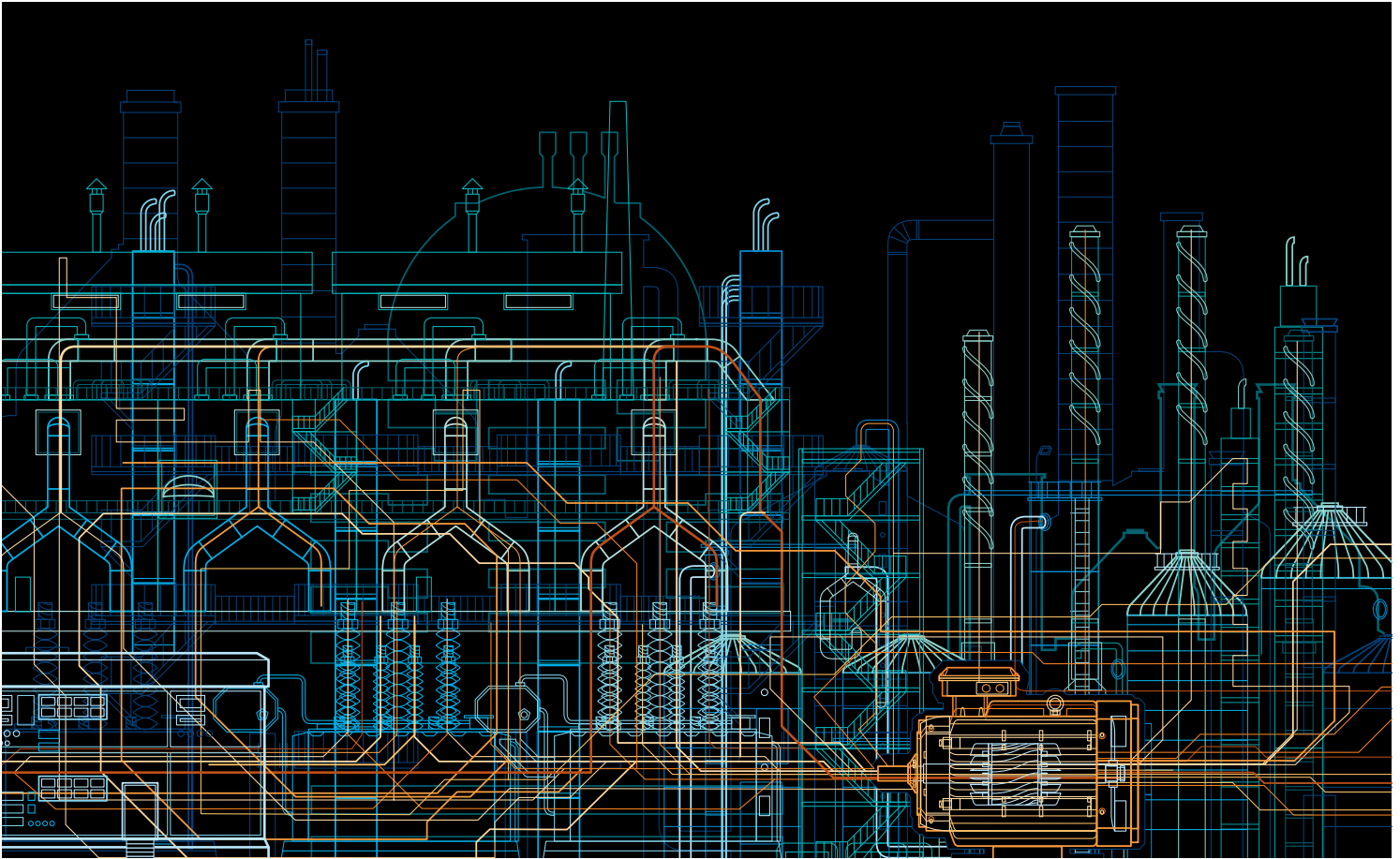


2|11

The customer magazine
of the ABB Group
New Zealand

source



Maximising performance through service

Feature story 08

ABB's speedy service helps keep fans refreshed for the Rugby World Cup

Top service for Top Energy 11

Quick thinking and excellent service recognised by Top Energy

Supporting engineers of the future 15

ABB was proud to sponsor the recent IEEE Asia Pacific Region congress

Power and productivity
for a better world™





04 **Steamfields reinjection**
ABB provides an integrated solution to Contact Energy



08 **Robot service**
Speedy service for DB Breweries

source 2|11



Grant Gillard
Managing Director
ABB New Zealand

I am pleased to be able to present you with a copy of our customer magazine Source, in which we detail some recent projects that have been executed by ABB.

