

The ozone wash heralds better cleaning

After development with Queensland Environment Protection Authority's ecoBiz program, Sunshine Coast Laundry Services is set to be the first commercial operator in Australia to clean fabrics with ozone – a process pioneered by NASA that heavily reduces the amount of water, energy and chemicals used to clean fabrics in standard laundries.

We expect to reduce our consumption of water by 10 million litres a year, which is 40 per cent of our current usage.

Ozone, a naturally occurring gas that happens to also be a powerful disinfectant, is

injected into the cleaning water where it not only kills bacteria, but also chemically breaks down stains, making them more quickly soluble at much lower temperatures. This means fewer washing cycles, less water, less chemical detergents and less energy demand for heating and electricity.

Laundry services are one of the highest water consumers in commercial industry. Sunshine Coast Laundry owner Jeff Hayes said 'We expect to reduce our consumption of water by 10 million litres a year, which is 40 per cent of our current usage.

'And because ozone works in cold water for most wash programs, we will be able to reduce our total energy use by around 30 per cent. All up, with the savings in water, energy, chemicals and production time,



Ozone technology is good news for commercial laundries and the environment. Sunshine Coast Laundry

we expect to be able to recoup the set-up costs within about 18 months, and enjoy the ongoing savings for years to come,' he said.

Executive Director of the EPA's Sustainable Industries Division, Dr John Cole, highlighted that ecoBiz can offer organisations big benefits and potential savings, particularly those businesses that have big

water and energy impacts.

'The ecoBiz program encourages industry to better utilise their energy, water and waste materials, which can result in cost savings but will also help the environment and our sustainable future.'

More information:
www.epa.qld.gov.au

New spray coating method cuts printing industry impacts

A new 'Cold Spray' coating method developed by printing engineers the Kirk Group and researchers at CSIRO Manufacturing & Infrastructure Technology could revolutionise the manufacturing of printing rollers. It significantly lowers production costs and the use of toxic chemicals, water and excess energy.

In printer-roller manufacturing, spray coatings are usually applied at high temperatures and often via an electroplating process, resulting in side effects such as oxidation, vaporisation, melting, crystallisation, residual stresses and gas releases.

The new technology, however, allows metallic and non-metallic coating powders, or a mixture of them, to be sprayed by robotic arms onto surfaces at supersonic speed, and therefore at much lower temperatures.

Graeme Kirk, Managing Director of the Kirk Group, expects the Cold Spray technology now under successful trial in his plant to save the company millions of

dollars a year by replacing the current electroplating processes.

'The major advantages for us are that we get rid of chemicals in our process,' he



The new Cold Spray coating is still robotically applied, but at much lower temperatures. CSIRO

said. 'This will replace the conventional electroplating, which is not environmentally friendly at all and is also a big energy and water user.'

Dr Mahnaz Jahedi, Cold Spray & Tooling Team Leader from CSIRO Manufacturing & Infrastructure Technology, says there are useful applications for the Cold Spray technology in just about any industry – from the biomedical to the aerospace industries, in chemical and mineral processing, and for applications in the electronics, paper, oil, gas and glass industries.

CSIRO established Cold Spray facilities about two years ago to focus on developing the technology for Australian industry. It is now working on different applications with other companies such as aluminium mining and production giant Comalco, a division of Rio Tinto.

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