Issue 55/08

ANASPEC INFO

In This Issue...

CONTACT ANASPEC TO SUBMIT ARTICLES OR TO SUBSCRIBE.

TRADE INFORMATION WELCOME! IT'S ALL FREE.

THIS NEWSLETTER IS PUT TOGETHER BY REAL LIFE SERVICE TECHNICIANS. ALL GRAMAR, SPELING AND PUNCTUATION ,ERRORS ARE INTENTIONAL. THE REST IS ALL INCIDENTAL.

BACK ISSUES ARE AVAILABLE AT WWW.ANASPEC.CO.ZA
TEL: +27 (0)11 794 8340
FAX: +27 (0)11 794 8349
SUPPORT@ANASPEC.CO.ZA

WE NEED MORE MICROSCOPISTS IN SA

14 years of Anaspec's history in South Africa and we have never been able to employ a young engineer with Microscopy experience. Even though we have now employed some 20 something technicians over the years. If we are one of the small players in the field how many technicians do we need per year? Not just technicians, but we seem to be taking researchers and academically trained scientists as Sales people. Why? Because it is only masters students who get real experience on top end microscopy.

Is that a sign that we need to look at the teaching facilities and ask; "Should we not be creating these 'technicians' at teaching institutions ?"

The main teaching institutions keep on buying more high end microscopes for millions of Rands and expect the trade to support them! Whith people that we get where?

Lets take the case of South Africa taking on a High resolution TEM. There was a great workshop in Cape Town, hosted by the NRF, to discuss this need and it was quiet clear that a 300KV TEM is needed, but when it came to how many TEM career options we create, well that is a problem because of pay and opertunity for researchers and we loose them to overseas offers and Commercial carrers.

If The NRF is going to spend a few Million supporting the installation of a TEM of this caliber, what provision do we have to ensure that it is well supported technically? Well there is the promise of the suppliers. Yea right! (And that comes from us as a technical support company.) South Africa is suffering under the skills shortage in all aspects of business. The ESKOM debarcle is a recent example.

Expecting the suppliers to train up engineers is a bit unrealistic really. TRADE DOES NOT OWN ANY MICROSCOPES!

"We just all practice on the installed systems!" is a comment that sort of rings true.

I believe that it is time that there is a drive to create technicians in microscopy. Not technical support only but operators of microscopy techniques and equipment.

The technical universities, or what was tekinons, are set up to deliver technicians, but how many of them have high end microscopes?

So basically we need to employ more trainee technicians at University microscopy facilities to get them hands on training. Well that is my opinion anyway.

So that opens up a whole bunch of questions. Who pays for it, where do you find these people, who pays for the damage they may cause, what pay can you pay them to keep them employed.???

Well if we had the answers it would already be in place! I am suggesting that we discuss this at MSSA in Botswana.

If we look at the average age in each EM unit, look at the money the DST wants to spend on science, then we should be looking at the future and be part of creating it.

Looking at starting some joint ventures with trade and the facilities that are taking on new high end equipment, I am sure we could find a way to empower more young people into microscopy as a career and at the same time reduce the service costs to the cash strapped Universities.

Hope to discuss this new crazy idea at MSSA with you.

luc@anaspec.co.za

Work a**w**ay from the **W**ife corner

Don't forget to let us know if you have found a few of your own favourite websites.

www.anaspec.co.za

Free antivirus for every one is possible. **Www.avgsa.co.za**
As long as you don't have a domain name email address version 7 is free.
With our slow internet system here, you may need a downloading assistant to bring down big files. Try **www.freedownloadmanger.org.**
This is very handy as it will allow you to continue from where the line may have been dropped
Then you may need better firewalling. **Www.pctools.com** and try their fire wall. May be better than the MS one.

KILOWATTS KVA AND WHAT SIZE GENERATOR DO YOU NEED!

For all of us living in the new "business unusual" South Africa we are now all looking at the question of power and whether to generate or to un-interrupt the power.
Given that for the next 5 years, at least, there could be planned or unplanned power cuts whilst our only power company finds the 4Mwatts that we need, it is time to start being power conscious and realize how we can do our bit to save power.

