

# TEAM TALK BOOSTS STRATEGY

WearCheck recently hosted another successful internal sales conference in Johannesburg where staff members from around the African continent gathered to plot the way forward for the company.

A packed agenda featured input from finance, technical development, customer services, product development and marketing strategy. In addition, discussions centred around the new transformer services division, new laboratories, and operational growth opportunities matching Africa's energy needs.

A motivational speaker advised the audience to actively engage with the here and now rather than dreaming of the future, with advice to find out what customers need as WearCheck may be able to fill those needs by developing new services.

Regional presentations covered Cape Town, KZN, Middelburg, Rustenburg, Bloemfontein, Johannesburg and Vereeniging, while cross-border staff presented on WearCheck in Zimbabwe, Ghana, Mozambique and Zambia.

The conferences, which are held twice a year, provide an invaluable forum for WearCheck staff to exchange ideas and formulate a strategy for the next 6 months.



*Just plane condition monitoring . . . the WearCheck brand reached new heights recently where the company logo holds pride of place on the fuselage and wings of one of the aircraft of an air acrobatics team sponsored by holding company Torre Industries. Look out for the plane flying over various sporting events in the greater Gauteng area!*



*Some of the delegates who attended WearCheck's most recent internal sales conference in Johannesburg recently are (from left) Shesby Chabaya from Zimbabwe, Gabriel Perengue from Mozambique, Philip Croucamp (national sales manager), Daniel Kwame Boakye from Ghana, Evan Meyer from Zimbabwe, Boniface Yuwama from Zambia and MD Neil Robinson*

# TECHNICAL TIP: Condition Monitoring breaks the barriers to achieve Total Fluid Management (TFM): Part 2

by Annemie Willer



Annemie Willer

In this two-part series, WearCheck's reliability solutions lubrication consultant, Annemie Willer outlines tips for making lubricants work to their optimum efficiency.

In part one, we discussed the basics of how to begin implementing a TFM programme and who should be involved. In part two, we discuss the design, implementation and management of the programme.

## PHASE 2: MODIFICATION AND DESIGN

Lubricant storage and handling must be done according to best practice standards.

In industry, today, it is not uncommon to see lubricant stores that are severely contaminated and not adhering to the three principles of keeping the lubricants dry, cool and clean. In your lubricant store is where you start to address contamination control. If the lubricant storage is not up to standard the programme will not succeed.

Handling of lubricants inside the lubrication storage area as well as in your operation needs to be done as cleanly and pristinely as possible. WearCheck RS knows how to achieve this, whether you are a chocolate factory or a coal mine. The principle stays the same although the procedure may differ.

Machinery needs to be optimised for reliability. For example breathers, oil level indicators and oil sample points need to be installed to aid an industrial gearbox to perform its operations on a daily basis. Automatic lubricators will be recommended for machines that are hard to reach or in hazardous environments. Mini mess points and filters can be installed on hydraulic

systems to help keep the lubricant clean and ease the process of taking an oil sample. These are only a few examples. Each individual machine in its environment needs to be assessed individually and modifications will be recommended to help the machine achieve optimum reliability status.

WearCheck RS has the capability and the initiative to develop customised solutions based on the customer's needs. We know that for every problem there is a solution.



Lubrication storage container designed by WearCheck's lubrication consultant Annemie Willer from the company's reliability solutions division.

## PHASE 3: IMPLEMENTATION

WearCheck RS will assist customers to implement modifications that need to be done on machines. We will assist in changing or tweaking procedures to make them more applicable and practical to follow. For WearCheck RS, the implementation phase is also the phase where hands-on, personal on-site training will be provided to ensure that your team grows with the programme.



Dispensing bay area inside the lubrication container



Storage area for bulk lubricants



Storage area for bulk lubricants

## PHASE 4: MANAGEMENT AND CONTINUITY

The ultimate success of a Total Fluid Management programme relies on the action taken, and whether continuity of the programme is viable and achievable. When we begin this journey with you, every step is crucial in order for us to assist you in the elimination of failure mode. Therefore Key Performance Indicators (KPIs) are in place that are practical and that can be achieved. Continuous training is always available and

we pride ourselves on our scrupulous after-sales service.

WearCheck's RS team believes in the Pareto rule:

**20% of failure modes are responsible for 80% of machine failures in your operation.**

By addressing your lubrication programme with proven scientific condition monitoring technologies, we enable our customers to address the root of the problem and enforce a pro-active maintenance approach.

WearCheck's reliability solutions manager, Philip Schutte, recently attended the International Machine Vibration Analysis Conference (IMVAC) in Antwerp, Belgium. The conference covered areas like industrial product and featured the latest technology related to vibration analysis.