ABB's strategy is grounded on the idea of applying our technology and expertise to support you - our customers - in the improvement of the productivity and reliability of your operations. We strive to apply ABB's technological leadership and innovation to provide solutions to the challenges that you are facing.

We notice that throughout the developed world there is a growing shortage of skills in many of our engineering disciplines. One result of this is that our customers, who perhaps previously had "in-house" engineering expertise, are increasingly relying on ABB and their other technology partners to provide the answers.

ABB has found that it can gain more leverage from the available skills by "productising" our offerings, so that one expertly engineered solution can be applied many times over.

This also provides for reduced implementation risk, lower cost, and allows for the "product" to be continually improved and enhanced.

An example of this approach is shown in the story on page 6, where our local expert engineer worked with the customer and ABB technology to provide an improved electric solution to a task that has traditionally been performed by hydraulics. The outcome is that the customer has now placed further orders for this solution, and ABB is investigating how this solution can be applied to solve other customers' challenges, for example in the mining industry.

We are very keen to work with you to assist you in your business, so please feel free to let me know if there is any way we can serve you better.

Regards,
Grant



10 **Safety STARS**
ABB wins team award at inaugural Transpower STAR awards



14 **Loud and Proud**
Proud supporters of Loud Shirt Day 2011



18 **On a roll**
Low voltage products go mobile

Maximising performance through service

- 08 **Feature story:** ABB's quick robot service response helped DB Breweries keep their production on track for the Rugby World Cup
- 09 Celebrating project success with Genesis Energy
- 09 From the Congo to Qatar, ABB's New Zealand service specialists travel far and wide
- 10 ABB substation service team wins at the Transpower STAR awards
- 11 Top Energy recognise and reward ABB for quick thinking and excellent service
- 12 Service profile: ABB's service centres and field service capabilities

Project completion

- 04 ABB helps provide generation growth for Contact Energy
- 06 Local engineering results in world first
- 07 ABB's compact control system keeps Southern Spars at the top of their game
- 16 ABB's robots help Dulux get back in business

ABB in the community

- 14 ABB employees muck in for Living Legends programme
- 14 Loud Shirt Day 2011
- 15 ABB supports future engineers as principal sponsor of IEEE congress
- 18 ABB's low voltage products on a roll with new mobile display trailer

New products

- 19 New products introduced to the market

ABB helps provide geothermal generation growth for Contact Energy

ABB’s product portfolio and tailored engineering solution capability has been showcased in the recently commissioned Te Mihi steamfield reinjection pump station for Contact Energy.



Te Mihi steamfield: The new geothermal station will be built in the area to the right of this picture

ABB’s involvement in the new Te Mihi geothermal power station

ABB is pleased to announce its supply of key products for Contact Energy’s new Te Mihi reinjection pump station.

ABB will be supplying generator step-up transformers, unit and auxiliary transformers, generator circuit breakers, low voltage and medium voltage switchgear and relays, and a distributed control system.

Keep an eye out for project progress in future issues of Source for more details.

Contact Energy’s wider Te Mihi project

The steamfield project is part of Contact Energy’s \$750 million programme of investments to expand the use of the Wairakei steamfield. It includes the construction of a new geothermal power station, Te Mihi, which will produce 166 MW. Once the station is completed, parts of the Wairakei geothermal station will be decommissioned, so the gain in output will be 114 MW, enough to power over 100,000 homes.

As part of ABB’s commissioned reinjection site project, the steamfield was developed so that separated geothermal water can be reinjected back into the ground. Environmental benefits resulting from this work includes the fact that Contact will substantially reduce the amount of separated geothermal water that is discharged to the Waikato River.

ABB’s reinjection plant solution

The solution needed to be suitable for the environmental conditions of the geothermal site, as well as offering the ability to be maintainable over the lifetime of the plant. It was also essential that ABB met Contact Energy’s strict performance requirements. ABB’s integrated offering included

engineering and architectural system design, supply of product, commissioning and conformance testing.

ABB’s ability to provide the balance of plant including transformers, medium voltage primary switchgear, low voltage switchgear, drives and the 800xA control system, gave Contact Energy the ease of dealing with one supplier, particularly for procurement and delivery. ABB’s automation technology is also future proof, in that the 800xA control system offers greater compatibility and functionality for future installations.

ABB’s liquid-cooled low harmonic variable speed drive (VSD) technology, previously only used in the marine and offshore industries in New Zealand, was also of particular benefit to Contact Energy, who needed to meet stringent environmental requirements and utility harmonic standards. With a 6 MVA VSD load in one plant, and only six drives in total, this plant includes the largest low voltage VSDs installed in New Zealand at 1400 kW.

