'Miss Electropar'

Targeting the title as we ready for the 2007 assault!

2nd overall was the fantastic final result for 'Miss Electropar' in the 2006 NZ Formula Honda championships, that wound up recently in Tauranga, bringing to a close an exciting few months in the company's debut season.

Electropar teamed up early in 2006 with Driver Mark Helm and Co-Driver Micheal Knight to put together a competitive package, and run a Formula Honda race boat in the exciting, NZ Formula Honda Championship, part of the Armacaup NZ Offshore Powerboat series.

The Formula Honda class is made up of identical Sonic 1900SS hulls, powered by 2.4 Litre 150BF Honda motors. The class featured over 16 teams with international and celebrity drivers such as Aaron Slight taking on the challenge.

The series was run over 8 rounds throughout the north island in 2006, with planning in the works for a extra few rounds in 2007.

Mark and Micheal proved that along with 'The Power To Perform', consistency and reliability were the order of the series, never really finishing outside the top 5 in all 8 races.

The series went down to the wire at Tauranga, with the top 5 boats all in with chances to finish their championships on a high, but in the final wrap up 'Miss Electropar' finished amongst the points with the achievement of 2nd overall, the just rewards for the well prepared and committed team.

During the 2006 series many Electropar customers took the opportunity to join us and the crew at various events under the Electropar tent, to take in the action first hand. The events are a true family affair and Electropar will be at each and every round in 2007 with the BBQ and refreshments chilled to entertain clients and their families.

Every single race event is action packed with pre and post race entertainment for the whole family. With Electropar being a successful family based business, we welcome the opportunity to treat our customers families to a day of excitement and fun at the waters edge. The series dates should be confirmed before the next 'Control Torque' so stand by to pencil the race nearest to you into your calendars.

Yes it was a windy day!
'Wellington March 06'

Passing under the support helicopter 'Whitianga April 06'

Skimming across the waves, fully trimmed airtime 'Whitianga April 06'

The 2007 series will also see a new and improved 'Miss Electropar' take on the even bigger fields. Next years series is predicted to possibly have an increased field of more than 25 Formula Honda's, taking to the water. Not wanting to rest on the achievements of this year the team will be taking on the challengers with a brand new boat that is currently being built. The new hull and race package, along with the experience gained during 2006, makes the team a huge threat and already quietly tipped as the team to beat in the up coming series.

If you wish to join the Electropar Racing team and receive regular updates, press releases and information on special events for the 2007 series please contact Murray Howell on murrayh@electropar.co.nz to be added to the teams email newsletter and join the support crew.

Miss ELECTROPAR

New Zealand: Freephone: 0800 733 735 Freefax: 0800 733 736
Australia: Freephone: 1800 141 502 Freefax: 1800 141 503
www.electropar.co.nz email: mail@electropar.co.nz

September 2006 - Issue 6.1

Electropar Ltd and KBS

Protecting NZ Steel from Fire

Electropar has commenced supplying KBS Passive fire stopping products to the NZ Steel Glenbrook Mill.

Cable penetrations through walls and floors of electrical switch rooms, control rooms and cable tunnels are being fire rated to 2 hours as per AS1530 Pt 4, using the four key KBS Passive Fire Protection System Products.

'No.1 Motor Room Switchboards'

KBS Coating to stop flame spread along the cable system and **KBS Panel**, **Mortar Seal** and **Seal Bags** to stop fire, smoke and gases entering or exiting the building. KBS Coating does not derate the cable system and can under IEC 331 fire rate the cable for up to 52 minutes.

The application of KBS panel and cable coating pictured, is within the Hot Strip Rolling Mill, Down Coiler and No 1 Motor Room.

Situated at Glenbrook, south of Auckland, New Zealand Steel's fully integrated steel mill produces a range of flat steel products for both domestic and export markets. New Zealand Steel uses locally sourced iron sand and coal to produce about 620,000 tonnes of steel a year.

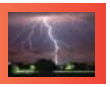
If there are any questions regarding this application or other KBS materials please do not hesitate to contact Simon Pratt on (09) 274-2000 or email: simonp@electropar.co.nz

'KBS Panel and KBS Cable Coating'

What's is store this edition ...

Lightning

It's an act of God – Insurance will pay – Why worry?