## Hola, WearCheck!

Buenos Aires in Argentina was the 2017 destination for the annual International WearCheck Group (IWCG) gathering. Member countries meet in a different part of the world every year to share ideas and international news on condition monitoring, and to discuss industry innovations. It is also a key opportunity to sustain the global WearCheck network, which has been in place for over 20 years.



*Catching up in Argentina in July at the IWCG meeting are members of the International WearCheck Group (IWCG). Members hail from all parts of our planet, including South Africa, Argentina, Hungary, South Korea, Spain, Canada, America, England and Belgium. WearCheck MD Neil Robinson is standing on the far right*

## Transformer division goes the extra mile

Many extra miles, in fact! Ian Gray, manager of WearCheck's transformer services division, and Des Rodel manager of the Cape Town Branch, recently travelled to Khobab and Loeriesfontein wind farms, in the Northern Cape – 450km from Cape Town – to run a transformer oil sample course for the maintenance team.

Each wind turbine is connected to a step-up (padmount) transformer which boosts the generating output of the wind turbine generator from 690 V to 33 kV. These transformers are located at the base of the wind turbine. From there, all the power is then interconnected to a collector step-up transformer located in a substation where it is transported to the electricity grid.

The reliability, or lack thereof, of step-up (padmount) transformers has led to the investigation of the total cost of ownership in trying to balance the low cost of step-up padmount transformers versus the cost of premature failures.

The insulating oil testing is typically a critical first step in this investigation that requires sampling performed by an experienced person, who has received adequate training, in accordance with IEC 60475.



*Ian Gray, head of WearCheck's transformer services division, at Loeriesfontein Windfarm*

## African Utility Week

WearCheck attended the 17th annual African Utility Week, in Cape Town earlier this year. This was WearCheck's first visit to this global meeting of African power and water utility professionals.

Ian Gray, from WearCheck's newly-expanded transformer services division, was at the Doble Engineering stand.

The primary function of the new transformer division is the promotion of transformer health through the regular assessment of insulating fluid and diagnosis of the results.



*Attending the African Utility Week in Cape Town earlier this year are Hendrik Spies of Doble Engineering and Ian Gray of WearCheck*

# BUDDING SCIENTISTS VISIT WEARCHECK

36 grade 11 pupils from Curro Grantleigh High School in Richards Bay recently visited WearCheck's Pinetown laboratory to further their studies in chemistry by learning about condition monitoring.

The students were hosted by WearCheck technical manager Steven Lumley, who explained the workings of the main laboratory to them. They also heard a presentation on oil analysis by diagnostician Quinton Verster and toured the mini-laboratory, witnessed science experiments, learned about important safety procedures and visited the outbuildings where waste oil and other fluids are processed or recycled according to the company's strict environmental standards.

Grantleigh teacher Andrew Meintjies reported that the science learners really benefited from the visit. 'It was really important for the students to see how the theory that they are learning at school is being applied and just how relevant it is to industry/society today.'



*Field and lab technician Shashay Rampersad of WearCheck demonstrates some of the wet chemistry performed on aircraft oil filters in the mini-lab in Pinetown, to a group of Richards Bay learners from Curro Grantleigh High School, on a recent visit*



*Grade 11 students from Curro Grantleigh High School in Richards Bay travelled a long way to learn about condition monitoring at WearCheck recently. Here, staff and students gather outside the company's Pinetown branch*



## Management review meeting

WearCheck's management review committee meets often to discuss strategy and ensure that the wheels are rolling smoothly in the company. Here they are in the Pinetown lab recently:

*Seen at a recent management review meeting were (from left) Scott Sowman, Frank Chakonda (visiting from WearCheck Zimbabwe), Eddie Perumal, Phillip Croucamp, Ian Gray, Steven Lumley, Neil Robinson, Michelle Padayachee, Philip Schutte, Prinda Narasi, and Meshach Govender*

# INTRODUCING... IAN GRAY



*Ian Gray is the head of WearCheck's new transformer services division*

Ian is the head of WearCheck's newly-expanded transformer services division, which was formed when WearCheck integrated Ian's company, TCS (Transformer Chemistry Services) into their existing transformer oil analysis section.

While his surname is "Gray", there is nothing gray about Ian's colourful career, both in the laboratory and out.

Ian began life in Kenya, went to Howick High and then, as an Eskom bursar, studied Chemistry at the Vaal University of Technology. His career with Eskom involved working at various power stations in KZN before starting a transformer oil testing facility for KZN. During his time with Eskom he completed various certificates in Chromatography at the Durban University of Technology's Advanced Analytical Training Unit.

In 1992 he established TCS to provide a service for the KZN transformer industry.

The business grew both nationally and internationally with a Cape Town laboratory opened in 2014. After 25 years, Ian joined the WearCheck family when the company bought TCS earlier this year.

