



FilterTalk

FRESH NEWS AND INFORMATION FROM FILTERCORP INTERNATIONAL LTD • SUMMER 2004

TWO JOBS THAT REALLY SUCKED!

#1 Cleaning Melter at the Smelter

At Tiwai Point in Southland, New Zealand Aluminium Smelter operates a primary smelter that uses pre-bake technology to produce some 330,000 tonnes of aluminium a year.

The end product is produced in reduction pots located in pot lines, through electrolytic reduction of aluminium oxide.

The pot shell refractory lining generally lasts around 2500 days after which it is removed from the circuit, transported to a de-lining facility and refurbished.

Prior to transportation, men used to clamber into pots with jackhammers, rakes and brooms to remove debris such as accumulate alumina and bath. And a vacuum system known locally as the guzzler did the best it could to clean up the mess and dust.

But it wasn't good enough.

Not only was there still the health hazard of dust, but also the remaining material contributed to environmental pollution. And in the process of washing the pot shell and superstructure, washings captured as sludge needed de-hydrating before the material could be disposed of.

What was needed was a transportable vacuum that could clean the shells in the pot line, eliminate workplace environment hazards, and enable recaptured dusts to be recycled. It would need to be



big, powerful, able in effect to suck a football through a hose.

Could it be designed? Filtercorp's designers and engineers took up the challenge and came up with "The Big Sucker" – a trailer mounted vacuum unit powered by an 83kW diesel engine, with an air volume capability

of 60m³/min handling material at rate of up to 320kg/min, over a distance of 60 metres. One of the biggest vacuums we've ever developed.

But would it work? Amid some healthy scepticism from on site workers, The Big Sucker was put to work.

"We cleaned out an end pit in the pot lines and apart from the bath and alumina, encountered solid bath that had leaked from the pot at some point," says NZAS's John Moynihan.

"We broke it up into hand sized pieces and fitted a 150mm hose to the vacuum and it handled it well. Operators said its predecessor, "The Guzzler," wouldn't have handled the job; they'd apparently tried it before. They were impressed with the performance and I think it changed a few personal misgivings they had about the machine."

#2 All Day Sucker for Industry

Consider this – a 24 hr central vacuuming system that can be wheeled away for everyday use or spillage cleanup.

Over the past 2 1/2 years we've developed PULSEVAC - possibly the first truly portable and self-cleaning industrial vacuum cleaner. Now it's at work cleaning up dust, ash, powder, and spillages in manufacturing and processing.

Drawing on our dust collector and bag house design experience, we've

developed a reverse pulse cleaner small enough to fit through a standard door and mounted it on large castors for easy moving.



Powered by a robust bypassing motor and fan unit, the system is housed in a lightweight, strong aluminium casing.

Pulsevac incorporates the latest technology in washable pleated filter elements that are continuously cleaned by compressed air using another Filtercorp developed system. The system can be linked to a 200 litre drum to clean up big spills.



Forres' Feedback

Where would we be without friends – especially in business?

Like most successful companies we've

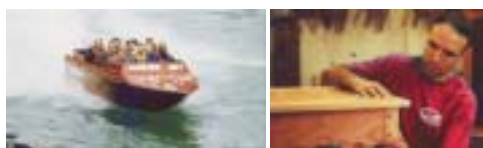
developed close relationships with many people and organisations over the years. But none have the curious switch of roles or longevity of our friendship with Garry Clarkin of Cook & Galloway, Hamilton. Over 27 years ago when we started off in business, Garry was our first client. But over the years as both our businesses grew and evolved the roles reversed. Now we are Garry's client and Cook & Galloway produce many of Filtercorp's engineering products, some of them gigantic to say the least.

Looking back, as one often does at this time, we're mindful that our business depends a lot on the Garrys of this world. Clients, suppliers and staff who have stuck with us through thick and thin since our early days as well as many new customers in New Zealand and around the world.

Apart from being able to deliver what a client wants, strong relationships are the lifeblood of any business.

That's why, whatever our association with you, we value it.

We hope 2005 brings you and yours the challenges, successes and rewards you wish for.



Two industries: similar solutions

Hamilton Jet, Christchurch recently decided to build a power generation plant. But a clean, reliable air supply was also required for the generating machinery.

The solution? An Aquavane louvre system with filtration behind – all designed, manufactured and installed by the friendly team at Filtercorp!

And a similar filtration solution provided clean air for the spray booth of Northland's Northwood Furniture Ltd whose products are laquer or stain sprayed to achieve a high quality finish.