Insurance is one thing but what about the other non recoverable costs of a lightning strike, especially the lost time and productivity while a Switchboard or Control system, or maybe a building are rebuilt.

It is sometimes necessary to rewire large sections of the plant as the lightning has taken out all the earth wires in the power cables as it looks for a good ground connection.

Electronic equipment such as motordrives, instrumentation, computer and telephone systems can often be destroyed by the voltage surge that can travel through all wiring when the mains are hit.

Can this be prevented?

It certainly can. Lightning Protection around a building includes not only the electrical points of entry to the building but also any metallic services such as water, air or gas pipes. Other areas to protect include the cables for TV, telephone, and the internet. Lightning is random; it will take the quickest and easiest route to ground. If that happens to be the cable from the satellite dish then it will go through all equipment in its path until it finds its destination.

The largest direct lightning strikes can be up to around 250,000 Volts. It is unusual to be hit by a strike as large as this but even a small strike will do significant damage.

Methods of protection:

Mains conductors are protected using Dehn & Sohne Type 1 (direct strike) lightning arrestors as close as possible to the point of entry. These draw the strike directly to ground by-passing and protecting the buildings cabling.

Incoming metallic pipework:

This can be protected by high integrity earthing and equipotential bonding of all the pipework and flanged joints. In Hazardous areas where there is pipework protected by Cathodic protection Dehn & Sohnes Isolating Spark gaps should be fitted across flanged joints and other insulated areas. These will allow the lightning current to travel across the gap but will be insulated under normal operation.

If lightning strikes cables in close proximity to an installation there will be an energy surge that will affect equipment connected to the conductors that are hit - Some say within 2 km of a strike. Protection can be effected by adding Type 2 (indirect strike) combined Surge protection and arrestor devices to the power distribution network and Type 3 Surge protection devices to the power outlets.

For all Telecoms, TV and computer networks the Dehn & Sohne "Yellow Range" of surge protection devices are designed to protect the individual pieces connected to the networks.

This protection is relatively straight forward with simple user friendly devices specifically designed for their roles. The primary strike arrestors are in a simple package suitable to be connected in parallel to the incoming mains with a direct connection to ground. In the next protection area the combined Surge/Arresters are also easily installed on the standard 'Din rail' found in most switchboards. In information technology areas which include TV, special items are needed to fit into the wide variety of cables that are in use. Included here are surge protection devices for coax cable, Cat 5 cable, telecoms cable racks, 19" rack panels , computer D plugs and many more.

And we haven't even mentioned 'air termination' (lightning rods) and downconductors.

For more information on the Comprehensive Dehn & Sohne Range of Lightning Protection talk to Garry Pugh on garryp@electropar.co.nz

DEHN

'Sydney, Australia. This spectacular lightning display captured on film displays the importance and need for lightning strike protection.'

IS pac Ex-i Isolators

The success story continues

The highly successful R.Stahl IS pac intrinsically safe isolator system, has recently been enhanced with additional features, extending it's flexibility and usability.

The first of these is Marine approval, to expand the use of the IS pac on ships and offshore drilling rigs. Secondly, an SIL (Safety Integrity Level) assessment was performed in accordance with IEC/EN 61508 gaining a SIL rating. These measures, when taken together, have made it possible to expand the range of applications and provide a high level of confidence in the products when used in critical, process automation applications.

Since it was launched the IS pac isolator range has been extremely popular. Design features that were forward thinking at the time of launch have made the IS pac a worthwhile addition to any process plant. Features such as the compact two channel housings, just 17.6mm wide, through to the use of tailor made carriers designed to interface directly with many proprietary process automation systems.

These features provide a solution with guaranteed financial savings over other products and facilitate simpler process system planning. This is important in a market where there is increased pressure on engineers to reduce costs and produce faster design to operation times.

IS pac-carrier

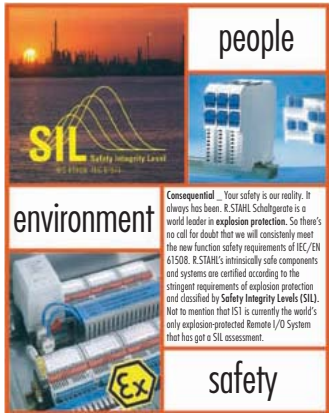
At this point we should mention the pac-carrier, just one of a number of innovations. The carrier system should be used when large quantities of signals need to be transferred via isolators. Manually wiring a large number of individual modules to the control system would be too time-consuming and costly to be done during installation. With the pre-wired 'pac-carrier' this time is saved.