To start off with we need to understand the concepts.
Basically any electric device using mains draws power to do the work.
Power = Voltage x Amperes. = VA
In south Africa we have a mains supply that should be 230v ac .
Ac means that the supply is alternating and in SA its at 50 cycles per second or Hertz (Hz).
A device now connected to the voltage will draw a certain current to do its work. This current is measured in Amps.
The two together can be seen in the same way as you would saw through a log. The voltage is the movement of the saw across the log. The amperage is the force you exert downwards on the saw to start cutting through the log.
Power is therefore the effort needed to move the saw back and forth and then make sure you cut into the log.

So for example a house hold kettle uses about 7 to 9A. Thus the power it takes is 230v x 7A = 1610VA or 1.61KVA.

Some other examples:

Geyser(Hot water cylinder)	~ 12A or 2.8KVA
100w Light Bulb	~ 0.5A
TV	~ 1A or 0.25KVA
Swimming pool motor	~ 4.5 to 3.5A or 1.1KVA
Fridge	~ 1A or 250 VA
Electric blanket	~0.24A
PC System	~0.7A
Steam Iron	~5A
Cooking Plate	~9A

Ah but wait… we express the power used in Watts. So what is the difference between Watt and a KVA.
The KVA we use to calculate switches and circuit breakers as it is the current drawn and the voltage used. The Watt is a factor of the KVA to get the "job done". This is know as a power factor.
Going back to the sawing of the log, the total work done is the cutting of the log and the amount of heat the poor man generates whilst he is cutting the log.
So too it is true of an electrical device. It needs a certain amount of current to perform its function and if the power factor of its power supply is efficient, all the current will be used to do the work. All the heat you feel coming from a system is the loss of current by the power supplies...doing the work.

Older electrical equipment, as well as most lower end computers and video equipment use capacitor input power supplies and have a power factor anywhere from .55 to .75 times the VA rating.
Example 1
You have a 10KVA UPS. Your data center has racks of low end self-assembled computers with a total estimated rating of 9000 watts. Your UPS will most likely fail, as the power factor is probably around .70. You would need at least 12.85KVA to adequately backup the data center. (9000/0.7)

The power factor of a device depends on whether it is an inductive (motors heaters etc) or capacitance load (power supplies etc). Long formulas etc. wont go into that.

Bottom line is that in a house hold, if your electrician tells you that you are drawing 4kW (4 killo watt) then if you wanted to buy a generator to power that up you should look at a worst case cenario of a power factor of about 0.7 and therefore the generator size would be in KVA.
KVA = KW/0.7 = 4000/0.7 = 5.7KVA generator.
Or the other way round.
A 2.5KVA generator will give 1700Watts of power to your house hold items. That would be a kettle/cooking plate, a TV and a few energy saving light bulbs. (but on the limit.)
A 5.6KVA generator would give 3.9KW of power which could do a TV a Kettle/cooking plate a few energy bulbs and the deep freezer and fridge. If you switched all the rest off you could then reheat your geyser in time of need. But that is at the limits of the generator.

Energy Meters.
I purchased an energy meter from Maplin in the UK (Well, in fact Liz from Intellection bought it for me.)
Visit WWW.efergy.com
Visit the site to see where else you can buy them. (Maplin Uk had them for £39.00) This device allows you to monitor the kW, kWh , amount of carbon emission and then the cost of your electricity. Our cost per kWh in SA at the moment is about 33c per kWh (Killo Watt Hour) where in the UK they pay about R1.50 pkWh…. Oh and it costs Eishkom about 16c to generate that power….. But only if they are generating!

It will log the power usage each day, week and month allowing you to closely monitor the electricity usage in your household.

(Continued on page 3)

At our house we can draw up to 7.6kW when both geysers are on in the morning and breakfast is being made.
During the day with the swimming pool motor off we use about 1kW and at night with the kettle, TV, lights, laptop to write the ANASPEC INFO, going ~3.8kW.

Wiring in a Generator.

Get it done by a professional…. People will die if you don't!
The law on wiring in a generator to your home stipulates that the mains cable coming in must be isolated before a generator can be connected. A isolation switch can be bought for ~R1300.
If you connect the generator to a wall socket and forget to isolate the mains switch, you may injure someone in the same electrical circuit and blow your generator.

Keep in mind that the wall sockets are designed to carry no more than 15Amps If you connect a 5.6kVA generator via the wall plugs, the wiring will overheat and could cause a fire!