The drives had three key advantages. The first advantage was that the totally enclosed liquid cooled cabinet meant the VSDs were not susceptible to high levels

of hydrogen sulphide on site, therefore treatment of the air to remove hydrogen sulphide was not required for drive cooling. The second key advantage was that the compact size allowed a smaller switchroom to be constructed. Thirdly, the low harmonic drives allowed harmonic standards to be met without external filters or special transformers.

Contact Energy’s Mathew Staddon, commented, “ABB delivered a solution for the electrical requirements for the Te Mihi steamfield reinjection plant that was cost effective and on time. The option ABB gave to have 1.4 MW LV liquid cooled VSDs will reduce ongoing running costs and simplify operations.”

To combat the site’s highly corrosive environment, ABB’s transformers were coated in a specially developed paint system to ensure greater protection, and tinned coating was used for the control wiring. These measures ensure the longevity and performance of the products in harsh conditions.



ABB’s liquid cooled low harmonic variable speed drive technology



ABB’s Unigear medium voltage switchgear



ABB’s transformers – locally manufactured in New Plymouth

Local engineering drives future electric winch solution

Local engineering expertise, coupled with ABB’s drive technology resulted in a world-first electric towing winch solution in New Zealand, onboard a harbour tug.



PT May during its testing phase



The 37 kW towing and dredging winch

Winches have traditionally used hydraulic drives, which generally involve higher installation costs due to hydraulic piping, give lower efficiency, and are less environmentally friendly. Shipco New Zealand manufactures tugs and winches for the Australasian market, with the majority of sales coming from Australia. The winches range in size from 75 tonne to 200 tonne braking capacity, with linepull capacities of between 10 and 50 tonnes, and with line speeds varying from 20 metres per minute to 100 metres per minute.

In 2009, ABB New Zealand approached Shipco with engineering evidence that demonstrated electric winches are the solution for the future due to their control capabilities and cost-to-benefit ratio. Shipco gave ABB an opportunity to prove its winch drive technology and direct control performance on their smallest tug, which has a 37 kW towing winch with 75 tonne brake capacity, 10 tonne line pull at 20 metres per minute.

First towing winch operating with ACS800 winch control program without PLC

In June this year the first tug, named PT May, equipped with an ABB winch system went through German Lloyd’s certification testing in New Zealand. ABB supplied a complete winch cabinet system with redundancy changeover, protection, safety and marine

standard approvals, using an ACS800-01 drive and ABB’s low voltage gear. The boat, owned by Pacific Tug (Aust) Pty Ltd, is now headed to work in the Australian marine and mining industry.

Kelvin Hardie, General Manager, Shipco, said, “The electric winch offers very good control at both low and high speeds and is very smooth and quiet in its operation. It is also very cost effective compared to hydraulic winches when comparing installation costs. The fact that the variable speed drive allows for intermittent loads of 100 percent performance above normal rated loadings is a very big plus. Electrical drives are environmentally friendly with the chances of oil pollution occurring being reduced by some 90 percent. If all goes well with this prototype, Shipco will make electric variable speed drives their preferred and recommended winch power application.”

On the back of the PT May’s winch performance, ABB has just received an order from Shipco for a second winch system for the sister tug of PT May called PT Mary.

Gayomurd Desai, ABB’s automation engineer says, “We are now in the process of productising our offerings to Shipco in four power ranges to make it easy for them to quote, procure, commission, remote monitor and maintain them in the future at a reduced cost.”

Drives milestone

Two million production mark reached
The two millionth ACS550 drive rolled off the production line in April 2011, making it the first for an ABB drive series to reach that production milestone.

The drive is distinguished via many built-in features that make it easy to integrate in a wide range of processes and applications.

Its control panel simplifies commissioning, maintenance and drive data access. The patented swinging choke reduces harmonics.

Multiple motor control modes and connectivity to all major automation systems make it easy to integrate into many different processes.

“Especially now, when increasing energy savings is a huge priority, our customers have found that this drive is a great solution.” says Pekka Tiitinen, head of ABB’s global low voltage drives business.

“It took us five years to reach the one million mark, and then three years to hit two million.

“We’ll keep listening to our customers, innovating, and providing the reliable products they need to make sure that we keep these exciting milestones coming.”

Compact system, vast capabilities

ABB’s compact HMI solution is helping Southern Spars stay at the top of their game in manufacturing world class yacht masts.



A reliable and user friendly control system



Inside the 52m long autoclave, the longest of its kind in the world

Southern Spars specialise in the design and construction of carbon fibre spars and components, rigging, and rig servicing. As the industry pioneer, Southern Spars built its first carbon spar in 1990. Its operation extends to four corners of the world with centres in the USA, Denmark, Spain, and South Africa, and headquarters in Auckland, New Zealand.