Filtercorp supplied Aquavane louvres, PW aerovanes, and Laplock FP60 pocket bags. A virtual "Rolls Royce" of systems for some of the best finished furniture in the country.

University Challenge!

With buildings on the drawing boards as modern as tomorrow, and other facilities that date back to mid 19th century settlement, the University of Auckland offers diverse challenges for maintenance and upgrading.

The institution accommodates some 27,000 students and 3,000 staff in campuses and buildings around Auckland city noted for their huge variety of construction styles and technologies.

"Maintenance and upgrading are a constant battle," comments one of the Facility Administrators, Roger Hooker, "because, for example, we're faced with upgrading or maintaining ventilation systems that in many instances are way out of date by modern standards. About 50 percent of the systems lack standard sizes because of when they were built.

Some of the former merchants' and settlers homes around the university's hub were built in the 1900's; the main city campus with its clock tower appeared in the 1920's; there's the late 20th century-constructed school of medicine, and the Tamaki campus and new Glen Innes facilities. Currently under construction is the business school that boasts the city's second largest excavation – to be filled with 5 levels of underground car parks topped with 5 levels of accommodation.

The technology ranges across the earliest to latest in centralised, localised, and independent systems, to split units.

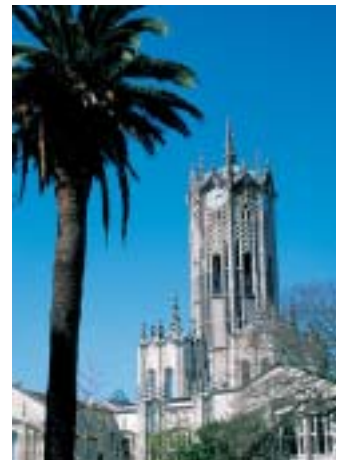
In filtration terms that's many thousands of filters and large pocket midge screen systems – and a continuous Filtercorp maintenance programme operates right through the year.

Filtercorp have been suppliers for many years – because of a unique ability to make filters to oddball sizes.

A marine engineer by background, Roger Hooker says he first encountered Filtercorp in its early days when he worked with an air conditioning company and Forres McPheat was beating the pavements drumming up business. He re-encountered the company when he joined the University maintenance team sometime later.

"When I first started at the University, the filter schedule was maybe 4 A4 pages," Roger comments. "Now it's 14 A3 pages with thousands of filters! Whoever I've dealt with – Forres, Blair, Graham, or any Filtercorp people – they've always had the knowledge and what I've learned from them is invaluable. If I call up and say 'I'm stuck,' they always come out on top. We had a few fires at one stage and needed filters rapidly. They worked overnight!"

"Understandably the University has been approached by a few companies over the years," Roger reflects, "but no one has really been able to match the service."



New filter kit improves tanker protection

An improved filter kit has been developed for retrofitting to existing Mercer pressure/vacuum relief valves used to vent Fonterra milk transport tankers.

The new kit eliminates possible ingress of contaminated airflow from external air born sources.

Fonterra needed improved filtered venting for safer transport of processed milk between processing plants in New Zealand.

Trials and testing of the new design were carried with Terry Moratti, Mercer; Bryce Johnsen, Service Manager Transport, Fonterra Morrinsville; Fonterra staff, and Filtercorp's Blair McPheat.

Mercer P/V valves are also used by NZ Armed Services' water tankers and other installations where pressure/vacuum protection is required to protect tank vessel integrity.



Concrete Improvement

Before

After

Dust can creep up on you and catch you unawares. Take this dust collector at Holcim Concrete, Lyttleton. Previously operating with little maintenance, the system became inefficient and dust swirled into the atmosphere. Enter Filtercorp's Service team that replaced worn out socks with the latest FM4DRF media socks. The system was restored so effectively with so little pressure drop that other plants on the same site are now ducted to the same system. And the atmosphere is no longer a work hazard.

NEWS FROM THE FILTERWORLD

MAKING WAVES. West Auckland's Waitakere Swimming Pool encountered an unexpected problem with chlorine corrosion of its ventilation systems. Filtercorp installed 316 stainless steel non-corrosive frames, and new ABS Laplocks to prevent corrosion in future.

SONIC SILO VENTS certainly seem to be flavour of the month. A number of units with fan sets and waterproof motors incorporated into their design have recently been shipped to a Fiji Concrete plant. And back home, Bridgeman Concrete, Hamilton placed an initial order of 7 SSV systems.