Fuel consumption

A 1kW petrol generator running a TV and a few lamps, uses about 1lt of petrol per 4 hours.
A 5.6KVA generator will use 1.5lt of petrol per 2 hours
A 30kW Diesel generator 3lts per hour.

Warning: Diesel and petrol fumes are hazardous. The exhaust fumes are deadly. All Generators must be in a well ventilated area outside of the home.

Selecting a UPS

For work, a UPS is now a must have. A UPS is a system that has a certain amount of batteries that are charged from mains, should there be mains! Your Pc, for example, will be plugged into the UPS which inturn is plugged into the mains supply. Whilst there is mains, your PC draws power from the mains through the UPS and the UPS charges its batteries. When the mains fails, the UPS switches over to the batteries and so keeps your PC working. That is, for as long as the batteries last.
Hence a UPS is specified in KVA and then in battery or standby time.
A typical PC draws 450watts and then a Monitor and speakers possibly another 500watts. In short you will need a UPS of about 1400VA to keep a PC running these days. How long it now runs depends on how many batteries are fitted. 20 Minutes is the usual time. But that is when the batteries are new….. Cost will be about R1500.00

For a SEM we would be looking at a 3KVA UPS for newer systems and around 5KVA for older systems or when there are accessories. Again you would have to specify how long you need to keep the system running for to order the extra batteries. Typical cost about R9,000 for 10 minutes and R25,000.00 for maybe 2hrs run time.

If you were thinking of a UPS system for the home…. R5,000 will get you a UPS which will keep the TV and a few light bulbs running for an hour or 2. Cheaper to get a generator and have a cup of tea whilst watching TV.

Hope this was helpful and lets hope we get electricity soon.

WALES, THE LAND OF THE ……. SOUTH AFRICANS

Ok so lst issue you all went off looking in Google Earth for the town of Abergele in Wales. This issue try again. This time look for Llandudno. Twice to North Wales in 2 months makes you strat to wonder how big the world actually is.
Llandudno is a sea side town and shares it's name with another sea side town in Cape Town. Except the one in Cape Town should always remain a topless beach for women. The one in Wales…..
This is not only because its fairly cold there, but the average age of the people visiting there is about 65. Topless there would just not be the same.
This time I was there to install yet another QEMSCAN for the oil and gas industry. A company by the name of Fugro Robertson.
After all the years of dealing with the mining companies I now discovered that if you look at rocks for oil, you're a sedementologist. For minerals you are a geologist and to take home a tourist.
The company operates from a very old Victorian styled building. Has a great canteen and filled with all nationalities of young sedimentologists and other rock lickers, as we call them.
Spent two weeks there with their team and by the end of it had the German being called SCHATZ by the English. World peace right there!
Oh yes the technical stuff. Nearly forgot. Yes another 4 Bruker detector QEMSCAN. 560,000 counts per second…. Still great to see. Man that system flys over the samples.
In the oil industry they do a lot of image stitching. Basically scan over a thin sections and map all the minerals. They then look at the pourosity of the material and that then tells them stuff. To someone who pays R8.70 per liter for the petrol… that's all I care about really.
Had a good couple of drinks in the Witherspoon pub. They sell beer that is close to the sell by date. Makes it cheaper!!! End result is the same so everyone wins!
The one evening I had one guy tell me that he once met a South African in Ivory Coast. He was at a comonay called Petroci.
Guess what, that was me. I remember about 9 years ago being invited out for dinner whilst servicing in the Ivory Coast. Whilst the locals ate with the hands, fought over the head of the fish that was served, spoke with their mouths full of food and tucked into the French wine, there were these 2 English men who were in Africa for their first time. Trying to figure out how to eat the prawns using their knives and forks and ducking the bits of food that flew out as the locals spoke. It was hillareous. Now 9 years later I meet the same person in the "discount pub" in Llandudno…… Small world.

Bus to MSSA 2008 Botswana

OXFORD INSTRUMENTS

At this stage there will be a bus leaving from JHB and arriving at MSSA 2008 in Gaborone, Botswana. Then bringing people back again on the Saturday after the conference.

The pick up point in JHB/ Midrand / Airport is still to be decided once we have a list of people who will be making use of the bus.

You may want to go and Come back or possibly just come back on the bus!