One of Southern Spars’ key pieces of machinery is their 52 m long autoclave, the longest of its kind in the world, used for curing the carbon fibre masts and components. ABB was tasked with upgrading the existing autoclave control system which was outdated, no longer supported and not user friendly.

ABB’s solution

The automation system controls the temperature and pressure inside the autoclave, using up to 25 different steps

in each of the 30 curing cycles – therefore a reliable and user friendly control system was integral. ABB performed an upgrade of the control system with a new AC800M PLC controller, a Panel800 touch screen HMI and a CompactHMI 800 operator work station.

Jonathan Burke, Site Service Manager, from Southern Spars, said, “As with any critical process change, I needed to be confident that the new controller would function as required and be installed without any real problems. ABB ensured this through factory acceptance testing and operator staff training prior to installation, which had me convinced that there would be no unwelcome surprises.”

The new CompactHMI 800 operator station allows operators to adjust the temperatures and pressures of each curing cycle, as well as providing access to historical information on multiple channel product temperatures

and the autoclave internal temperature, pressure and vacuum readings during the cook cycle.

This historical data is retrieved from the Compact HMI 800 station and exported to provide a report for each batch to show that the specified standards have been reached. The control system was also tailored to include an automatic fire control sequence and additional manual controls to improve usability, reliability and safety.

The new system was thoroughly tested with the customer before installation, and ABB was able to complete installation with minimal disruption to their Southern Spars’ production capability.

Jonathan said, “ABB delivered on time in full and I am most appreciative of the end result. Other than the planned down time, we had no other stoppages and no disruption to our production.”

ABB helps keep fans refreshed for the Rugby World Cup



Rugby World Cup 2011 special edition Heineken cans

ABB quickly came to the rescue when DB Breweries called for urgent repairs to one of their ABB robots that was packing special edition Rugby World Cup-themed Heineken cans for the tournament, which was kicking off the next day.

Within 24 hours of the call, ABB’s robotics engineer Graeme Paulin was onsite, repairing the robot and getting it back into action within the day.

DB Breweries installed four ABB IRB 640 palletising robots 13 years ago in their Otahuhu plant, with two of the four robots palletising bottle beverages, while the other two, including the one that needed an urgent service, palletising canned beverages.

Geoff Butt, DB Breweries Planning Engineer, said the robots were a key part of the process in helping prepare increased volumes of Heineken in preparation for the Rugby World Cup tournament:

“The Heineken cans were of particular importance to us as the stadiums only allow cans for the games, so it was essential that we got back to production fast – we couldn’t have the rugby fans going thirsty!”



One of ABB’s robotics specialists on the job



ABB’s robot hard at work palletising the cans

ABB celebrates project success at Genesis Energy dinner

ABB’s project team was invited by Genesis Energy to a dinner in honour of the team’s hard work on the hydro control system upgrade, completed by ABB earlier this year.

Tracey Hickman, Renewable Energy Manager for Genesis Energy, said it was important for their team to get together with the contractors who worked on their recently completed large projects, in a relaxed atmosphere to celebrate their significant success. “This is something we should all be extremely proud of and it was important to Genesis Energy that we had the chance to say thanks and let people know how much we appreciate their dedication”.

The upgrade saw the control system of a hydro electric power network covering five power stations, in remote locations around New Zealand’s North Island, replaced with ABB’s 800xA control system, including multisystem integration to take this vital electricity generator into the future.



Left to right: Dennis Preston (Associate Director Power & Energy, Aecom), Vettivel (Vetti) Balasubramaniam (Project Manager, Genesis Energy), Tracey Hickman (Renewable Energy Manager, Genesis Energy) and ABB’s Stuart Cowie, Nidia Bernal and John Kennedy

Service specialists

From commissioning jobs on oil rigs off the coast of Congo, to servicing a shore-power system for a Sheik’s second wife in Dubai, ABB’s New Zealand service specialists are required internationally from time to time, particularly from the power electronics R&D/manufacturing facility in Napier.

ABB’s power electronics equipment, including voltage conditioning, and shore-to-ship frequency conversion technology, is produced locally for a predominantly international ABB market, and has applications within many countries including China, Congo, US and Singapore.

Shore-power in Syros

Graham Ward, ABB electronics technician (high power) was recently sent to service a shore-power system, produced in Napier in 2006, on a shipyard that was originally the Greek Navy’s base for building wooden battleships. ABB’s system is used in the shipyard to permit the use of the (onshore) utility (400 V 50 Hz) to power ships berthed at the port, which may have different voltage and/or frequency requirements. Therefore it is a key piece of equipment that needed repair and maintenance thanks to the harsh sea air, rain and sand-blasting dust that are part of the environment it is situated in.



