

# Schiavello saves water through smarter technology

## Water Conservation Co-Funding Case Study

Cleaner Production 

### Project Overview

#### PARTNER

Schiavello Group Pty Ltd

#### PROJECT TITLE

Powder coat rinse water recycling

#### OBJECTIVE

To reduce water use in the powder coating production process

#### HOW THE SAVINGS WERE ACHIEVED

Through treatment and re-use of rinsing water

#### TECHNOLOGY UTILISED

Filtration and ionic regeneration equipment

#### WATER SAVINGS

8 million litres of water per year

#### OTHER SAVINGS

50% reduction in effluent treatment chemicals (approx \$1200 p.a. saving)

#### TOTAL PROJECT COST

\$77,000

#### PROJECT FUNDING

\$38,600 from City West Water

#### PROJECT PAYBACK

- 8.1 years without City West Water funding
- 4.1 years with City West Water funding

#### PROJECT COMPLETED

December 2008

## schiaavello

**Schiavello is one of Australia's leading international designers and manufacturers of furniture products and interiors that enhance people's work environments. Since their foundation in 1966, by brothers Tony and Joe Schiavello, the family-owned company has grown into an international brand that is ranked amongst Australia's top 200 private companies.**

Schiavello manufactures and installs commercial office furniture and interiors throughout Australia and abroad. The company also designs and installs upmarket retail outlets, executive lounges at airports, dealing rooms and call centres.

Schiavello employs over 1100 people at their fully integrated design and manufacturing facility in Tullamarine. They currently manage over 87,000 square metres of facilities, which includes manufacturing plants, showrooms, corporate headquarters and sales offices.

Since 1997, Schiavello has led the Australian furniture industry in the development of Environmental practices, leading to the formation of its own Environmental Rating Tool [ERT].

Schiavello's manufacturing capabilities include state-of-the-art powder coating facilities. A significant amount of water is required in the metal powder coating process, primarily in the on line pre-treatment of the metal prior to powder coating, where the metal is cleaned by chemicals and rinsed with water. The rinse water is now recycled. It was calculated that the existing system used approximately 10 million litres per annum.

As part of their commitment to greener production processes, Schiavello management sought to reduce water consumption within their powder coating processes. As such, a supplier with the appropriate filter and re-generation technology was sourced and a submission was made to City West Water for a grant.



### City West Water Ltd

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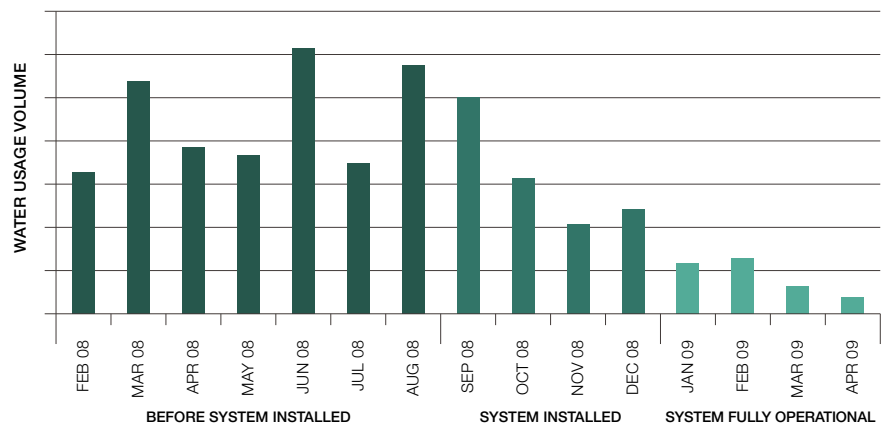
In order to make the water suitable for re-use, it passes through a thorough cleansing process:

- high volume particulate filter – to remove solid particles
- carbon filter – to remove chlorine
- twin bed de-ioniser

Once the water has been through these processes it is returned and reused in the pre-treatment rinse of the powder coating lines. Some additional water is used to make up for water lost through evaporation caused by the heat of the aforementioned process.

After several months of fine tuning a design, installation of filter and re-generation technology commenced (on one powder coat line) in September 2008. Whilst some adjustments to flows and cycles were required, the new system made significant water savings in the first few months of operation, as shown in the graph opposite.

MONTHLY WATER USE



Once the recycling system was up and running on a single powder coat line, additional equipment was installed to process the rinse water from the two main powder coat lines.

Now the second of the major lines is connected, and in future smaller additional lines will be added.

The rinse water recycling system is regularly monitored by Schiavello operations staff to ensure it continues to deliver the required water savings.



### Contact

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