Given that **Oxford Analytical** has agreed to part sponsor the bus, the cost is .... **R50**. Not bad!

Please send emails to Veno@anaspec.co.za or call on 011 7948340 to let us know if you need bookings.

We are looking at a 64 seater bus so there should be plenty of space.

Just please book seats.....

OXFORD INSTRUMENTS

Did you know that if the Nucleus of an Atom was the size of a marble then an electron would be the width of a hair and would be 2 miles away from the marble as the first orbit!

THE ARGIES ARE INVADING ENGLAND!

I recently had the opportunity of dusting the ol' technical cobwebs by attending two superb training events in the UK. The first was a week-long RMS cryo-microscopy course entitled "Microscopic Ice Age". The course was run at the Rothamstead agricultural research institute in Harpenden, and was sponsored by Leica, Diatome, JEOL and Gatan. Lectures were delivered by key figures in the cryo-scene (Daniel Studer, Helmut Gnaegi, Paul Verkade, among others) and a final keynote address by Chris Hawes. Applications of cryo-EM were presented by Kim Findlay (John Innes) and in the area of cryo-tomography by Corinne Smith. The course had a strong hands-on bias, so the 13 or so delegates could not avoid getting their hands cold (as well as dirty …) Stalwarts like Andy Yarwood (JEOL), Marilyn Carey (Gatan) and Gareth Jackson (Leica) kept us busy cryofixing samples using high pressure freezing and plunging devices, doing freeze-substitution, and viewing frozen hydrated samples using cryo-SEM and cryo-TEM.

While the equipment on display was pretty much state-of-the-art, I firmly believe we have enough kit in the country to utilise cryo-techniques far more than conference presentations would suggest. (Perhaps after Chris, Alan and Andre finish clearing the crates of all the new toys UP has recently bought we could organise another Cryo –Workshop??) Among the benefits cryo-techniques can offer are: reducing chemical intervention (and thus the associated risk of altering structure), being able to capture dynamic events in the millisecond time range (e.g. quenching chemical reactions, biological responses to stimuli) and often - but not always - shortcut sample preparation times.

During the week that followed, I spent three days at Carl Zeiss (SMT) in Cambridge getting to grips with the finer details of SmartSEM 2.05, the latest version of the software driving EVO (LEO), Ultra and Supra SEMs. Dr Veronika Kugler expertly (and patiently, the poor thing…) navigated me through the latest advances in image processing capabilities (stereo imaging, LUTs, mixing secondary and backscattered images) integration of hardware and software (e.g. performing repetitive imaging routines on a sample, locating target areas on the automated SEM stage by correlation to a light micrograph of the same sample), and of course how to get the best out of our LEO tungsten instrument. The facilities are excellent, with a strategically placed coffee machine that invites informal discussions with the likes of Ken Robinson, Tim Sparrow and Stewart Bean. I was also treated to an eye-opening tour through the SEM factory, which boasts a photograph in the factory of a ***very*** young looking Dane Gernecke. I chatted to Andy Lee and some of the other guys hellbent on delivering quality, and who make the Anaspec team look good when they deliver spares in record time. Many thanks to you all!

In short, the trip to the UK was extremely productive (although my punting still needs more work…!). I would like to thank the MSSA Trust Fund for sponsoring the RMS cryo-course, and Carl Zeiss (Pty) for organising the training in Cambridge.

James Wesley-Smith EM Unit – University of KZN
Westville Campus

(We appologise for the lack of spelloing mistakes in this article. Damn Accademics….. So perfect! ED.)

Pin Holes in Detector windows.

Just out of interest.

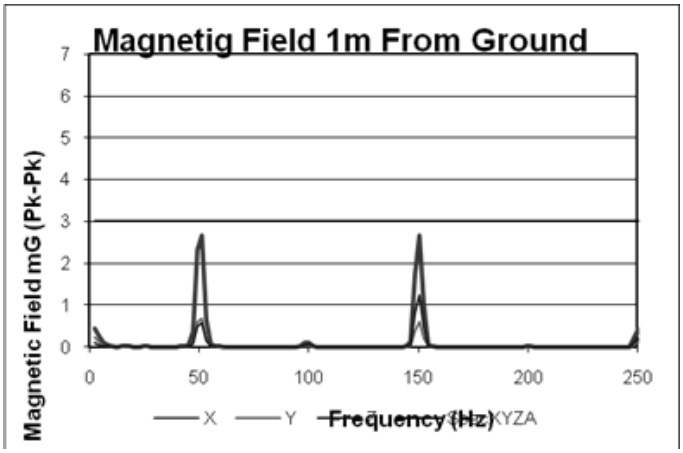
Granville just returned from a service visit at a JETSCAN customer where he found a ED detector with pin holes in the Be windows. He also noticed a lot of oil in the chamber.