ABB’s Graham Ward working in the Mediterranean heat

ABB wins “Best Safety & Health Performance (Team)” at Transpower STAR awards



ABB’s Ian Russell, Dan Harris and John Kinvig represented their team to receive the award

A high level of safety performance and a culture of openness were the key to success for ABB’s Power Systems – substation service team based in Christchurch, who was awarded the Best Safety & Health Performance (Team) award at the inaugural Transpower STAR awards in Wellington on 10th August.

STAR awards
The STAR (safety, thanks and recognition) awards were developed by Transpower to recognise achievement and excellence in safety in the national grid high voltage transmission industry. They are open to all Transpower employees, sub-contractors and consultant employees.

ABB’s Power Systems division – Substation team
ABB’s winning award category recognises teams with a strong collective safety culture, that consistently demonstrates a commitment to safety.

Describing ABB in the official winners booklet, Transpower stated: “This team has demonstrated a strong commitment to safety, applying health and safety systems to an exemplary standard, including

training, participation in collaborative health and safety meetings, carrying out SOTs and near miss reporting. The team has an exceptional record of seven years without a lost time injury, and has set its own stretch target to extend this to 10 years.

“The judges were highly impressed by the team working together to sustain such a high level of safety performance over a long period of time. Much of this was attributed to a culture of openness, and celebrating successes.”

Matthew Sarten – finalist in the Apprentice of the Year category
Although he missed out on the Apprentice of the Year award, ABB’s Matthew Sarten was also honoured at the awards as one of the three strong finalists in this category.

Top service for Top Energy

Quick thinking and excellent customer service by ABB’s Hamilton service centre has been recognised by Top Energy, from the power station to the boardroom.



The generator arriving at the Hamilton service centre

Having a strong relationship and history with ABB, the Hamilton service centre was first choice when Top Energy’s largest geothermal turbine driven generator had a fault at the beginning of the year during the Christmas holiday period. Based on the physical size, this was the largest generator that ABB had ever had in the centre.

Les Parker, Generation Manager for Top Energy, said, “When faults occur in generation they cost both in lost revenue, and unplanned maintenance, so you need to work as fast as you can to resolve them. To do this you need a capable and committed team. This is exactly what Steve Lowther and the team at ABB’s Hamilton branch are. They pulled out all the stops to get the generator turned around in the shortest time possible, whilst maintaining high quality standards.

“Each member of the team displayed tremendous focus and drive to complete the work. I felt Top Energy and ABB worked as a team, not as a client and contractor, which made a huge difference. Again, thanks to the team - you did an excellent job which was recognised in Top Energy from our station staff all the way to the boardroom”.

The workshop functioning with only limited holiday coverage staff was just one of the challenges faced by the team when they headed up to Ngawha, north of Kaikohe, to look at the fault. Unfortunately, the generator could not be fixed onsite and ABB and Top Energy were faced with the task of loading, transporting and unloading the 49 tonne, 25 MW unit for urgent repairs.

While awaiting delivery of parts, ordered from around New Zealand and overseas, ABB went the extra mile for the customer by using the opportunity to suggest and provide a dry ice cleaning process for the generator. This was a process that has not previously been performed by ABB on a generator in a workshop setting in New Zealand.

Dry ice cleaning is a form of abrasive blasting, where dry ice, the solid form of carbon dioxide, is accelerated in a pressurized air stream and directed at a surface in order to clean it.

Top Energy was impressed with ABB for completing the job in only 15 calendar days, despite the limited staff and suppliers on Christmas leave. To show their appreciation, Top Energy threw a BBQ for the staff at ABB in Hamilton.

Top Energy

Top Energy is the most northern power company in New Zealand. With operations throughout the Far North, the Top Energy Group has interests in electricity generation, lines distribution, electrical contracting and customer contact centres.

The Group’s lines network stretches from North Cape down to Waipoua Settlement on the west coast and across to the Russell Peninsula on the east coast, supplying electricity to over 30,000 power consumers.



ABB's field service is a combination of local knowledge and global expertise

Service profile: New Zealand Service Centres – Hamilton and Christchurch

With two locations ideally located for both the North and South Island industry, ABB's Hamilton and Christchurch Service Centres are purpose built to cater for all manner of electric motor, generator, pump and transformer maintenance and repairs.



ABB's team in action

With heavy duty equipment, including two cranes, 10,000 kg and 50,000 kg, and two ovens, the 27 m² main oven and an 8 m² burn out oven, ABB's Service Centres are able to produce a quality result in a timely manner, to fit any customer's requirements.