Ian is a Member of the South African Chemical Institute and the South Africa mirror committee for IEC TC 10 (International Electrotechnical Commission)

He has authored several publications and presented at conferences on transformers, oil analysis and condition monitoring of high voltage electrical equipment.

In addition to a passion for all things chemistry, Ian is also a successful sportsman, winning gold in the Champion of Champions hockey tournament, completing three Comrades marathons, plenty of endurance mountain bike races, and is also an accomplished sailor and windsurfer.

Welcome to WearCheck, Ian!

## WearCheck wins new contract

ArcelorMittal South Africa (AMSA) – the largest steel producer on the African continent – has awarded WearCheck the contract for the provision of the analysis of transformer oil samples at AMSA.

In the letter of confirmation from AMSA, the group manager for IPS and group contracts had this to say, 'Following a comprehensive evaluation and consideration of proposals submitted to us, your proposal has been successfully nominated.'

'We would like to take this opportunity to thank your staff for the comprehensive manner in which the information was presented.'

Earlier this year, WearCheck bought Transformer Chemistry Services (TCS) and brought TCS MD Ian Gray on board to run the new transformer services division. TCS has had the contract to service the ArcelorMittal transformers since 2005, and the new contract with WearCheck bears testament to AMSA's satisfaction with the service from TCS.

During a recent audit of WearCheck by AMSA, WearCheck's score as an AMSA vendor was excellent.

AMSA has the production capacity of around 7 million tonnes of liquid steel per annum, supplies over 61% of steel used in South Africa, and exports the balance.

AMSA attributes its success to 'ongoing alignment with international best practices... ensuring the company's continued global competitiveness and participation in international markets.'

Says Ian, 'We at WearCheck are honoured to be selected to service AMSA's transformers, and guarantee that our usual standards of excellence are aligned with AMSA's best-practice ethos.'



ArcelorMittal

## LUBE TIP: Water absorption in fluids

The amount of water that a given fluid will absorb depends upon its base stock, viscosity, additive package, and temperature. The amount of water that can dissolve in a fluid is termed its saturation level. The saturation level for a hydraulic fluid is 200-300 ppm while for a lubricating oil it is around 500-600 ppm. Oil is cloudy when it is above its saturation level. The saturation level for a synthetic fluid is generally much higher than for a mineral base fluid.

– Extract from the Noria Corporation's 'Lube-tips Newsletter'

## UPCOMING EXPOS

Watch out for WearCheck at the **WINDABA** expo in Cape Town in November, and at the **AMEU** convention in Port Elizabeth in October, and we will see you at **Mining Indaba** in Cape Town next February.

# RENEWABLE ENERGY

WearCheck recently conducted training courses for wind turbine manufacturers Nordex and Acciona at Cape Town's SARATEC (South African Renewable Energy Centre) institution, focusing on wind energy and sustainable resources and how to maintain the equipment that harnesses these resources in peak operating condition.

SARATEC is the first national renewable energy technology centre in SA to offer specialised industry-related training for the entire renewable energy industry, and served as a venue for the WearCheck training courses.

*Pictured during wind turbine training at SARATEC are Steven Lumley (third from left) then Philip Schutte on her right and Ian Gray (far right). With them are some of the students who completed the course – Kunene Nhlakanipho, Noel De Rose and Elton White from Acciona*



## LONG SERVICE: Dedicated for two decades

One of the things that makes WearCheck stand head and shoulders above its competitors is the people that work for the company, and the great rapport they have with our customers and with their colleagues. This rapport is not developed overnight, but rather, it is nurtured and grown over time, and WearCheck is fortunate to have many dedicated team members who have worked for the company for long stretches of time.

HR manager Michelle Padayachee praised the long-serving staff members who have dedicated their energy to the company and applauded the loyalty of all long-serving staff members. 'We appreciate your dedication and recognise your commitment to the company – thank you.'

Michelle noted several team members who have now been with WearCheck for two decades.



*Managing director Neil Robinson has been at WearCheck for 20 years. He began his career with the company as a chemist in 1997, was promoted to lab manager in 1999 then technical manager in 2002. He has led the company as MD for the past 12 years.*



*Field service customer support officer Isaac Mabaso has worked at WearCheck's Johannesburg branch for 20 years*



*Laboratory assistant Shireen Brijlal has worked in WearCheck Pinetown's lab for 20 years*



*Software support assistant Collin Naicker has worked at WearCheck Pinetown for 20 years*



*Reliability solutions lead technician Eddie Pieterse, fondly known as "Eddie Senior", has worked at this job for 20 years. Eddie was part of WearCheck's ABB acquisition in 2012.*



*Credit supervisor Kay Pillay has worked at WearCheck Pinetown for 20 years*

# WEARCHECK 2017 TRAINING COURSES

Venue	NetCheck: Software package	Oil Analysis 1: Understanding oil and its analysis	Oil Analysis 2: Report interpretation
Course length	One full day	Two full days	One full day
Northern Cape	On request	7 – 8 November	9 November

Oil Analysis One covers two full days and costs R5 540. Oil Analysis Two and the NetCheck course cover one full day each and each costs R2 795. [Please note that the Oil Analysis Three course will not be run this year]. All courses include course material, refreshments, giveaways and certificates. Prices exclude VAT and are subject to change.