Speaking to our JETSCAN hero in Carl Zeiss Cambridge, they have found that the oil used in the Jet engines contains material that attacks Beryllium.
Usually the samples being put into the JETSCAN should be washed in 2 or 3 alcohol solutions to clean all the oil of before they are placed in the SEM. So if sample prep is not done correctly, you may eventually encounter problems with the detector.
In countries where alcohol is difficult to come by/restricted they make use of other chemicals to wash the samples, and there they see problems with detectors more often.

I knew it…….. restriction of alcohol can not be a good thing!
neville@anaspec.co.za

Fields in the lab at PTA

From last year when we put the demo FEG sem in at the University of PTA, we noticed that this lab has a very unique field interference.
In the field picture we can see how the 50Hz and the 150Hz are about the same.



Its quiet obvious that the 50Hz comes from the mains supply, but why the 150Hz?
Well this is a 3rd harmonic of the 50Hz.
From John at Spicer, who supplies the site kit we use:

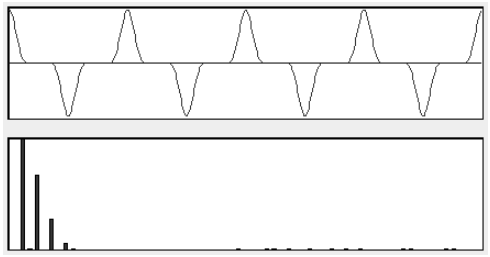
The scope would also help in determining why there are such high 3rd harmonics. The magnetic field waveform is the same shape as the current waveform that generates it. It could be that there is a cable that is supplying a lot of computers. Computer power supplies typically pull current only at the peaks of the AC supply. The resulting current waveform is much more 'pointy' than a sine wave, resulting in a large 3rd harmonic.

Best Regards,
John
Web: www.spicerconsulting.com

THE BASICS of fields

http://www.marcspages.co.uk

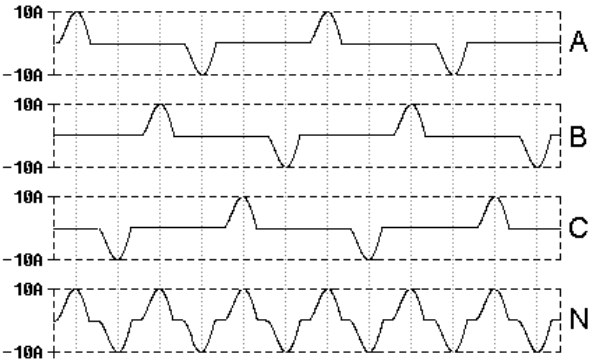
This from a brilliant website on Power quality.
A chap called Fourier introduced an idea that all repetitive waveforms can be made up from a combination of fundamental and harmonic sinewaves of varying amplitudes and phases. This principle is applied in nearly all (if not all) power quality instruments i.e. the waveform is graphically represented as a mixture of sinewaves of the fundamental and direct multiples of the fundamental frequency.



In the above example, adding some 3rd, 5th, and 7th, produces a waveform not unlike that of a single-phase hi-tech load (as shown in the previous section on "Load Linearity").

In this example of our single-phase load, the Live and Neutral are carrying the same current - just opposing in phase - thus having equal harmonic content (else the waveform would not be distorted!)

If we were to then introduce such a load to each phase of a 3-phase system (see below), notice what occurs on the Neutral conductor! The waveform is no longer returning two conduction periods per cycle, but six! (two from each phase). Also, the timing is such that the predominant frequency on the Neutral conductor is not 50Hz, but 150Hz i.e. the 3rd harmonic! And so is born the whole new subject.