With over 40 experienced service specialists, the Service Centre's capabilities include all manner of rotating electrical machine repair, hazardous area machine repair, AC and DC rewinding, AC and DC overhauls, dynamic balancing and transformer servicing.

Rotating electrical machine repair

The Service Centres are able to provide machine repair to a range of motors, including AC, DC, low voltage and high voltage. Having been involved in New Zealand for over 30 years, the team are well experienced with local knowledge to solve problems efficiently with long-term reliable results. ABB regularly provides motor, generator and pump repair services to customers from a range of New Zealand industries including power generation, pulp and paper, cement, dairy and the oil and gas industry.

ABB's commitment to ISO standards, to which ABB is accredited, enables our Service Centres to provide consistent quality,



allowing for traceability and control, a reliable operation, and in a timely manner, with useful and accurate reporting information.

Hazardous area machine repair

ABB's Service Centres are accredited with the NZ "S" mark for the repair and overhaul of hazardous area equipment, and work strictly to the AS/NZS 3800:2005 standard. For the service and repair of any hazardous area equipment, ABB's personnel are trained and experienced in all common flameproof techniques such as Exe, Exn, Exd and DIP.

AC & DC rewinding

The Service Centres are experienced in all manner of AC stator, rotor and DC motor rewind and repairs.

To reduce any thermal degradation of cores, all of the stators we rewind are placed through our large burnout oven first to ensure a temperature controlled burnout of insulation material. To further ensure the integrity of laminated steel stator cores, core loss testing is performed on all stator core suffering poling or short circuit damage.

Field service

ABB's Service Centres are complemented with highly skilled field technicians.

With experience and inductions at many New Zealand industrial sites, our team

Did you know - New Zealand Coil Centre

Based in Hamilton, ABB has a New Zealand Coil Centre that has the ability to manufacture quality coils to suit any requirements for a national and international market.

The Coil Centre is the manufacturer of quality replacement formed coils for motors and generators, up to 13.8 KV, to international standards. The Coil Centre primarily creates three different types of coils: stator coils (MICAMOLD and MICASEAL), armature coils and rotor coils.

provides expertise in site maintenance in a range of industries including dairy, pulp and paper, manufacturing, mining, steel and power generation.

ABB's field services include:

- Diagnostics and repairs of pumps, motors and gearboxes
- Fan inspections, repairs and maintenance, including bearing replacements
- Small plant installations
- Machinery installations including fans, motors, generators, gearboxes and pumps
- Industrial shut maintenance
- Inspection and repair of journal bearings
- Light fabrication, welding and machinery
- Precision laser alignment to recognised standards:
 - Inline couplings
 - Belt and chain drives
 - Offset (cardan) shafts
 - Multiple machine trains
- Thermography
- Vibration

ABB's field service team also offers extensive expertise in correcting machine alignment through fast and accurate laser technology.

ABB supports Living Legends



Around 30 ABB employees from Auckland, including family and friends, recently joined thousands of New Zealanders all across the country to celebrate our special landscape by getting involved in a Living Legends planting day.

Living Legends is a community conservation project that is coordinating 17 native tree planting projects throughout New Zealand during Rugby World Cup 2011.

Each planting is being run in conjunction with provincial rugby unions and

dedicated to a regional ‘Rugby Legend’ who has been selected by the union.

Living Legends will plant almost 85,000 trees nationwide in 2011, and is making a five year investment to plant a total of 170,000 trees by the end of the project in 2015.

Loud and proud



Each year, ABB proudly supports Loud Shirt Day, the annual appeal of The Hearing House and the Southern Cochlear Implant Paediatric Programme (SCIPP), two charities that work with deaf and hearing impaired children.



All the money contributed by employees is matched dollar-for-dollar by ABB. This year ABB and its employees contributed over \$1,200 to this worthy cause.

New report 2011

Trends in global energy efficiency

The International Energy Agency estimates that energy efficiency measures can deliver half of the cuts in emissions that are needed over the next 25 years to slow global warming, compared with a business-as-usual scenario.

This new publication, sponsored by ABB, is a contribution to raising awareness about the importance of using energy more efficiently and the opportunities that exist for industry and power utilities. To download the report, please visit www.abb.com/energyefficiency

ABB supports future engineers

ABB was proud to be the principal sponsor for the recent IEEE Region 10 Student, Graduates of the Last Decade (GOLD) and Women in Engineering (WIE) Congress (R10SC) held in Auckland from 7-10 July 2011.



