

International co-operation continues to reap benefits

EXCITING new developments have emerged from an overseas trip by MD Wally Crawford and information systems manager, Gary Dorman, during August.

Software synergy

At a meeting of four of the eight International Wearcheck Group (IWCG) members in Atlanta, USA, substantial progress was made with plans for mutual collaboration on strategic projects

'The greatest headway has been achieved in our efforts to standardise computer software,' says Gary Dorman.

'The four IWCG companies at the meeting - Wearcheck Africa, Australia, Canada and Germany - have agreed to standardise on core software and adopt

the same interpreting system so that all software developed within the group will be freely available to all members.'

Following the meeting, each company will develop different elements of the network with the aim of increasing automation and productivity on an on-going basis.

'This global integration of client-based software using the expertise of all group members promises to provide a huge competitive advantage, sparking exponential growth, generating substantial cost savings, and maximising expertise and resources across three continents,' says Gary.

Computer diagnosis

A visit to the mechanical engineering department of the University College of

Swansea in Wales also proved fruitful. Gary returned to South Africa with the software for CASPA (Computer-Aided Systematic Particle Analysis) which Wearcheck will use while beta testing it for the university who plan to market it internationally.

CASPA is a windows-based artificial intelligence software application designed to be used with the RPD (rotary particle depositor) for complicated analyses of wear particles. It is a rules-based system which takes the user systematically through the steps taken by the human analyst when looking through a microscope, asking questions at each stage and providing a conclusion from the answers entered into the computer.

'CASPA provides a form of insurance against which human analyses can be compared', says Gary. 'It also offers complete consistency and repeatability.'

Wearcheck plans to build up its own rules base catering specifically for local conditions which will be added to the system to increase its capabilities.

As Christmas approaches

AS THIS IS the last issue of Monitor this year, we would like to thank you for your valued support during the year and to wish you everything of the best over the festive season and throughout 1996.

Instead of sending out Christmas cards, we will again be donating a sum of money to READ Educational Trust on behalf of all our customers. This is an organisation which strives to develop literacy skills in all South Africans, a worthy cause which we are sure you will be happy to support.

The Australasian connection

IN BALMY Brisbane, the fastest-growing and 'most liveable' city in Australia, the Oils Division of Australian Laboratory Services (ALS) processes 158 000 used oil samples annually, making it the third largest lab in the International Wearcheck Group (IWCG).

The Oils Division, which employs 20 staff in Brisbane, Perth and Singapore, complies with NATA (the National Association of Testing Authority), described by ALS general manager Greg Kilmister as the oldest laboratory accreditation scheme in the world.

While the Australian labs



Greg Kilmister, general manager of Australian Laboratory Services, compares notes with Wearcheck Africa diagnostician, Nick Thomas during the IWCG conference in May.

only perform used oil analysis - servicing major companies like Komatsu, Castrol, BP and Ampol - the Singapore operation has Garrett accreditation for jet turbine filters and also

processes new oil samples and petroleum.

Part of the 124 year old

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Oil analysis aids engine rebuilding and preventive maintenance at Brockwell

GARETH REEVES, managing director of Brockwell Engineering in Eshowe, is a firm believer in the value of oil analysis, both for the company's engine rebuilding and preventive maintenance divisions.

The company has been responsible for preventive maintenance for over 300 units of heavy construction plant used for road maintenance in Zululand over the past six years, and has been rebuilding engines in Kwazulu-Natal since 1983.



Gareth Reeves of Brockwell Engineering.

Engine rebuilding

'If a specific problem arises on a rebuilt engine which could result in the client putting in a warranty claim to a third party, the first thing we do is send an oil sample to Wearcheck for a second opinion,' says Gareth. 'In this type of situation we can rely on Wearcheck to give us priority, so that any problems can be resolved as quickly as possible.'

Brockwell also makes use of oil analysis for all major engines they rebuild. 'For our own peace of mind, we take a sample 50 hours after we have completed the fitment check on site,' says Gareth.

Preventive plant maintenance

Brockwell started using oil analysis from day one when the company opened its preventive maintenance division in 1990, servicing a range of equipment from graders and bulldozers to tractors and excavators.

'Because the equipment we are responsible for is spread over a vast area - from the Mozambique border to the outskirts of Durban and inland

to Vryheid - we have a strict programme of servicing on-site every 250 hours using fully-equipped mobile workshops. Oil samples are taken from oil-wetted compartments before every service to alert us to any potential problems.'

'Our clients cannot afford surprises with the distances involved and the logistics and expense of replacing failed equipment,' says Gareth. 'The equipment represents a huge capital investment and our job is to keep it operating cost-effectively for as long as possible.'

Brockwell has found that they experience three major problems with equipment because of the dusty rural environment in which most units operate - fuel dilution, dust in the engine and water leaks in radiators.

Budget saving

The early detection of fuel dilution - caused by contaminated diesel damaging the injectors and injector pumps - is the main source of budget saving for Brockwell's clients.