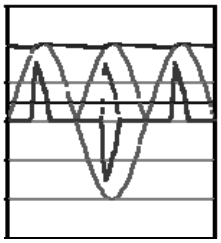


There is also a new factor to the current waveform appearing on the Neutral; It shows the Neutral acting as the return to all three Phases, but at different times! While any one Phase is conducting, there is no other Phase offering a cancelling current. The Neutral currents of all three phases, therefore, combine on this common Neutral thus carrying the sum of the Phase currents i.e. 3 x Phase RMS current in a equally distributed load.

Now we add to this whole story the fact that all the “traditional

(Continued on page 6)

universities have, over the years, installed thousands of PC's. How does this affect fields?
Without getting to technical on this matter, PC's have switch mode and inductive load power supplies.
With AC power consumption, a resistive load is the "best load" to attach to a source as the voltage and current drawn match each other in "waveform". With an inductive or Hi-tech load the power supply only takes current at certain points of the supply wave. This means that we land up with a specific load shape. Below is a typical power graph for a rectifier. The sine wave is the voltage supply and then the sharp peaks would be the current drawn.



This imbalance in the power consumption would mean that if we measure a waveform of the source we note how the tops of a waveform would be "flat" as the current drawn pulls down the voltage.
If we look at the field measured at the Univ of PTA, we can see a distinct shape to the fourier transform. Very typical of a hi-tech load connected to a 3 phase supply.
So how can we correct this?
With the use of power factor correction capacitors.
And here is a scary thought; If all heavy industry in the UK were to install the correct level of power factor correction, the UK would satisfy its portion of the Kyoto agreement! Saving 20% of its power consumption.

These capacitors are fitted to inductive loads to make the load look more resistive. The saving on the electricity bill is around 10 to 20% depending on the load.
All the hi-tech load is doing is not demanding current from the supply during all of each half-cycle (by only drawing current during a portion of the cycle). And, contrary to popular belief, every ounce of energy being drawn by the hi-tech load is being used by the hi-tech load. None of it is being 'reflected' back to the source (the rectifiers alone prohibit this from happening).

It is the supply which has the spare energy (similar to our engine example above). And by the supply reacting to the hi-tech load in the way it does means it is not the hi-tech load **but the supply that actually "generates" the harmonic energy!**

But before you run off and start strapping caps to everything at work and at home, its not that simple. PFC Capacitors should be 70% higher rated than the supply voltage due to harmonics that draw more current through them.
So if you have read through all of this, you want to walk away with something easy to understand.
Basically computers and transformers cause problems on a mains supply that can cause the harmonics of the fundamental freaquency to be very high. If you have unbalanced 3 phase supplies, the neutral will be generating the 3rd harmonic even higher. The shape of the field measured will give some clue to the fact that you have a hi-tech load and PFC capacitors could help to reduce this or a better balancing of a 3 phase supply is needed. Reducing the length of the cables will lead to less leakage and also help to keep fields down.

Luc@anaspec.co.za

Exciting things happening in Oz over the next few months

Anaspec Australia is involved over the next few months in a number of exciting events on our calendar.

Anaspec Australia is now working closer with the Carl Zeiss Australia (New Zealand) team, as they are now the Agents for the Carl Zeiss Electron Microscope Division. We would like to thank Steve Wisbey from Science Solutions for the time and support we have had working with Steve on the Carl Zeiss product range. Anaspec Australia and Science Solutions will still be working together on the Raith product range.

Due to changes in the Australian market and within the Australian team, Anaspec Australia is now looking for a junior technician/engineer for the Melbourne area to be trained up on all the products we support. Once this new engineer is fully trained it will allow us to support the Melbourne area more efficiently.

Over the next few months you may find that availability team members are a little scarce this is due to a number of installations we have coming up in the months of June and July, which is great. We have four FE systems and two Tungsten systems to install and commission which will keep the boys very busy. We will do our best to ensure that those customers who require assistance do not have to wait too long for assistance. Customers please if you have any difficulties please don't hesitate to ask for assistance.