One factor not to be underestimated is the increased probability of unintentional wiring faults. R.Stahl's pac-carrier solution is the answer, adapted to the control system and the number of isolators. Installation cannot be quicker.

The pac-carrier features rugged construction designed for today's process installation, integration of the IS pac modules and absolutely error-free connections by comparison with conventional "motherboard" solutions.

With the pac-carrier it is Stahl who prepare the interface to the process control system. Connection to the DCS can be as simple as connecting a plug.

For larger projects complete panels can be supplied completely pre-wired to the terminals in whatever size and type of cabinet is needed.



The IS pac range is a comprehensive, technically advanced solution for all projects where Isolators are required.

IS pac Solutions

IS pac just one of the I.S. Solutions available form Electropar and Stahl.

Also available is the "IS 1" a multiplexed solution for projects with significant I/O. It puts the DCS virtually into the field, beside the field devices saving thousands on wiring, cable trays and labour.

For Fieldbus systems we have the "IS-bus", with simple I.S. fieldbus couplers expanding the number of devices that can be connected to a fieldbus.

The HMI (Human Machine Interface), for hazardous areas, monochrome or colour, push-button or touch screen, a few commands through to full computer capability in the Ex zones.

If it's an I.S. Solution that's needed talk to us. We have the solution to suit applications.

For more information on the Comprehensive Stahl IS pac Range and Applications contact Mike Barker on mikeb@electropar.co.nz

STAHL

Control TORQUE.

ELECTROPAR
THE POWER TO PERFORM

Duelco

Danish safety relays made to fit the bill

Electropar has been the NZ distributor for Duelco safety products since 2003.

Duelco is a Danish company with 20 years experience in machine safety analysis and products. Their range includes emergency safety stop relays for door monitoring, light curtains, safety mats and magnetic switches along with a range of safety timers with delayed outputs and two handed control gear.

Electropar now has ex stock Duelcos range of 12Vdc and 24Vdc emergency stop relays, these slimline 'din rail' mounted units, have 2 channel operation with short circuit protection. They have 3 x 230 Vac, NO, 6 amp contacts, have manual/automatic resets, and LED indication of supply and output status.

These units comply with EN, MD, EMC, and ISO standards. For safety requirements the units have forced contacts, internal/external redundancy and doubling of output contacts.

Steelbro a NZ manufacturer of innovative container handling solutions has been using these units in their sidelifter container lifting trailers. Due to the low (12 & 24Vdc) voltages available in automotive applications, Steelbro has relied on the Duelco product to provide safety monitoring on their trailer units.

For more information contact Brad Whitaker on bradw@electropar.co.nz

Electropar Profiles

Behind the Power to Perform!

Garry Pugh
Sales Engineer.

Garry has been involved in the electrical industry since starting as an apprentice electrician in the UK in 1975. His career in New Zealand started 24 years ago when emigrating from England, first working as a contract electrician at the Glenbrook Steel Mill, then on to maintenance with Otis elevators and Masport.

As a sales engineer Garry has had 4 years in the lighting industry and 6 years in Control and Automation. Garry took a big OE with his family returning to the UK to work as a Project Manager and Sales Engineer before returning to New Zealand to become a Instrumentation Sales Engineer.

Garry has been with Electropar since February 2006 in a Sales Engineer role and is looking forward to the challenges ahead.

Ashley Brown
Customer Service.

Ashley Brown (The Colonial), infiltrated from Richards Bay, South Africa in 2001 and is still a hard Natal Sharks supporter. (poor deluded chap)

Since setting up residence in New Zealand, Ashley has been employed in the Mechanical and Electrical industries now welcoming new and varied challenges as a proud member of the Electropar Organization.

Construction Site Emergency Warning Systems

Safety system for Wembley Arena construction site

Injury accidents on Construction sites are a high profile topic within the Safety industry as we are all aware. Anything that can be done to create a safer working environment in this high risk field of work must be looked at carefully, especially if there is a chance that lives or injuries may be prevented.