'This problem does not necessarily manifest itself at a service,' says Gareth. 'It is usually oil analysis that first alerts us.'

Immediate action is taken if

Wearcheck phones or faxes regarding a critical problem.

'We radio our man on site to ensure that the machine is stopped at once and advise the client to action the necessary repairs. Repair costs would amount to around R 3 000 if the problem were detected early through oil analysis. If not, this amount could increase up to tenfold depending on the extent of the damage.'

Dust ingress

'Dust in the engine is the second major problem we find in the rural areas and we rely on oil analysis to pick this up and help us find the point of entry,' says Gareth.

'We find that by following the Wearcheck troubleshooting checklist and investigating the parts they suggest, we are usually able to find the root of the problem fairly quickly. Oil analysis is a great time-saver because it narrows down the possibilities.'

'Again, early remedial action could save on the cost of an engine overhaul - between R9 000 and R25 000.'

Reliability

Brockwell Engineering's preventive maintenance programme centres around the Wearcheck programme and oil analysis reports are consulted on a daily basis. Being linked to the laboratory through Infocheck ensures that they have all the information they need at their fingertips and are able to send valuable feedback to the laboratory via computer modem in seconds.

'Wearcheck offers a first-class, cost-effective service,' says Gareth. 'I constantly recommend Wearcheck to my clients and that is probably the best endorsement I can give.'

MEET THREE new staff members - all filling new positions created to meet the increasing demand for Wearcheck's services and to ensure that all customers are offered the best possible service.

Computer specialist



Larry Baddock.

SENIOR SYSTEMS analyst Larry Baddock's interest in computers developed rapidly from the age of 12 to the extent that he began undertaking contract work for private companies when he was just 16 years old.

Having completed his master's degree in chemical engineering at the University of Natal, Larry is currently studying for his doctorate, specialising in computational fluid dynamics.

While based at the university, he ran the chemical engineering department's computer network. This involved installing and maintaining about 50 commercial software packages, assisting users and supporting the Internet connection.

The combination of his engineering expertise and his knowledge of computers served him in good stead when called upon to develop software for a number of industrial companies including various marine and electronic operations and the Water Research

Commission. Before joining Wearcheck in July he wrote the software for controlling and sequencing Wearcheck's Houillon viscometers.

Larry's job is to analyse Wearcheck's computer system on an ongoing basis, recommending modifications and developing new software and procedures in accordance with the company's strategic plan.

'What makes my job interesting is that the computer system is evolving all the time. This gives me ample opportunity to indulge in my favourite pastime of trouble-shooting - I love the challenge of finding the solution to a complex problem.'

Recently married, Larry grew up in Johannesburg but has been based in Durban for the past eight years.

New technical trainer, new courses

JAMES BARTON has wasted no time developing new training courses to meet the growing demand since he joined Wearcheck as technical trainer at the beginning of May.

A firm believer in the value of training employees if companies are to get the most from their oil analysis programme, James intends increasing the number of courses offered.

Convinced that training should start with drivers and maintenance staff who work closely with the equipment, James has developed a new introductory course. This covers basic oil sampling

methods, oils and their applications, and how to interpret an oil analysis report and complete the sample submission and feedback reports. He presents the full-day course to a maximum of 20 delegates at the customer's premises.

'Incorrect sampling is a common problem which can prove very costly, affecting downtime and productivity. It can be avoided if artisan assistants and drivers are taught about correct sampling methods, the importance of oil for machinery and the use of oil analysis,' he says. Another of his responsibilities is to revise the more advanced courses offered by Wearcheck with the aim of increasing delegate involvement. He is presently developing a comprehensive new course on trouble-shooting which is based on actual case studies and deals with the 10 most common problems affecting different components.

Equipped with an N6 diploma from Witbank Technical College, James completed his apprenticeship as a fitter and turner at Eskom, gaining general engineering experience before specialising in turbines for five years. He moved into training during a four-year stint as a technical instructor with the former South African Defence Force. He then returned to Witbank Technical College for 18 months, this time as a mechanical engineering lecturer teaching up to T3 level.

Training courses to be offered by Wearcheck next year are listed overleaf.



James Barton.



Debbie Juby.

Developing human resources

DEBBIE JUBY, who joined Wearcheck as human resources officer at the beginning of June, is enjoying the challenges that a newly-created position brings.

With seven years of experience in all aspects of human resources at several large corporate operations, Debbie is well equipped to implement HR policies in line with Wearcheck's strategic plans.