We welcome an addition to the O'Loughlin family with the arrival of my first child, as we also welcomed Lee's first child in February earlier this year and no we are not using this as a way of increasing our team members here in Oz. Due to the new arrival Ruth will be on leave for a few months, all enquiries (work related) can be forwarded to Angela Da Silva, at angela@anaspec.co.za or on 02 8338 8157

Last but not least, Anaspec, Protrain and the Centre for Microscopy and Microanalysis at the University of Queensland come together again in October 2008 to bring you two training courses. The first course is "Microtomy and Transmission Electron Microscopy" held from Monday 6th October until Friday 10th October 2008 and the second course is "Monitoring and Maintaining the Electron Microscope" held from Monday 13th October until Friday 17th October 2008. For further information please check out our website www.anaspec.co.za or contact Ruth O'Loughlin at ruth@anaspec.co.za or Angela Da Silva at angela@anaspec.co.za

AUSsiespec and Carl Zeiss Australia

As Zeiss continues to increase it commitment to the Australian and New Zealand market we are always looking for ways that we can make the interaction with our organization a more rewarding experience. As we continually strive to improve this experience, Zeiss have decided to bring the NTS electron microscopy division back into the local Carl Zeiss organization.

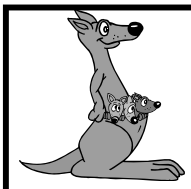
By doing this, Zeiss have made it possible for you to discuss your entire microscopy needs with any or the Zeiss team. It is now possible for Zeiss to supply and service your entire microscopy needs from basic teaching microscope through advanced light microscopes, confocal microscopes to state of the art electron microscopes.

As we move into this new area of electron microscopy, we have been able to transition the business from the existing distributor Science Solutions, who have been our dedicated partner for many years here in Australia and New Zealand in a staged way. We will be retaining Steve Wisbey as an advisor for number months to ensure your needs as high end microscopy customers are maintained

To make sure that the support of your electron microscopy products is continued. Zeiss have invested financially in the Anaspec organization, to bring them into the team that will support the growth of the Zeiss electron microscopy products here in Australia and New Zealand.

The aim of this transition will be to continue and build on the service that you have come to expect from your Zeiss partners. The only changes will be that you will now be dealing directly with the friendly team at Zeiss ANZ for your purchasing, technical and service enquiries. You will still be receiving engineering support from the Anaspec team but all your invoicing and billing information will be handled through Carl Zeiss ANZ info@zeiss.com.au

Best Regards
David Flood
Division Manager
Carl Zeiss Pty Ltd
Australia and New Zealand
Microscopy Business Group



Where do you take sick kangaroos?
What you give up?
It's a hop ital of course!

Ok ok now that you are warmed up…..
Where do you take a dog when it is sick?
Yes you got it , to a dog..tor of course!

A pig to the hospital? In a…..
Ham...bulance!
Now take a look around the lab and see if anyone noticed you get all these wrong!

Training courses for 2007

Here we try to inform you of the training that is available. We will advertise for anyone, University or company, that may be hosting a course.

Course offered, can be run in Australia or South Africa

Australia

1. **TEM Basic operation and advanced tricks!**
   There has been some requests for Protrain TEM course.
   Contact Ruth@anaspec.co.za for details and costs.

South Africa

1. **TEM training course 9-12 June 2008 Cape Area**
   Would there be anyone interested in attending a TEM training course in June of 2008 in the Cape Area? This will be presented by Steve Chapman of Protrain
   please email Marelize@anaspec.co.za

Contact Rachel@anaspec.co.za for any other training

Microscopy training at CMM BRISBANE

There will be two courses presented this year at the CMM at the University of Queensland in co-operation with Protrain and Anaspec.

Microtomy and Transmission Electron Microscopy
6 to 10 October 2008
This course will focus on sample prepearyion and TEM imaging of biological samples.

Monitoring and Maintaining the Electron Microscope
Monday, 13th October 2008 until Friday, 17th October 2008
This course has been presented a few times now at the unit and each year we are challenged by those who attend to teach them something new on the support of electron microscopes. Always an interesting course to attend.
For more information on the course, please contact Ruth at her email address. **ruth@anaspec.co.za.** (just give here a few weeks to get used to the lack of sleep due to the new baby, then you can email anytime of the day or night!

We would also like to thank the CMM for their continued support in training up Australia….and allowing us to use the facilities. Always a great team to work with. (this was the payoff line!)

Patient: During my operation, Nurse, I heard the surgeon use a four-letter word that upset me very much. I would like to report this to the highest level in the hospital.
Nurse: That is a very serious complaint sir. Before I get the CEO of the hospital, what was the word he used?
Patient: Oops!

The GOOF awards.

