PROFILE: EXPORTER OF THE YEAR

# Santa's helper lights up the world

Christmas wouldn't be the same without NOJA Power. LAURA CENCIGH-ALBULARIO reports on the company's dazzling record of growth

**Special delivery:** Santa goes over his Christmas list at the Santa Claus Village attraction in Finland. The popular tourist destination is one of the sites that uses equipment from Brisbane-based NOJA Power, winner of the Australian Export Awards Large Advanced Manufacturer category, and recipient of the Prime Minister's Australian Exporter of the Year Award

AS Santa sits down to make his list and check it twice this Christmas, his desk lamp will be powered by a grid which uses high voltage circuit breakers from Brisbane.

Finland (home to the Santa Claus Village attraction) is one of 72 countries to which NOJA Power Switchgear exports.

The company's low and medium voltage switchgear products are also used in every country in Latin America, in electricity grids in New Zealand, Sabah and Sarawak in Malaysia and in Fiji - just to name a few.

In addition, NOJA Power recently completed a five-year contract upgrading Scotland's entire power network. Altogether, more than 10,000 of its high voltage circuit breakers are currently in service across the globe.

Born global, the company's first client was from China, but NOJA Power's products are now used by almost every electricity utility in Australia.

"Without that strong domestic platform, it can be difficult to build the export side of the business," says managing director, Neil O'Sullivan. "There can be the perception that if locals are not using the product, why would it be used internationally."

Winner in the Australian Export Awards Large Advanced Manufacturer category, and recipient of the Prime Minister's Australian Exporter of the Year, NOJA Power has experienced 90 per cent annual growth since its inception just seven years ago, and now employs over 80 people.

Judges chose the company for the overall award based on its success across all areas, from its financial management and risk management structure, to its strong and sustainable export growth. Among NOJA Power's unique selling points is its range of products that eliminate the need for oil or sulfur hexafluoride (SF6), which are typically used in the industry. Both of these have negative environmental implications, and the latter is listed as the most harmful greenhouse gas known to man under the Kyoto Protocol.

Its other environmental strength lies in aiding the development of "smart grids" - systems which deliver energy from generation through to the final customer more efficiently.

Last month, US president, Barack Obama, announced 100 grants, totalling $US3.4 billion, to update the nation's antiquated power infrastructure to a smart grid, and as energy efficiency becomes a global priority, demand for NOJA Power's services is only set to grow. Mr O'Sullivan says the company has been doing extensive work in both developed countries updating existing grids, as well as in developing nations, establishing smart grids where none previously existed.

> "THE LEADING EDGE TECHNOLOGY WE HAVE CREATED IS BECAUSE OF OUR BIG INVESTMENT IN RESEARCH AND DEVELOPMENT"
>
> **Neil O'Sullivan**
> Managing director

"It means you're able to control the grid in a smarter way to reduce peak demand and increase reliability," Mr O'Sullivan explains.

He compares the peak hour demand problem to peak hour vehicle traffic, where cars crawl below the speed limit: "You can't do that with electrons, so you have to keep building bigger and bigger highways. The problem is that you might only need this 10 lane highway for a few hours a year.

A smart grid brings that need down by controlling loads and sharing energy more efficiently." The company also has a patented "arc fault containment and venting" system which ensures greater safety in the event of a fault. "Ordinarily, if it fails, it can be catastrophic," Mr O'Sullivan says. "A lot of live line work is done today, so, all up, our products are a safer, more reliable, environmentally-friendly, leading edge technology solution."

Behind every leap forward is a rigorous research and development process - NOJA Power dedicated most of its first year in business to research. "The leading edge technology we have created is because of our big investment in research and development," Mr O'Sullivan says. "We have to continue to invest to keep our products at the forefront of technology." It may seem like NOJA Power's Christmases have all come at once, but the company is in no way resting on its laurels. It currently holds under 10 per cent of the world market share in the industry, but Mr O'Sullivan says the company has plans to dominate a major portion within the next five years.

