

KUDOS FOR QUALITY DRIVE



Showing their delight at receiving ISO 14001 environmental certification - and a brand new flag which will soon be flying high at Wearcheck's Pinetown offices - are MD Lesley Stewart, quality administrator Melanie Hynd, technical manager Neil Robinson and chemist Paul Swan.

Wearcheck has been granted ISO 14001 certification for its environmental management system, making it the only oil analysis company in Africa to meet the requirements of both ISO 9001:2000 and ISO 14001:1996.

Says managing director, Lesley Stewart, 'Achieving ISO 14001 registration has been a long and exacting journey which has required the input and support of each and every staff member.'

'I would like to make special mention of quality administrator Melanie Hynd who has driven the process with dedication and enthusiasm, refusing to allow any obstacles to dampen her enthusiasm.'

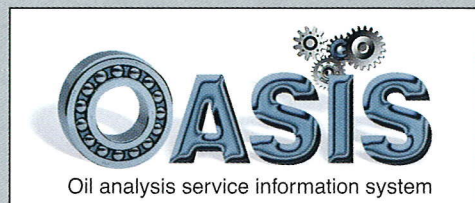
'We are delighted with this achievement which reinforces our commitment to providing a quality service to customers whilst operating in an environmentally and socially responsible way.'

BRIGHT IDEA

Diagnostician Quinton Verster was the winner of a recent internal competition for bright ideas to enhance customer support. He suggested that Wearcheck should take a fresh look at providing relevant training for customers at all levels on a continuous basis. MD Lesley Stewart presented him with his certificate.



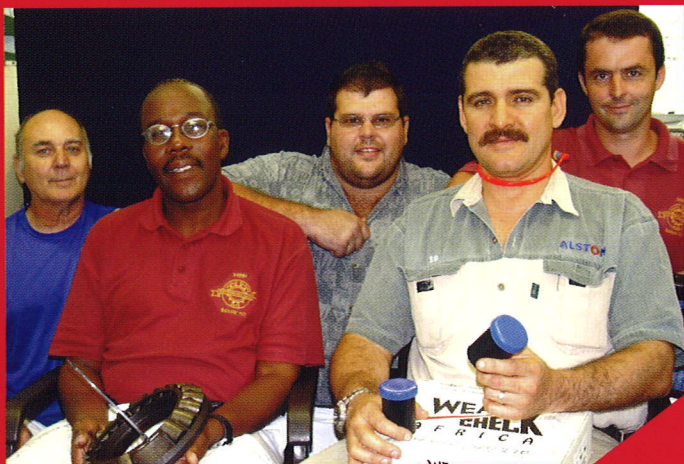
**OASIS
IS COMING**



EQUIPMENT AVAILABILITY SOARS FOR SAPPI SAICCOR

Since Sappi Saiccor started implementing Wearthcheck's oil analysis programme several years ago, equipment availability for production has increased astronomically.

So says Ephraim Tekete, assistant divisional engineer for the company which is the country's only producer of dissolving pulp for export.



Sappi Saiccor's condition monitoring team (from left) Earl Mace André, Ephraim Tekete, Jan Heymans, Sid Thorne (who manages the department and originally introduced the oil analysis programme) and Evan Wright.

Sappi Saiccor, situated on KwaZulu-Natal's South Coast, has more than 320 components on the Wearthcheck programme in equipment ranging from log loaders, turbines, bulldozers, conveyors, blowers, pumps and chipper drives to roll drives, presses and refrigeration units.

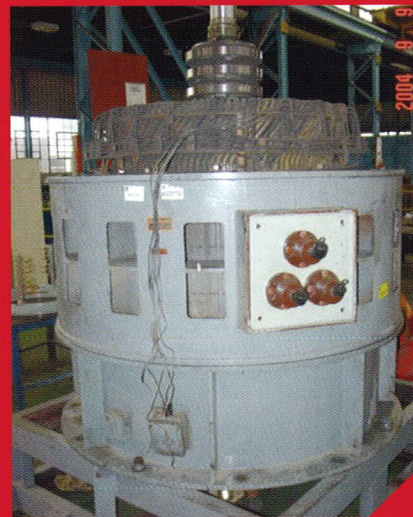
'Last year alone, Wearthcheck picked up 33 critical problems, 51 urgent cases and 187 borderline samples – all of which could have resulted in failures,' says Ephraim. 'Oil analysis has proved to be one of the best predictive technological tools available for both fast and slow turning oil lubricated machinery.'