E2S one of the worlds leading suppliers of high output, ruggedised warning sounders, have developed for John Sisk, the UK based family owned building contractors and civil engineers, a radio based audible warning system to give open area protection on the high profile, Wembley Arena construction site.

The Wembley system enables any worker to give a warning if a fire or other dangerous incident occurs. It consists of six E2S 120dB sounders arranged in three clusters of two

devices, which can be initiated by any of the seven manual call points (MCP's) around the site.

The 'MCP's, each one attached to a radio transmitter, communicate with the radio in the master control panel. When it receives a 'break glass signal' the master control panel activates some or all of the sounder clusters, via radio, to battery backed slave panels with local wiring to the sounders.

The sounders have an effective range of 70 metres in an environment with an ambient noise level of 70 – 80dB and specific tones for "small fire or other safety incident" and "full site evacuation." The central panel constantly monitors the 'health' of all elements of the system with a check signal received hourly from every radio device.

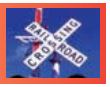
Such systems will be particularly useful on a temporary basis when construction work is being carried out on large or congested sites.

The system is modular and easy to configure when deployed at a new site. Break glass/radio units can control the sounder clusters, enabling the protection to be extended as required; the break glass call points and sounders can be located up to 5000 metres from the MCP's.

For further information regarding this and other safety warning applications contact Mike Barker on mikeb@electropar.co.nz

Proven Warner Reliability

PB400 Warner brake keeps the barriers moving



ONTRACK
New Zealand Railways Corporation

When Ron Williams of Ontrack Signal Repair Centre in Christchurch contacted Electropar's Christchurch office, he had a problem.

His problem was that the barrier gate arms on the railway crossings were not staying up, which resulted the field staff being called out to repair the barrier arm. This also caused drivers to get upset with the barrier gate arms being lowered and no trains coming!!

When he investigated the problem, he found the ratchet wheel part on the gate control mechanism was failing.

He turned to Electropar for a solution, and after trialing different electromechanical brakes, he settled on the Warner PB400, 24 volt brake.

To date there are around 65 units in use throughout the country, the longest having been in service for five years.

This modification has resulted in no further call outs of this nature and the PB400 brake has again proven it's reliability. He is so happy with the brake that all new barrier arms are now fitted with the PB400 brake prior to being installed.

Please refer any enquires for the Warner range of products to your local Electropar office.

Zero-Max

Cost effective mechanical variable speed drives

Electropar has been the agents for Zero-Max for many years and has had great success with their range of mechanical variable speed drives.

These units consist of an input and output shaft, a rugged sealed case and a control lever which can be locked in any position, to maintain any desired speed.

The Zero-Max Drive units operate via changing the distance that 4 one way clutches rotate the output shaft when they move back and forth successively. These units are designed to permit speed control for any low input horsepower application from 1/4 to 1/2 Hp up to 2000 rpm. They can give a 4:1 speed reduction and are capable of giving constant torque through out the speed range. They do not need electricity to operate are cost effective and do not need technical skill to set them up.

They have a 0-400 rpm infinitely variable output , which also means that they can be stalled safely with Zero rpm output, which makes them ideal as a manual clutch unit.

The Zero-Max units come in a number of sizes, suitable for torque ratings from 12 inch Lbs to 300 inch Lbs with counter and clockwise output shaft rotation available.

These units are ideal for agricultural, printing and food processing applications.

Taege Engineering Ltd from Sheffield in Canterbury has had great success with these units on their agricultural seed drillers and found them to be tough, reliable with no maintenance needed.

Insuring their exporting success with their seed driller machinery.

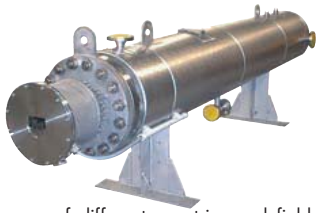
For more information contact
Brad Whitaker on
bradw@electropar.co.nz

Elmess - Thermosystemtechnik

German quality delivered to you through Electropar

As a manufacturer of industrial electrical heaters, heating systems, monitoring devices and control units, ELMESS-Thermosystemtechnik GmbH & Co. KG, located in Uelzen in the North of Germany, stands for reliability and quality - worldwide. And for safety, as one of their specialities is manufacturing explosion-protected devices according to ATEX directives. ELMESS-Thermosystemtechnik GmbH & Co. have worked in this field for over 60 years.