For more details on course content, view Training at [www.wearcheck.co.za](http://www.wearcheck.co.za). For bookings phone Kay Meyrick on (031) 700-5460 or email [training@wearcheck.co.za](mailto:training@wearcheck.co.za).

## ON-SITE TRAINING

All courses can also be presented at the customer's premises for a minimum of seven delegates.

WearCheck also offers two more on-site courses:

- WearCheck Practical (in English or Zulu), a half day course costing R685 plus VAT per delegate

- WearCheck Customised – oil analysis for workshop technicians, a full day course costing R1 610 plus VAT per delegate.

For on-site training, there may be an additional charge for the lecturer's travel and accommodation, if needed.

## ARRANGE A TRAINING COURSE NEAR YOU

Training courses can also be arranged in any of the following areas:

Bloemfontein	Rustenburg
Cape Town	Steelpoort
Kimberley	Botswana
Makopane	Namibia
Middelburg	Tanzania (Mwanza)
Nelspruit	Zambia (Kitwe)
Port Elizabeth	

## RELIABILITY SOLUTIONS TRAINING COURSES

Mobius training is offered in 153 countries, and is recognised the world over as the preferred standard for reliability solutions technicians. Mobius courses are run by WearCheck and presented either on-site or at the ABB School of Training premises.

Courses include Alignment, Balancing, Awareness, and CAT I to III, and costs (excl VAT) are as follows, when presented at the ABB venue at 2 Lake Road, Longmeadow Business Park, Modderfontein, Johannesburg, South Africa.

Courses can be presented on-site, and will be quoted accordingly.

Course	Cost	Oct	Nov	Dec
Vibration analysis awareness	R6 370	23	27	
Vibration analysis ISO CAT one	R14 900			
Mobius ISO certification exams	R4 800			
Vibration analysis ISO CAT two	R17 800			
Mobius ISO certification exams	R5 750			
Vibration analysis ISO CAT three	R20 000		30-2	
Mobius ISO certification exams	R6 720		3	
Vibration analysis ISO CAT four	TBA			
Laser alignment	R12 350			
Balancing	R10 595			
Master Vibration Analyst ISO CAT IV				

To book any of the above courses, or get course dates for the second half of 2017, please contact Dennis Swanepoel on 082 878-1578 or email [dennis@wearcheck.co.za](mailto:dennis@wearcheck.co.za), or contact Christene Fourie on (011) 392-6322 or email [christenef@wearcheck.co.za](mailto:christenef@wearcheck.co.za)

\* Prices exclude VAT, and are valid until the end of 2017.

Note: the condition monitoring overview courses do not include any training material, and a minimum of six candidates is required for all training courses. There may be an additional charge for the lecturer's accommodation and travel.

# WEARCHECK PASSES AUDIT WITH FLYING COLOURS

WearCheck recently underwent its annual audit by one of its customers – Siemens – where the audit scope was on occupational health, safety, environment and quality. The auditors rated WearCheck as “excellent”, with a score of 99,56%.

While the entire company and its systems are reviewed, the WearCheck team liaising with the auditors consisted of quality administrator Prinda Narasi, managing director Neil Robinson and laboratory manager Meshach Govender.

The auditors had this to say in their report: “A well-defined and mature system was found to be in place and communication thereof, accessibility and knowledge were found to be well-ingrained within the company.”

Well done, WearCheck!



WearCheck MD Neil Robinson, along with quality administrator Prinda Narasi and laboratory manager Meshach Govender, liaised with Siemens during the annual audit recently

## HIGHLIGHT YOUR SUCCESS

If oil analysis has helped prevent a major failure or saved your company money, we would like to feature this in Monitor. Our writer will contact you for the details and will write the article for your approval. Simply email [prinda@wearcheck.co.za](mailto:prinda@wearcheck.co.za) and we will contact you.

## TECHNICAL BULLETIN TOPICS?

Is there a particular subject you would like to see featured in a Technical Bulletin? Simply email your suggestion to [prinda@wearcheck.co.za](mailto:prinda@wearcheck.co.za). Before you do this, why not check out the more than 60 titles already available on the web site: [www.wearcheck.co.za/info/Technical Bulletins](http://www.wearcheck.co.za/info/Technical%20Bulletins)

## JOINING TOGETHER TO SUPPORT THE PLANET



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