Ephraim cites a specific example in which oil analysis saved the company a substantial amount of money. When Wearthcheck detected increasing wear on the

non-drive end (NDE) bearing of a vertically mounted 645 kW motor operating one of the company's water intake pumps in September last year, Sappi Saiccor's condition monitoring team was alerted to problem.

The company's two-weekly in-house vibration monitoring diagnosis confirmed there was a problem, and the motor was sent for an overhaul.

When the motor was opened, the NDE bearing showed evidence of bearing creep or turning in the housing. They also found heavy wear metal sediment on the bottom of the bearing housing (see photograph below), the cage was broken and there was excessive wear on the rolling element and raceways.



Early detection by Wearthcheck of a bearing problem in the motor of this water intake plant at Sappi Saiccor, saved the company hundreds of thousands of rand.



The damaged NDE bearing which was replaced before the motor failed.

'If the bearing problem had not been detected early, the machine could have failed catastrophically, resulting in great financial losses,' said Ephraim. 'The replacement value for the motor alone is in excess of R500 000, without taking into account the cost of downtime and loss of production.'

CELEBRATING WORLD QUALITY DAY

Wearthcheck's internal auditors were treated to a slap-up lunch in the Pinetown office as part of World Quality Day in November last year to thank them for their exceptional work in monitoring Wearthcheck's quality performance.



Charmaine Thumbiran (left) and Deon Yettian were the proud recipients of certificates for exceptional internal quality auditing during 2004 from MD Lesley Stewart.

Charmaine Thumbiran and Deon Yettian were presented with an award for exceptional auditing during 2004 by managing director Lesley Stewart.

The three internal quality auditors in the Johannesburg

office - Cathy Bolton, Devi Armugam and Josephine Rakolota - also celebrated the day in style.

This was one of several activities organised by quality administrator, Melanie Hynd, to encourage staff involvement in the ongoing quality drive and to raise awareness of the programme.

Three examples of thought-provoking quotations which were emailed to staff every day during Quality Month are featured below.

'Quality is an achievable, measurable, profitable entity that can be installed, once you have commitment and understanding and are prepared for hard work.'

Crosby

'There are no passengers on spaceship earth. We are all crew.'

Marshall McLuhan

'When the flower blooms, the best come uninvited.'

Rama Krishna

TRAINING HELPS CUSTOMERS ACHIEVE A TEN TO ONE RETURN ON OIL ANALYSIS EXPENDITURE



Jan Backer,
Wearthcheck's
technical trainer

Wearthcheck's oil analysis programme is an invaluable diagnostic tool in a predictive maintenance programme, improving the cost-efficiency of maintenance and reducing lubrication costs.

However, the benefits to be gained from the programme can be diminished if not accompanied by the appropriate technical training.

This is the view of Jan Backer, Wearthcheck's senior customer support consultant and trainer. He conducts courses across the continent and is the only trainer in Africa certified by the International Council for Machinery Lubrication.

'If a company is spending R1 on oil analysis, it should be getting back R10 on lubrication and maintenance savings,' says Jan. 'Our courses enable companies to put systems in place to achieve this return on investment.'

'Because Wearthcheck has been in operation for 25 years and analyses 400 000 samples from across southern Africa every year, we have a database of more than 10 million entries. We capture information from the machinery we analyse and this allows us to increase our knowledge base. We pass this knowledge on to our customers in the training courses and we illustrate the theory with meaningful, practical case studies.'

'What is of great value is that all this information relates to local conditions,' Jan said.

Jan warns against self-teaching as people learn by building on the knowledge they have, and this knowledge may have been incorrect initially.

Wearthcheck's standard training courses

The standard training courses offered by Wearthcheck range from entry level to advanced. These are run at Wearthcheck's Johannesburg and Pinetown training centres and cost about R1 500 a day.

- An entry-level practical course offers information on oil analysis and basic information on lubrication. This half-day course is aimed at vehicle or machine operators and is offered on the customers premises in a variety of languages.
- Three full-day courses provide technical training to the point of being able to read an oil analysis report and troubleshoot.
- A fourth half-day course takes a managerial approach with topics such as tracking trends and interpreting monthly statistics.
- Specialised NetCheck training courses are offered to help companies gain maximum advantage from this advanced giveaway software which allows customers to receive reports and submit feedback electronically, and to build their own databases.

'We urge companies to avoid the pitfall of third party bookings without research which often ends up in the wrong course being booked,' says Jan.

