

One Eighty Materials Engineering Solutions Inaugural Root Cause Analysis Africa Conference 2025



11-14 March 2025 at The Vineyard Hotel | Cape Town, South Africa



**Africa's Inaugural
Root Cause Analysis
Conference**

Visit the complete conference section on our web here



Introduction

Why Attend?

In South Africa and Africa today there is not nearly enough emphasis placed on Materials and Metallurgical Engineering Expertise as a Professional Engineering Discipline. This presents a considerable risk to emerging markets in Africa.

This conference is to raise awareness of this critical skill and showcase what is available to the industry locally. Economies simply cannot grow without these skills.

This event is not to be missed by anyone touched by the necessity of this expertise.

Failures in materials and machinery impact productivity, profits, insurance claims, and legal decisions. Root Cause Failure Analysis (RCFA) is essential for mitigating risks in industries where asset care is critical, including industrial, maritime, and oil & gas sectors.

This conference connects industry professionals to expert insights on materials engineering, failure prevention, and forensic investigation.

Who Should Attend?

- Engineers & Technical Experts: Mechanical, materials, structural, QA/QC, maintenance, and reliability engineers.
- Legal & Insurance Professionals: Legal advisors, insurance specialists, loss adjusters, underwriters.
- Operations & Asset Care Managers: Risk managers, procurement managers, supply chain professionals.
- Academics & Researchers: Professionals in materials science, engineering, and related fields



Key Topics

Failure Prevention & RCFA:

- Recent breakthroughs in novel materials (e.g., advanced composites, high-performance polymers)
- The future of material innovation and its impact on various industries

Corrosion & Wear Protection:

- Advanced coatings and materials for extended asset life.

Manufacturing & Quality Control:

- Best practices in materials processing and compliance.

Legal & Insurance Insights:

- Understanding liability, claims, and regulatory standards.

Emerging Materials & Sustainability:

- Innovations shaping the future of engineering.

Key note speakers



Dr Robert Ochola

PhD Graduate in Materials Engineering and experienced in a range of economies and industries in Africa in his career in Banking across Africa trade.



Eben Snyman

Construction Legal Expert with a strong background in Engineering.



Panelists



Anne Myers

Country Manager and
Principal Surveyor
ABL Energy and Marine
Consultants South Africa



Malcolm Hartwell

Master Mariner and Director at
Norton Rose Fulbright Maritime
Division



Mark Glock

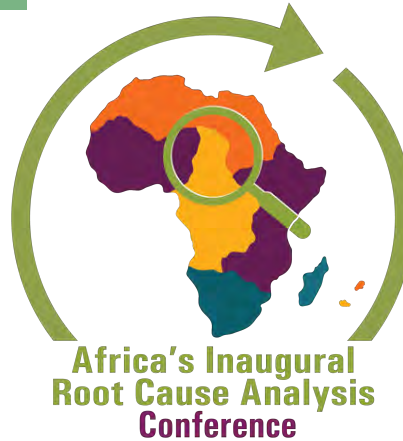
Bureau Veritas Marine,
equipment and materials
surveyor.
Business Development
Manager (Marine) – Sub
Saharan Africa.



Robert Denovan

Director of Denith Engineering
- a firm specialising in the
design and fabrication of
marine and offshore structures

Special Events



- **Workshops (March 11):**
Laser Welding & Laser Cleaning (also a stand alone workshop for R3500-00 per person)
- **One Eighty Materials Engineering Solutions (Pty) Ltd Grand Opening of NEW OFFICES (11th March 5pm)**
in Mowbray address to be provided
- **Zeiss Microscopy Workshop (March 12):**
Hands-on training in modern imaging techniques.
- **RCA Plenary Sessions Conference (March 13-14):**
Presentations, case studies, expert panels.
- **Gala Dinner (March 14):**
Connect with industry leaders.