Its recently completed $7 million purpose-built facility will go some way towards this, doubling its production capacity. "Keeping up with demand has been a challenge," Mr O'Sullivan says. "When you experience growth at such a rate, all these aspects are a challenge. We're constantly advertising and hiring new people."

PROFILE: HALL OF FAME

# DIGGING DEEP TO FIND SUCCESS

JAMES DUNN

**Dr John Russell:** Into the ranks of the elite

HAVING picked up its third Australian Export Award, Toowoomba-based specialist mining equipment designer and maker Russell Mineral Equipment (RME) is joining the ranks of the elite exporters, being inducted into the Awards' Hall of Fame.

At first sight, it may look as though the company has simply ridden the resources boom to export prominence, but founder, Dr John Russell, says the seeds of RME's success go back much further than that.

"When I founded the company in 1987, I was thinking mostly about technology and management," he says. "There were some things that I had noticed while working for a big mining company that put a bee in my bonnet, and originally I was thinking about trying to solve them."

The technology side of it was the way in which processes could be sped up if new techniques were applied, leading directly to economic benefits for the mine. The management side of it was what happened to engineers. There was a lot of pressure back then for professionals to move from technical engineer to management, probably within five years of graduation.

"I figured that I'd have to do about 20 years of technical engineering before I had the right to tell anyone else what to do.

"I also noticed that engineers who did move into management were written off as boffins: you could spend your entire career underpaid, under-resourced and under-appreciated. That was a big driver, to start a company that appreciated engineers."

The technology side of it was even more pressing. "The company I worked for spent an awful lot of money and an awful lot of its people's time fixing problems with imported mining equipment," he says.

"The area that I decided to focus on was a very unsexy part of the industry: the relining of the crushing mills. It was an intensely manual maintenance task that used to shut down the whole operation of the mine: when the mine is not operating, the company's cash flow stops. It seemed fertile ground for a better approach."

That approach was to ask the unanswered question, says Dr Russell: How could this essential task be done better?

"Manually replacing worn parts was one of the most dangerous tasks on a crushing mill and the single largest contributor to shutdown time," he says. "The mills are lined with a chrome/molybdenum alloy, a very high-strength steel, very wear-resistant, but you probably have to replace half the lining every three to six months.

" It was obvious that the liner life dictated when a shutdown was going to occur and how many shutdowns there were a year; the relining process dictated the duration of the shutdown; and the combination drove annual availability of the plant."

Dr Russell realised that if you could break the back of the critical part of the process - the relining - the mill downtime could be cut significantly, because the other maintenance jobs on the concentrators could be done at the same time.

From this realisation came RME's core product, the suite of technologies that form its mill relining system. From a typical shutdown time of 160 hours, RME targeted 80 hours. Its standard mill relining machine has cut that to 60 hours, while its new twin machine has brought it down to 40 hours. "We targeted halving that 160 hours but we have quartered it," says Dr Russell.

This can release 24 per cent of extra annual full-plant operation a year, he says.

"We recognised the economic potential for the mine of reducing the mill relining time, because you can parallel everything else," he says. "That's why we dominate this market, even though we entered it at twice the price of our competitors, because we recognised an opportunity that they didn't, and we have overwhelming technological superiority."

Every job is approached the same way, Dr Russell says: RME identifies problems in mineral processing industries, develops solutions, and then designs and manufactures the mechanical, electrical, electronic, hydraulic and pneumatic systems necessary to solve those problems.

It has certainly paid off. RME has grown five-fold in five years and in 2009 is estimated to turn over sales of $50 million - almost 90 per cent in exports. Its core product is the relining system, although it has also developed a range of specialist mining and mineral processing machines.

"We rode what I call the second industrial revolution, which is what computerisation does to design and machine control, which meant that we were up to speed when the mining boom wave overtook that commercially, if you like," says Dr Russell.