'We recommend that customers allow us to perform a needs analysis for them before deciding on the different training options available. This ensures that the right people are being given the right information and is a cost-effective use of resources.'

Customised on-site courses

In recent months Wearthcheck has been encouraging customers to re-evaluate their training needs and to consider customised on-site training courses designed to meet their specific in-depth requirements.

These are run in-house at the client's own training facilities, offering a number of benefits:

- The content is tailor-made to meet your needs
- They are run to suit your schedule
- They cut out travel time and accommodation costs.
- They are ideal for companies that find it difficult to suspend shifts for hours at a time

For more information phone Wendy Holiday on (011) 392-6322.

GLOBAL LINKS ADD VALUE

Accuracy is paramount at Wearthcheck and the company goes to great lengths to ensure that laboratory analysis and the diagnosis of results are as exact as possible.



**Technical
manager,
Neil Robinson**

'We conduct round robins every quarter with the eight other members of Wearthcheck International, confirming agreement on both the analysis and diagnosis of a cross-section of samples,' says technical manager, Neil Robinson.

'We also participate in an ASTM (American Society of Testing Materials) round robin every six months for diesel engine oil analysis, along with about 50 other companies globally who subscribe to this service.'

'The round robins satisfy the verification and validation requirements of ISO 9001 and ISO 14001.'

'We try and take full advantage of our international connections,' Neil said. 'This coupled with our solid infrastructure and decades of experience in the field in southern Africa helps to ensure we produce the results our customers expect from us.'

Neil and IS manager Larry Baddock will be attending the 2005 Wearthcheck International meeting in Canada during July.

LUBE TIPS

QUESTION

What happens to the additives in oil over time, and is there any way to replenish them?

ANSWER

Over time, additives are depleted performing the function for which they were intended, degraded by hydrolysis, mechanical shearing, condensation, settling, water washing, particle scrubbing, etc.

The rate of depletion or degradation depends upon the application and the environment. In particular, heat, pressure, shear rate, fuel sulfur, soot, dirt, water, aeration and the presence of catalytic metals (copper, iron, etc.) affect the rate of depletion.

Regarding replenishment - whenever you top-up a system, you are replenishing additives. Likewise, one can perform a partial drain and replacement (often referred to as bleed and feed).

A bleed and feed can work if the base oil is not degraded. If the base oil has been degraded, adding new oil is analogous to sending a healthy person into a room full of sick people with the hope that his or her good health will be contagious - it doesn't work that way. The additives in the new oil might be compromised within the first hours of use, leaving you right back where you started.

Casual addition of additives into a formulated oil can be dangerous and should be avoided. When in doubt, consult your lubricant supplier.

- Courtesy of Noria Corporation

Noria lube tips are published on their company web site and sent out electronically to interested people all over the world. The Noria lube tip below was taken from the 'The Oil Analysis Handbook' which was co-authored by Wearcheck's own John Evans.

SOOT

Soot is abrasive. Intuitively one might think of carbon black as being relatively 'soft'. However, soot particles, in any form, are harder than steel. Motor oils are formulated with additives that keep soot in suspension and stop it from agglomerating but, as with other additives, they are sacrificial. Once a certain level of soot loading is reached (typically around 3 percent by mass for most common motor oils), the soot particles will no longer be able to be carried by the oil and sludgy deposits will form. Soot is not only abrasive but it also causes the viscosity of the oil to increase.

MAKING HEADWAY

Several new appointments were made recently to assist in the smooth running of the Pinetown office.



Rosina Pokotsa (left) is now lab assistant and **Pamela Gwensa** is stores assistant.

On the customer service front, **Kay Meyrick (left)** has been appointed sales developer, **Charmaine Thumbiran (right)** has been promoted to KZN sales co-ordinator and **Lyn Moodley (front)** is customer sales and support assistant.



PROTECT YOUR OIL!

Wearcheck is now supplying the 'Oil Safe' range of oil dispensing containers and drums. These robust, heat and chemical resistant products are manufactured to survive the toughest conditions and help protect your expensive lubricants from contamination.

The drums come in four sizes and can be matched with any of the fully interchangeable range of lids and spouts.

For further details contact Wearcheck's customer support team in Gauteng on (011) 392-6322 or in KZN on (031) 700-5460.

If you would prefer to receive future issues of Wearcheck Monitor and Technical Bulletin via e-mail instead of in printed form, please e-mail a request to: support@wearcheck.co.za

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