IT'S IN THE BAG! Top Coat, Christchurch, spray treats timber to seal in sap. But timber sawmills also generate dust – that ends up in the spray solution. Answer? A Filtercorp system that catches the over spray, filters out the dust and enables the solution to be recycled.

FOOD TECH held recently in Auckland was one of the best in which we've participated. At times we were a little overwhelmed by visitors – despite all of our sales team being on deck. Thanks for visiting us.

MEANWHILE we've just developed a system for de-dusting the tops of concrete mixer trucks that use dry bowl type plants.

AMBROSE GOLF TOURNAMENT Next year will be bigger as teams from Kauri and Te Rapa will be invited to compete. Meanwhile this year Filtercorp took the trophy again – team comprising Runa, Forres, Blair, and ring-in from Waikato, Russell James.

RELIEF FOR GROWING PAINS. Right in the middle of the pre-Christmas rush, long overdue factory extensions have been approved and are underway. The construction will increase our work area by 50 percent and accommodate bigger and better service and engineering facilities, as well as underground car park.

“ENGINEUITY:” Like to know how other companies in your field solved filtration problems? Ask us for a copy of our new brochure “Engineering Innovation and Excellence” showing some of the solutions we created for people like you (and maybe even you!) It's all about our services and solutions – and full of action, not talk. Email us at sales@filtercorp.co.nz

FILTERCORP'S WEBSITE gives you access to the widest range of filtration products and services in the country. Our web site is a living document and is being constantly upgraded with new products and technical details. Visit www.filtercorp.co.nz

Service programme saves big \$\$\$\$\$

"A couple of years ago, we were in dire straits with our dust collector systems," recalls Carter Holt Harvey Maintenance Planner Gary Thomas.

The medium density fibreboard manufacturing plant in Christchurch has 7 collectors and 3 silos whose socks were washed regularly.

But the plant was 28 years old and while the filtration system was appropriate in its day it was not coping with the demands of modern day production – and nor were its maintenance procedures.

"We had allowed contractors to self-maintain our systems – which wasn't proving satisfactory," Gary says. "We realised we needed a proper maintenance management programme."

He called in Filtercorp for a site summary that surveyed every aspect of the operation.

"We followed every recommendation," Gary says.



"After all we're board production experts, not filtration experts. Filtercorp looked at everything from the pulsing system, diaphragms, and seals to gaskets and rotary valves. Over the two years since the programme began we've made huge

savings – \$60,000 for example on compressed air used in bag housings, blow downs, pneumatic control systems, and so on. It also turned out to be much cheaper to replace socks than launder them."

"The best part is that we now have an effective maintenance management system developed in working with Filtercorp."

* If your organisation has dust problems that affect plant efficiency, operating costs and worker health, ask how a Filtercorp filtration system or maintenance management programme can save money and improve efficiency.

Thought for the Season

"If you spend a perfectly useless afternoon in a perfectly useless manner, you have learned how to live." Lin Yutang



FILTERPEOPLE

Maybe a 27-hour day might be more useful for Engineering Manager **Ken Skinner**.



Not only is he working on 14 projects right now, but also there is more

coming in every day. That's probably why he rarely has time to sit back and dwell on what he's achieved for clients or even jobs he's particularly proud of – life is a little bit like running from one job to another he says.

Right now is particularly busy as "everybody wants everything by Christmas or by the time they come back from holidays."

Blair McPheat commented recently that everything works when it leaves Filtercorp as a result of high engineering standards – and Ken is the man behind that engineering.

He joined Filtercorp in 1992 moving from an international company that specialised in air pollution control, industrial drying and paint finishing. He's credited with having designed and overseen the installation of some 600 baghouses.

After hours is full on too – with two daughters Genevieve and Denee, and son Andre who is a NZ representative trampoline gymnast. That's seen Ken become involved in club activities and he's a national judge. Until an accident, he was a keen windsurfer. He's still regularly out on the water – sailing Ross 930's, 31ft keelboats. And he's a keen musician, playing guitar with several cover bands.

"Filtercorp deals with projects, not off the shelf stuff," he says, "and I enjoy getting to know customers well, building relationships that help ensure they're getting what they actually need..."

Penmanship!

Enjoy this issue of Filter Talk? Then email or fax your feedback to us before December 25 and you're in the draw to win a brilliant Parker pen.

Congratulations to our last winner **Peter Gregson**, Danisco NZ Ltd, Wiri, Manukau City, and thanks for your comments.



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