ABB's Grant Gillard (second from right) at the opening of the event with (from left) Hengjie Wang, Josheel Pran Lal (Vice president, IEEE organising committee), and Professor Michael Davies (Dean of Engineering, The University of Auckland)

The R10SC united 150 students, young professionals and women in engineering, computerscience and allied fields from the Asia Pacific Region, from all countries between Japan and Pakistan, to explore ideas, develop skills and discuss issues in their profession. With a theme of “emerging technologies”, the host of the event was The University of Auckland’s IEEE Student Branch.

Hengjie Wang, President of the IEEE student branch and organising committee, commented: “The IEEE fosters an environment that stimulates the collaboration of world-changing technologies, and inspires future leaders; both being an integral part of the R10SC. We were thrilled to have ABB as our Principal Sponsor, and everyone involved thoroughly enjoyed the professional, technical and social aspects of the R10SC.”

In the principal sponsor’s address, ABB’s New Zealand Managing Director Grant Gillard welcomed the delegates:

“Engineering is at the core of our activities,” said Grant. “We are proud to support the

next generation of engineers, and the theme of emerging technologies is an essential part of our own business strategy.”

Simon Walton and Dustin Murdock, from ABB’s Power Electronics team in Napier, represented ABB as part of the official programme, presenting a paper each in the emerging technology seminars on the second day.

This is the first time the event has been held in New Zealand since its inception in 2002, and this was the first time ever that the event has combined the student, GOLD and WIE programmes.

IEEE

The Institute of Electrical and Electronics Engineers (IEEE) is the world’s largest professional association dedicated to the advancement of technological innovation and excellence. It boasts over 400,000 members from 160 countries, including over 90,000 students and over 50,000 members of Graduates of the Last Decade (GOLD), IEEE’s affinity group for young professionals. Region 10 (also referred to as the Asia-Pacific region) comprises 57 local geographical sections and

student branches at over 500 universities. It encompasses a geographical area from South Korea and Japan in the north-east, to New Zealand in the south, and Pakistan in the west. With a membership of over 73,000, it is the largest region in the IEEE.



Hengjie Wang presenting Simon Walton (top) and Dustin Murdock (bottom) with thank you gifts at the official congress dinner



01

ABB robots help Dulux get back in business quickly following flood

Haden & Custance, a leading New Zealand robotics integrator, helped paint manufacturer Dulux get back into production quickly, providing six new ABB robot systems in an unprecedented time, following the Queensland floods in early 2011.

The biggest flood in over 40 years

During extensive flooding in January in Brisbane, Australia, Dulux's Rocklea plant, which includes a production facility, distribution centre and office building, was filled with up to two and a half metres of water. The flooding and several centimetres of residual silt and mud resulted in immediate temporary shutdown and significant damage to the plant. With Rocklea being Dulux's principal decorative coatings manufacturing facility in Australia, they required timely action from Haden & Custance and ABB to get them back into full production as quickly as possible.

Robots to the rescue

ABB's robots were no stranger to the site, with the installation of six ABB palletising robots, three 4-axis and three 6-axis, by Haden & Custance almost 10 years ago, along with conveyor and stretch-wrapping lines. Haden & Custance was quick to respond, mobilising a large team of 24, made up of electricians, mechanical tradesmen and automation engineers, to Brisbane to assist Dulux on site immediately following the flooding. After initial assessment it was deemed all six robots could not be repaired and needed to be replaced.

Working in partnership with ABB's robotics team, a system solution was designed. Understanding the urgency for Dulux to start production again, ABB liaised with its robotics manufacturing arm in China to procure six new IRB industrial 6640 6-axis robots.

The robots, weighing 30 tonnes collectively, were airfreighted in an unprecedented six week delivery – this is less than half the standard delivery time, which in early 2011 was peaking due to an increased industry demand for ABB robots worldwide.



02

Production back on track

After weeks of installation and testing, and 24 weeks after the flooding, Dulux's plant has returned to full production.

In terms of assisting production, five of the robots and accompanying conveying equipment palletise full paint pails, with the other robot de-palletising empty paint pails ready for filling. There are three different head types attached to the IRB 6640 robots – four have mechanical fork type for the palletising of metal pails, one has a vacuum type for palletising of plastic pails and one magnetic type for de-palletising the metal pails.

In addition, the system includes new robot technology, with the benefit of more up-to-date powerful programming capabilities.

Martin Kirk, General Manager – Sales & Marketing for Haden & Custance, comments they were pleased to offer Dulux such a tight turnaround time to get production back up and running. "When you compare that the initial project in 2000 took two years to install a full production facility for Dulux, this was not an easy task."

"To react to the customer urgency, our team worked very long hours, but despite this never lost their focus and completed the job in a professional manner."

Iwan Lane, Engineering Manager at Dulux, says using the original installer had been a huge advantage in terms of their responsiveness.