Programme

Tuesday 11 March 2025

Laser Welding and Laser Cleaning Workshop

Laser Welding Workshop

Join One Eighty Materials Engineering Solutions for an informative Laser Welding Workshop on Tuesday, 11 March 2025, at The Vineyard Hotel in Cape Town. This workshop will cover the latest advancements in laser welding technology and techniques, providing hands-on experience with equipment and processes. Attendees will learn about the precision and control laser welding offers, leading to improved weld quality, reduced defects, and compatibility with various materials. The workshop will also highlight how laser welding enhances productivity and efficiency by increasing processing speed, reducing cycle times, and integrating automation.

Laser Cleaning Workshop

Laser cleaning, a non-contact process, uses laser irradiation to remove contaminants, coatings, or residues from material surfaces. This workshop will explain how laser cleaning works and its key features, such as precision, non-abrasiveness, and environmental friendliness. Attendees will explore applications in industrial cleaning, cultural heritage conservation, and surface preparation. The benefits of laser cleaning over traditional methods include reduced waste, lower operational costs, and increased safety for workers.

By attending these workshops, professionals can gain advanced skills, improve process efficiency, and stay informed about the latest technology and industry trends.



Programme

Agenda

Laser Welding and Laser Cleaning Workshop

8:30-09:00	Welcome & opening remarks by Dr Janet Cotton
9:00-10:00	Presentation: Laser welding: Principles, practice, benefits, and risks across various materials, geometries, and filler materials by John-Owen Welgemoed
10:00-10:30	Tea Break & Networking in Exhibit Hall
10:30-11:00	The meaning and use of ISO 15614-11 for the development of laser welding WPS and WPQRs for various materials and filler combinations by Robert Lawrence
11:00-11:30	Laser Welding and Stainless Steel – Game changing Technology by Michel Basson - Sassda
11:30-12:30	SAIW and Training Industry for Laser Welding by Confidence Lekoane - SAIW
12:00-12:30	Panel Discussion with Q&A Session
12:30-13:15	Lunch & Networking in Exhibit Hall
13:15-14:00	Laser cleaning: practical examples of applications in the industry by Dirk Uys
14:00-14:30	Nitrogen generation for laser welding and laser cleaning by Tom Sowry
14:30-15:00	Travel to One Eighty Materials Engineering Solutions
15:00-17:00	Live demonstrations at One Eighty Materials Engineering Solutions: - Laser welding demo - Laser cleaning demo Nitrogen generation demo - Additional demos to be announced

The Workshop will be followed by the Grand Opening of the new One Eighty offices in Mowbray, Cape Town at 17h00 for all WorkShop and Conference attendees

[Read more and register for the workshop here](#)

Programme



Wednesday 12 March 2025 ZEISS Microscopy Workshop

8:30 for 8:45	Introduction Dr Janet Cotton
9:00-10:00	WORKSHOP: Introduction and modern microscopy trends
10:00-10:30	TEA BREAK
10:30-12:30	Materials Applications in ZEN Core Imaging Software including – Grains, Cast Iron, Multiphase, Layer Thickness, Comparative Diagrams
12:30-14:00	Lunch and Exhibit
14:00-15:00	Image Analysis with Artificial Intelligence and object classification
15:00-15:30	TEA BREAK
15:30 - 16:30	Live demonstrations and sample demos
16:30 onwards	Networking Event – Drinks, Canapes and Welcome



Programme

Thursday 13 March 2025 Conference

8:30 for 8:45	Welcome Address - Dr Janet Cotton
9:15-10:00	Key Note Speaker - The key role of materials engineering in various economies in Africa - Dr Robert Ochoa
10:00-10:30	Tea Break - Exhibit Hall
10:30-11:00	Challenges facing the South African Mining Industry by Prof Cyril O Connor - Dept Chemical Engineering UCT
11:00-11:30	Vignette 1 – by Richard Baker - Specialist Loss Adjusters
11:30-12:00	Vignette 2 – by Richard Baker - Specialist Loss Adjusters
12:00-12:30	Assessing the Residual Lifetime of in-service components by Micro-Sampling: an innovative method of Predictive Maintenance by Laurent Ponson - Cetim France
12:30-14:00	Lunch – Exhibit
14:00-14:30	Navigating of the tariff classification crises in the steel industry The Sars Debacle by Caylynn Jacobs - Heerschop Pienaar Inc
14:30-15:00	Ship Disposal A commercial perspective by Robert Denovan - Denith Engineering
15:00-15:30	Tea Break - Exhibit Hall
15:30-16:00	Why you cannot regrade EN 10025 JR material to J2 classification and the associated risks of catastrophic failure – a metallurgical perspective by Dr Janet Cotton - OEMES
16:00-16:30	Breaking Point: Root cause analysis in the Marine Industry by Karl Waters - ABL Senior Marine Surveyor
16:30-17:00	Root Cause Analysis of a Rudder Stock Failure by Marcelle de Waal - OEMES

