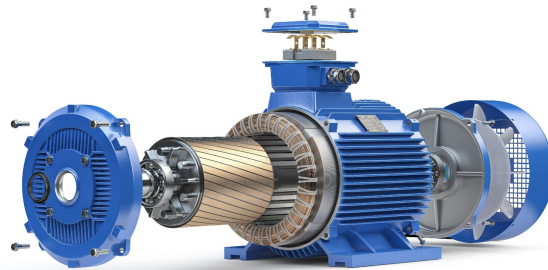


***SIRF Roundtables***

**MIKE DAVIS PRESENTS  
ELECTRICAL MACHINES**



**SIRF**   
*Smarter together*



International Specialist  
Workshop



## Introduction

Join us for an engaging and informative workshop led by Mike Davis, a well-known and respected electrical machine thought leader. This hands-on workshop focuses on simple electrical machine maintenance and common failure processes. It is designed to empower your staff to be proactive, confident, and safe when working with your electrical machines.

Our program will ensure that your team understands failure processes and how to operate your equipment at optimum levels. Through this intense workshop, participants will learn that the secret to electrical machinery reliability lies in performing simple maintenance extremely well.

Don't miss this opportunity to transform the way your team thinks about and maintains electrical machines. Invest in the long-term success of your organization.

## Course Outline

This workshop aims to coach attendees on simple electrical machine maintenance and some of the underlying process that lead to unreliability in electrical machines. Attendees will be provided with the tools they need to describe and identify the functions of electrical machine components, various insulation types in stator and rotor windings, failure mechanisms common to electric machines, and electrical and mechanical tests sensitive to specific failure mechanisms.

### TOPICS INCLUDE:

- Electrical Machine Familiarisation
- Electrical Machine Failure Mechanisms
- Common Electrical Machine Tests
- Common Electrical Machine Inspections
- Electrical Machine Visual Inspections

By the end of the workshop, your team will have a new perspective on electric machines and will be equipped with the skills needed to keep your electrical machinery in top condition, ensuring maximum efficiency and minimizing downtime.

## Workshop Methodology

The course is presented with a mix of presentation, discussion, and small group (4 to 5 participants) practical exercises focusing on:

- Motor model to understand basic induction motor functioning.
- Wind a model stator to understand coil arrangement and symmetry.
- Build model to show the source of bearing fluting.
- Model rotor cage construction and impact on reliability
- Poster reviews of 6 common machine failures



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## Learning Outcomes

- **UNDERSTANDING THE FUNCTIONS OF ELECTRICAL MACHINE COMPONENTS:** Upon completion of this training course, attendees will have a clear understanding of the various components that make up an electrical machine, including stator and rotor windings, and their respective functions.
- **IDENTIFYING INSULATION TYPES IN STATOR AND ROTOR WINDINGS:** Attendees will gain knowledge on the different types of insulation used in stator and rotor windings, as well as how to identify and distinguish between them.
- **RECOGNISING COMMON FAILURE MECHANISMS IN ELECTRIC MACHINES:** This course will equip attendees with the ability to identify and understand the common failure mechanisms that affect electrical machines. This knowledge will be valuable in diagnosing and correcting issues that arise during maintenance.
- **APPLICATION OF ELECTRICAL AND MECHANICAL TESTS SENSITIVE TO SPECIFIC FAILURE MECHANISMS:** Attendees will learn how to apply both electrical and mechanical tests that are sensitive to specific failure mechanisms in electrical machines. This knowledge will be essential in detecting issues before they become critical thus, ensuring the reliability of machines.
- **DEVELOPING SKILLS IN SIMPLE ELECTRICAL MACHINE MAINTENANCE:** Through this training course, attendees will develop practical skills in the maintenance of simple electrical machines. This will include knowledge of proper maintenance procedures, use of tools and equipment, and safe work practices.

## Business Benefits

- Significantly reduce costly electrical machine failures at your plant.
- Reduce unexpected machine failures by coaching your staff in today's most effective inspection, test and maintenance procedures
- Change the way electrical machinery staff think about electrical machines and continuously build plant knowledge
- Provide peace of mind with a safe working environment ensuring your team have the right knowledge.

### Additional Courses

Enquire direct to EMKE for coaching programs that include practical exercises and real-life case studies.

[emkecoach.com](http://emkecoach.com)





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## The Presenter

Mike has presented papers throughout Australia, New Zealand, United States of America, South East Asia and South Africa, won the Australian Small Business of the Year Award in 1996 and the Australian Quality Award in 2000. Mike is actively involved in several Australian Standard Committees, along with a Statutory role as an accredited assessing authority for the New South Wales Department of Minerals and Energy. Mike has worked in a variety of factories and plants throughout Australia and the world. After training thousands of technical staff working with electrical machinery, Mike now uses his knowledge and experience to mentor and coach electrical engineer staff and teams with the EMKE Coaching Program - the world's most advanced electrical machine coaching program.



## Who should attend

Electrical and Mechanical Personnel who work on and around electrical machines, including Technicians, Trainees, Electrical Engineers, Mechanical Engineers, Project Managers, Repair Company Personnel, and Condition Monitoring Engineers.

## Testimonials

"I enjoyed the course. It was a great refresher for me and gave me an amazing new perspectives". **Senior Electric Power Systems Engineer. Oil & Gas**

"Real life knowledge - very informative" **Maintenance Supervisor. Minerals Processing**

"I believe that Mike is probably the most knowledgeable practitioner on electric motors in the world. His knowledge on this subject is astounding". **Reliability Engineer. Minerals Processing**

Mike brought good operational knowledge and experience to the course. The knowledge was well communicated at a good pace and furthered my understanding of electrical machines in operation. **Electrical Design Engineer. Traction Motor Design - Railways**

For more information, visit the website: [sirfrt.com](http://sirfrt.com)  
Or call head office: 03 9596 3821