solution Cleared blockages from pumps and pipes



These pipes are from an old pit in a WA gold mine that is being dewatered. They show how salt-laden water caused build-up in pipes at the mine. To clear blockages, maintenance crews needed to use sledge hammers on the outside of the pipes to break up salt build-up at joints. This didn't always work so the pipes had to be cut to clear the line and then re-welded. The mine had also used chemicals to help but they only made the salt softer and failed to reduce build-up.

After installing the DELTA technology, this build-up was eliminated and water now flows freely through pipes and pumps. The DELTA technology is saving the mine time and money because they are no longer experiencing costly maintenance and breakdowns due to pipe and pump blockages.

Mine type Zinc and lead

Location Zinafex Lawn Hill, North Qld

Solution Reduced scale build-up in amenities block

A zinc and lead mine north of Mt Isa has used DELTA technology to tackle scale in crib rooms, kitchens, an ice machine and hot-water system. Before DELTA, this scale build-up in the ice machine required the mine to fly in a maintenance man from Townsville once a month.

After installing the DELTA technology, scale no longer formed on any of the equipment in the amenities block. A side benefit of the DELTA treatment was that the cloudy ice became clear.

DELTA has helped eliminate premature failure of hot water systems and blockages of pipes and fittings, and reduced maintenance costs and time.

CASE STUDIES

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