The GOOF award is awarded to microscopists, and others, who have really goofed. All those stupid mistakes and hilarious situations that arise in everyday work, which prove we all make mistakes and are therefore human. If you know of any, please let us know and if that person wins, they receive, fame, glory, recognition and absolutely nothing else except a certificate to prove they goofed.

Got nothing for you this month.

Look we could give out a few for things we have seen others do, but that's just not right. They have to give us the info and then we can print it so that we all learn from their mistakes.

So we have some parenting for our team.

The Evolution of Mom

Your Clothes -

1st baby: You begin wearing maternity clothes as soon as your OB/GYN confirms your pregnancy.

2nd baby: You wear your regular clothes for as long as possible.

3rd baby: Your maternity clothes are your regular clothes.

Preparing for the Birth -

1st baby: You practice your breathing religiously.

2nd baby: You don't bother practicing because you remember that last time, breathing didn't do a thing.

3rd baby: You ask for an epidural in your 8th month.

The Layette -

1st baby: You prewash your newborn's clothes, color-coordinate them, and fold them neatly in the baby's little bureau.

2nd baby: You check to make sure that the clothes are clean and discard only the ones with the darkest stains.

3rd baby: Boys can wear pink, can't they?

At Home -

1st baby: You spend a good bit of every day just gazing at the baby.

2nd baby: You spend a bit of every day watching to be sure your older child isn't squeezing, poking, or hitting the baby.

3rd baby: You spend a little bit of every day hiding from the children.

Carl Zeiss Micro Support in JHB

From the 1st of May, Anaspec has taken on an agreement with Carl Zeiss PTY LTD to assist with the support of the Microscopy and sample preparation equipment. This includes all the high end confocal and laser scanning microscopes. As the same users are also involved with the histology sample preparation equipment, the MICROM range of products will also be support from Anaspec in JHB.

At present the Anaspec Cape Town branch has been supporting the clients in the cape region for Carl Zeiss already. So here we have a case where the Cape Branch will now assist the JHB branch to get the support of MICRO in place. By no means doe sit mean that we all become STORMERS supports, but if we get free tickets to a game, who knows.

It is expected that the JHB branch will start with 1 technician on this product line to start with and then take on a second in a few months time once we can establish the demands of the clients.

Trying to find technicians with this experience is proving to be impossible. So here we start again with training up a new technician.

Good bye and hello to new staff.

Yes a good bye to Kevin. He has hit the jackpot. A real chance to get out of the analytical world and get offered a position to own a company that makes its money from the municipality budgets. And we all know that that is where the millions are!!!! It's one of those offers that no one can really resist. However the good news is that we already have James Twala on board for 2 months now and he has been following Kevin around so that he at least knows where the IMT clients are. James will be on the IMT range of products that Anaspec support. He also has the Sartorious check weighers and the metal detectors to look after. These are mainly used in the food industry. So Anaspec keeps training new South Africans…..

A whole new bunch of kids

Since the last newsletter we have a number of additions to the family.

We had Benita Venter of what was Picasso travel start us off with a baby girl. All healthy and cute.

Lee was first with a health baby boy. Kayin was born at a healthy 2.5Kg. Anneshri did well with Kayin. Within days she had Lee already doing speed nappy changes.

This was followed up with Veno and Candice bringing baby Tristan into the family. This was on the 16th of April and coming in at a decent weight of 2.96Kg. Can you see the trend here?

Now not to be out done by the Southies we had Olivia O'Laughlin arriving at 12:45 on the 25th of May to Ruth and Michael . This one came in at 4.1Kg a definite Aussie. None of this small fuzzy stuff. Clearly the feeding in Brisbane is the best for mums.

So if you know of anyone who has fertility problems, send their CV's to us. 2 months employed and you get….(you can fill in the rest!)

An English tourist on the train from JHB to Cape Town asks the conductor to wake him up when the train stops in Bloemfontein as he needs to get off there. He gives the conductor R100 to make sure he does not forget. Ngubane, the conductor, agrees.

14 hrs later he wakes up and see's he is in Cape Town. He runs down the train and yells at the conductor why he did not wake him up in Bloemfontein and he wants his money back. Two French tourist seeing this comment: Wow! This Englishman is really cross."

"Yes, but not as cross as the Afrikaaner they put off the train in Bloemfontein.