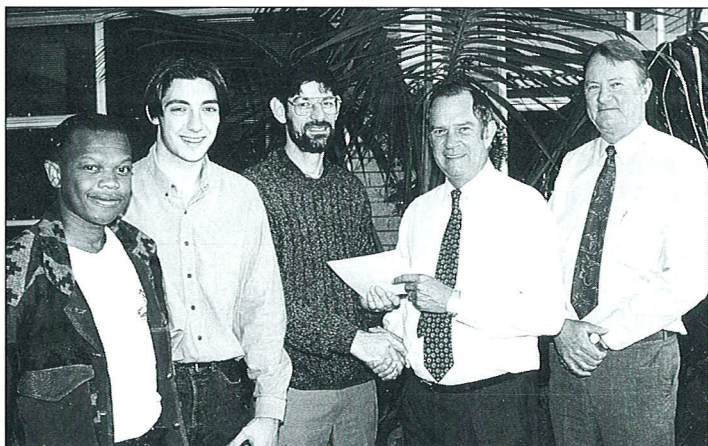
Although she qualified as a teacher, Debbie started her career in the training department of the Edgars Group in Johannesburg and two years later was promoted to human resources officer at one of the group's largest stores.

In 1990 she joined Reckitt & Colman as senior human resources officer before moving to Becketts - a division of National Brands Ltd - two years later as senior personnel officer. She relocated to Durban in January this year.

Debbie views her appointment as a sound career move.

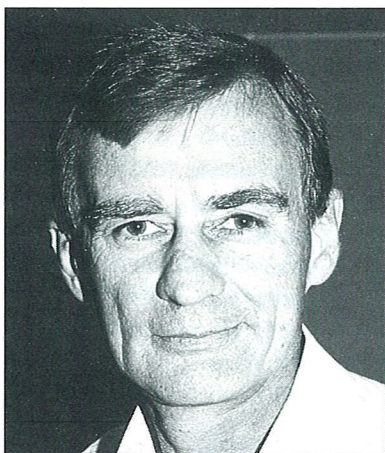
'A smaller company offers better opportunities to learn about the different facets of management,' she says. 'It is also exciting to be responsible for introducing formal HR practices such as a performance management system, and job grading and affirmative action policies in a company which is in a dynamic growth phase.'

Wearcheck sponsors SA chess champs



Wally Crawford and Gary Brown present a cheque to Chris Brouckaert (centre), president of the Durban Chess Club, as sponsors of the SA Open Chess Championships which took place in Durban in July. Part of Wearcheck's sponsorship was used to run coaching clinics which gave chess enthusiasts the opportunity to improve their skills and pit their mental stamina against international masters, Watu Kobese and George Michelakis standing on the left of the group.

Tony McFarlane, technical services manager of Wearcheck's Australian counterpart, ALS, visited the Pinetown laboratory at the end of August as part of a four-nation trip to South Africa, Canada, the USA and Britain. Wearcheck's automated oil analysis procedures and marketing and training techniques were of special interest to Tony during his five-day visit.



Where to find us

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I would like more information about: Wearcheck Infocheck

1996 Technical training courses

Date	Course	Venue
8 January	2	Johannesburg
9/10 January	3	Johannesburg
5 February	2	Pinetown
6/7 February	3	Pinetown
18 March	2	Johannesburg
19/20 March	3	Johannesburg
2 April	2	Pinetown
3/4 April	3	Pinetown
8 May	2	Johannesburg
9/10 May	3	Johannesburg
12 June	2	Pinetown
13/14 June	3	Pinetown

Course 2: The applications of oil analysis and an introduction to trouble-shooting. (8h30-16h30) Cost: R360 incl. VAT (Wearcheck customers); R500 (others).

Course 3: The technical management of oil analysis and lubrication. Cost: R690 incl. VAT (Wearcheck customers); R900 (others).

For bookings please telephone Melanie Hynd on (031) 700-5460 or Rina Vice on (011) 455-3342.

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Campbell Brothers group, ALS also runs a Minerals Division with 17 labs throughout Australia as well as labs in New Zealand and Laos (a small country near Vietnam); and an environmental division which operates in Australia, New Zealand, Hong Kong, Singapore, Malaysia and Thailand.

All of the ALS labs are linked to a single computer system with a UNIX mainframe. Oil analysis software has been specially developed over the years at a cost of \$200 000 (Australian). The

company runs a user-friendly Windows-based system similar to Wearcheck Africa's Infocheck called Wearinfo.

They have also introduced a bar-coding system whereby users key information into a hand-held device which prints a bar code on the sample bottle. This saves ALS staff from keying in the information at the other end, reducing errors.

Greg believes that the International Wearcheck Group has tremendous potential.

'I am eager to see greater exchange of technology and sourcing of equipment between members,' he said.

Wearcheck FLYER launched

WEARCHECK has launched a new aviation newsletter - the Wearcheck FLYER - to cater for the increasing number of customers from this industry. Since becoming the accredited oil and filter analysis company for Garrett jet engines in Africa and a Department of Civil Aviation approved test organisation, Wearcheck is set

to become a major player in the analysis of oil and filters for jet engines and helicopter rotor gearboxes in sub-Saharan Africa.

Anyone wishing to be placed on the Wearcheck FLYER mailing list may phone Melanie Hynd on (031) 700-5460.