"The experience of Haden & Custance has been fantastic and a testament to the Kiwi attitude. The professionalism and capability of all involved was outstanding."

About Haden & Custance

Haden & Custance, based in Havelock North, specialises in the design, manufacture and automation of materials handling equipment for a wide range of industries including food, dairy, meat, building, paint, paper board and beverage.

About Dulux

Dulux Australia and Dulux New Zealand are owned by Australian Stock Exchange listed DuluxGroup Limited. Dulux has been manufacturing in Australia since 1918 and in New Zealand since 1935. Dulux is Australia's largest paints manufacturer.

01, 02 The Rocklea plant under water and silt damage to the facility's production line, January 2011

03 Thanks to its state of art design, ABB's IRB 6640 is the robot of choice for applications needing high production capacity and high payload

04 Dulux's robots in palletising action



03



04

Low voltage products on a roll

ABB's new mobile trailer, showcasing ABB's range of low voltage products, was rolled out earlier this year and has already travelled the length of the country. Offering hands-on demos and product information, feedback received so far on the mobile trailer has been positive.



The mobile trailer in action at the National Safety Show in Auckland, with ABB's safety fencing and robot products in front of the unit



Low voltage products and building automation products on display

"We had a very positive response from our customers when the trailer visited us last month. It was a good opportunity to get some technical information and to see the products in an informal, relaxed setting", comments Stewarts Electrical Supplies, Palmerston North Branch Operations Manager, Kevin Sandbrook.

"It was great to get ABB's products trailer to our Fonterra site so the team could see the products and meet the sales engineers in between planned jobs, without having to carve out a chunk of the day by leaving the site. Seeing the equipment powered up is definitely better than looking at glossy product brochures", says Glenn Brewerton, Lead Automation Engineer at Fonterra's Research Centre.

Melvin Penman, General Manager for ABB's Low Voltage Products division comments, "ABB's key point of difference is that we're well placed to provide complete technical solutions, with first-class service and back-up. ABB's products are high quality and we're really excited to be able to offer our customers the convenience of a mobile product trailer."

Phone: 09 966 4600 or
Email: lvproducts@nz.abb.com
to book the trailer to visit your site.

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New products

Read about the latest products in the market.

Low voltage products

PQF active filters

Enhancing system performance and efficiency

The increasing use of non-linear loads in all types of industrial and commercial applications has resulted in the introduction of potentially harmful harmonics into the power network. This can lead to overheating of cables, motors and transformers, cause damage to sensitive equipment, tripping of circuit breakers and blowing of fuses, as well as cause premature aging of the installation.

ABB's modular PQF active filters provide a reliable and cost-effective solution to this problem by continuously monitoring the current in real time to determine what harmonics are present. The filter then injects harmonic currents in the network with exactly the opposite phase to the components that are to be filtered. The two harmonics effectively cancel each other out so that the feeding transformer sees a clean sine wave.

Further info: lvproducts@nz.abb.com



- Advantages**

 - Filters up to the 50th harmonic
 - Harmonic attenuation factor greater than 97%
 - Free choice of harmonic selection
 - Automatic adaptation to network impedance changes
 - Dual filtering parameters for standby supply scenarios
 - Fault and event logging with real time stamp
 - Automatic network analysis to simplify commissioning

Low voltage products

Busch-iceLight®

Low power consumption and durability

Busch-iceLight® is the latest LED flush mounted light system and comes with matching switches and wiring accessories. Combining high-quality design with pioneering LED technology, iceLight distinguishes itself through low power consumption and durability.

Providing maximum energy efficiency, iceLight has two light colours for different atmospheres and applications and can be wall mounted or ceiling mounted. The intensity can be pre-set depending on the application.

Inserts in the form of shapes, logos and symbols are available so iceLight can be used as stylish illuminated signage for hallways, lifts, and bathrooms, in commercial or semi-public spaces. Simply insert between the light source and the clear lens to achieve a high quality, decorative lighting effect.

Further info: lvproducts@nz.abb.com or www.abb.co.nz/knx



- Advantages**

 - Harmonious interaction of light, architecture and function
 - Blends with other ABB/Busch-Jaeger switch ranges
 - Two light colours for different atmospheres and applications
 - Inserts to achieve high quality, decorative signage



Optimise process performance without compromising energy efficiency.

Water and wastewater utilities are facing many challenges from managing leakage and pressure, optimising pump performance, improving potable water quality, reducing energy consumption and CO₂ emissions to lowering maintenance costs. ABB drives, motors and starters, control gear and instrumentation are designed to help tackle these, and other, challenges. To discover how to improve your utility's energy efficiency and productivity, visit www.abb.com