Their customers include small, medium-sized and large companies from a wide



range of different countries and fields as well as consulting engineers for national and international projects.

Typical fields of application are the petrochemical, chemical and pharmaceutical industries, oil and gas exploration and distribution and many others. ELMESS offers technology for global players and specialists, and of course for everyone who is aware of the major importance of safety in electrical heating technology.

ELMESS range of products includes immersion heaters, lube oil heaters, motor anti condensation heaters, air heaters, circulation heaters for liquids and gas, gas preheaters, space and finned tube heaters, thermostats, level switches, electronic temperature monitoring equipment and complete control boards for electrical heaters.

Electropar can offer customers tailored solutions and services. From the first consultation through to organising the manufacture of high-quality devices and the delivery of replacement parts.

With ELMESS-Thermosystemtechnik GmbH & Co. we offer you everything you need to ensure the optimal operation of your systems and consequently the success of your company.

LMK Thermosafe Jackets

Effective heating jackets that keep productionlines boiling over

Electropar are the NZ agents for the LMK Thermosafe range of flexible heating jackets. These heating jackets are suitable for a range of drums, tubs, kegs and IBCs, and can be used with a variety of container materials, plastic, metal, fibre etc.

The jackets are made from a polyurethane coated nylon and are fitted with adjustable retaining straps and quick release clips, making it easy for the jackets to be changed from one drum to the next.

The heating is done by a silicon insulated spiral wound resistance element which is woven back and forth along the length of the jacket, to give even heat transfer.

The jackets are controlled by a adjustable thermostat, either 0 to 90°C or -5 to 40°C and are supplied by a double insulated 5 metre wire braided supply lead.

The supply voltage can either be 230Vac or 110Vac and you can also have other options of over–temperature thermal cutout and power indicating lights.

LMK has a wide range of jackets ex stock suitable to fit the Standard 25, 50, 100, 205 litre drums as well as 1000 litre IBC containers.

A number of their 44 gallon 400 watt units have been purchased by Oceana Gold for their Macraes Flat gold mine. They needed to maintain their 'Shell EP2' bearing grease at its correct viscosity regardless of outside temperatures and also obtain an even temperature transfer throughout the grease. The drum base heaters they had been using were not achieving this even heat transfer.

The solution was the LMK heating Jackets.

For more information contact
Brad Whitaker on
bradw@electropar.co.nz

LMK Drum Heaters

Emulsion hazardous area drum heater for Nuplex Penrose

Project Review.
Company: *Nuplex New Zealand*
Description: *590 dia x 890 Steel drum*
Quantity: *One*
Volume: *205 litres*
Haz. Area: *Yes*
Group/Rating: *Zone 1*
Supply: *230Vac*
Chem Name: *Surfactant (wax)*
Ambient: *10°C*
Operating Temp: *75°C*
Max safe temp: *90°C*
Time to temp: *2 - 3 hours*

Comments.
This was an ideal application for the Thermosafe Induction Drum Heater, which is the fastest possible way to heat a steel drum in a hazardous area.

The heater is approved as a complete system to the ATEX and IECEx standards, with a "T" rating of 170°C (T3) when operated at 240 volts ac. T4 and T5 ratings are also available at alternate voltages.

Most surfactants have auto-ignition temperatures well above our standard 170°C rating, so you can deliver maximum power to ensure shortest heat-up time, although we usually suggest one of our power controllers as a useful addition, so that you can balance power for (say) overnight operation or new product trials.

Many customers find that they do not need as many Thermosafe heaters as they first calculate, due to the power and efficiency of the units. The TH heater is completely encapsulated, so will not be damaged by hot splashes of wax, and will basically last forever. It is also very efficient in its use of electricity, at around 2kW, but delivering the same effective heating capacity as about 5kW of radiant heater.

Our client has proven this solution in practice and has since ordered a second Thermosafe.

For more information contact
Gary Pugh on
garyp@electropar.co.nz