

Transformer Condition Management

Complete training for managing transformers in service by analysis of the transformers life blood, the oil.

ECSA Validation no: SAAMA2016108 for 4 credits

Principles of Transformer Oil Management

This four-day course covers theory and practical solutions for the analysis and management of transformer insulating oils:

- Insulating fluids
- Specifications
- Researching the market
- Oil classes
- Transformer design and materials
- Dual operational transformer triangles
- Transformer life management
- Oil sampling methodology
- Transformer risk profiles
- Laboratory process
- Gas in oil interpretation
- Breakdown of oil molecules



- Gases produced from oil
- Calculations and ratios
- Trending data
- Production rates
- Sample automation
- Artificial intelligence
- Quality assurance testing
- Moisture management and removal
- Oxidation and sludge management
- Degree of polymerisation
- Polychlorinated biphenyls
- Safe handling and management
- Removal of PCBs

Who should attend?

- Maintenance technicians and engineers
- Reliability engineers
- Condition monitoring practitioners

Course prerequisites

- Post matriculation technical electrical qualifications or an understanding of the operation and construction of a transformer
- An operational knowledge of MS Excel (the interpretation of oil results involves calculations performed in MS Excel)
- Each delegate must bring their own laptop with MS Excel installed

The facilitator

Tom H Dalton

Mr Dalton is a transformer reliability specialist at Martec a member of the Pragma Group. He holds a National Higher Diploma in Electrical Engineering and gained experience at Eskom



specialising in oil analysis and management for over 10 years. Tom has worked on several working groups and committees concerned with transformers and insulating oils and written a number of specifications and has co-authored two books on the subject. As a software developer, he has developed an insulating oil management application to assess transformer condition.

Format

- Four days: 08h00 – 17h00
- Breaks for tea and lunch

For more information

+27 11 848 6940 training@martec.co.za

Transformer Condition Management

Registration form

Complete in full and fax +27 (0)86 502 0634 or email: training@martec.co.za

DMS.TCM.01

Learner details			
Name and surname	Cell number	Email	
Designation	Work phone number	Work fax number	
Invoicing details			
Company name			
Physical address			
VAT registration number		Purchase order number	
Postal address	Menu option: Standard or Halal		
Person responsible for payment			
Name	Phone number	Email	
Course information			
Dates:	Minimum number of learners per group:	Cost per person (excl. VAT)	X
March 12 – 15, 2019	6 – 10 per group	R 13,500	
May 6 - 9, 2019	6 – 10 per group	R 13,500	
June, 2019	6 - 10 per group	R 13,500	
Rates for South Africa only			
Venue Pragma Building – Waterfall Park, Treur Close, Midrand			

A confirmation letter and tax invoice will be sent to the delegate on receipt of this application. Confirmation of the delegate's registration including a map to the venue and a list of accommodation options in the area will be sent on receipt of confirmation of payment.

Terms and conditions of registration

- **All applicants must complete this registration form in full and indicate menu options. Halaal is charged over and above the course fee.**
Incomplete application forms cannot be processed.
- **Full payment must be received prior to attending the course**
On arrival, each delegate must present the confirmation of registration that will have been emailed to them.
The course presenters reserve the right to refuse admission where this confirmation and evidence of payment cannot be shown.
- **Cancellation and non-attendance policy**
All notices of cancellation must be in writing. Cancellations received more than 10 working days prior to commencement of the course will be accepted subject to a 10% cancellation fee. Alternatively, a substitute delegate will be accepted. Late cancellations (10 or less working days prior to commencement of the course) and non-attendance are liable for the full invoice amount.
- **Obligation to Pay**
Even though the Company is liable for paying the course fee, the delegate retains ultimate responsibility for ensuring that the fee is paid.
- **Confirmation of Registration**
If you have not received your confirmation of booking before the course, please contact us to make sure that you are registered.
- **Martec reserves the right to cancel any advertised course due to insufficient enrolments or conditions beyond our control.**

I hereby confirm that I am authorised to sign for and on behalf of the Applicant Company and accept the above Terms and Conditions.

Name	Signature	Date