Programme

Friday 14 March 2025 Conference

8:30 for 8:45	Welcome Address - Dr Janet Cotton
9:15-10:00	Key Note Speaker - The role of expert evidence in litigation, experiences from an attorney - Mr Eben Snyman
10:00-10:30	Tea Break - Exhibit Hall
10:30-11:00	The Role of and Expert In Litigation by Adv Michael Wragge SC – Cape Bar
11:00-11:30	Root Cause Analysis: the importance of an early gathering of evidence in maritime claims under South African law by Malcolm Hartwell - Norton Rose Fullbright
11:30-12:00	Statistical Fractography: The Missing Link between Fracture Mechanics and Failure Analysis by Julien Delgado - CETIM France Statistical Fractography
12:00-12:30	Composite Testing for a BV Marine and Offshore Classed Composite Vessel by Ms Sarah Virgin - OEMES
12:30-14:00	Lunch – Exhibit
14:00-15:00	Recovery of the Barc Europa by Captain Nick Sloane - Marine Salvage Expert
15:00-15:30	Tea Break - Exhibit Hall
15:30-16:00	Two Case studies in litigation, a failed bollard and failed paint coating of a fire reticulation system by Dr Janet Cotton - OEMES
16:00-16:30	Student Poster Presentations
18:00 for 18h30	Gala Dinner



The Venue

The Vineyard Hotel, Cape Town

We are thrilled to announce that the One Eighty Materials Engineering Root Cause Analysis Conference will be held at the prestigious Vineyard Hotel in Cape Town, South Africa. Nestled in the lush greenery of Newlands, this historic hotel offers a unique blend of charm, luxury, and modern amenities, making it the perfect venue for our conference.

The Vineyard Hotel is renowned for its exquisite gardens, stunning views of Table Mountain, and a serene ambiance that fosters both relaxation and productive collaboration. Attendees will enjoy world-class facilities, including state-of-the-art conference rooms, exceptional dining experiences, and comfortable, elegant accommodations.

Join us at the Vineyard Hotel for an unforgettable conference experience where innovation and expertise meet in an inspiring and picturesque setting.

Delegates can book accommodation at the Vineyard Hotel at a special conference rate

[Link to book at discounted rate and see more here](#)

Registration & Sponsorship



- General Attendee: R17,500 excl. VAT (Includes workshops & gala dinner)
- Laser Cleaning and Welding Workshops Only: R3,500 excl. VAT
- Additional Ticket for Gala Dinner: R850.00 excl VAT
- Exhibition & Sponsorship Opportunities Available

For more details, contact Ms Jean Domingo frontdesk@one-eighty-degrees.com | +27 21 447 5258

Join us to advance materials engineering, strengthen risk mitigation, and build critical industry connections!

[Click here to download Conference Registration Form](#)

[Click here for details on Exhibition & Sponsorship Opportunities](#)

COST:

Attendee:

R17 500 excl VAT

- includes Zeiss Microscopy Workshop and Gala Dinner with jazz band

Additional attendee for Gala Dinner:

R850 excl VAT

Student rate:

R9 500 excl VAT

excludes the Gala Dinner

Laser Cleaning and Welding Workshop:

R3 500 excl VAT

ENQUIRIES:

Email: frontdesk@one-eighty-degrees.com

Call: +27 21 447 5258

REGISTER HERE

