# MECHANICAL, ELECTRICAL AND INSTRUMENTATION ENGINEERING

FOR NON-ENGINEERS

# **MELBOURNE**

19 & 20 February 2015

# **SYDNEY**

23 & 24 February 2015

ONLY \$1995

per person including GST

# EARLY BIRD BOOKING OFFER

# TOTAL VALUE TO YOU - \$835

Book by 22 January 2015 and you will receive 20% OFF the full registration price + 4 eBooks each with hundreds of pages of engineering knowledge



- Practical Power System Protection for Engineers and Technicians
- Fundamentals of Industrial Automation
- Fundamentals of Mechanical Engineering
- Practical Project Management for Engineers and Technicians

PLUS 4-FOR-3 BOOKING OFFER

# A 2-day practical workshop presented by:

# John Piperides



# Been to an IDC workshop before?

- Attend this workshop and you'll receive 5% OFF the registration price!

# WHAT YOU WILL LEARN:

- Basic mechanical engineering concepts such as force, work, power, moments and torques
- The importance of common engineering material properties in relation to component life and failure
- The basics of electrical power engineering
- Practical steps in selection, installation and commissioning of electrical systems
- · How to protect yourself and others from electrical hazards
- The fundamentals of instrumentation and process control
- The basics of Programmable Logic Controllers (PLCs) and SCADA systems

# WHO SHOULD ATTEND:

- · Administration staff
- Civil, mechanical, chemical, mining engineers, technologists and technicians
- Electrical contractors
- Finance, IT and accounting managers
- Human resources managers
- IT personnel
- Legal personnel
- Managers who are involved with or work with staff and projects in electrical engineering

- Non-electrical and mechanical engineers and technicians
- Non-electrical and mechanical personnel who want to understand the broader picture
- · Non-engineering personnel
- Operators
- Plant and facility engineers
- Procurement and buying staff
- · Project managers
- Sales engineers
- Senior managers



AUSTRALIA • CANADA • INDIA • IRELAND

MALAYSIA • NEW ZEALAND • SINGAPORE • SOUTH AFRICA

UNITED KINGDOM • UNITED STATES • VIETNAM



# MECHANICAL, ELECTRICAL AND INSTRUMENTATION

# DISCOUNT OFFER SAVE \$1995

BOOK FOUR DELEGATES
PAY FOR THREE!

Register three people on a public two-day workshop and receive your fourth registration

# FREE

\* discounted and free registration to be used for the same workshop in the same venue

# PLUS 5 eBOOKS OF YOUR CHOICE!

Every delegate will also receive
5 eBooks of their choice
from IDC's technical library
- valued at \$420!

# **ABOUT IDC TECHNOLOGIES**

With a portfolio of over 300 workshops specialising in the fields of industrial data communications, electrical and mechanical engineering, automation and control, we have trained over 500,000 engineers, technicians and technologists over the last 20 years.

We have an enthusiastic team of professionals in offices conveniently located around the world, who are committed to providing the highest quality of engineering and technical training.

Visit our WEB SITE
www.idc-online.com to download
FREE software and technical information

# **ON-SITE TRAINING**

All IDC Technologies training workshops are available on an on-site basis, presented at the venue of your choice, saving delegates travel time and expenses, thus providing your company with even greater savings.

**SAVE MORE THAN 50% OFF** the per person cost!

2-day courses start from \$6,000 FOR UP TO 6 PEOPLE and can be CUSTOMISED to your needs.

Have the training delivered WHEN AND WHERE you need it!

For more information or a FREE detailed proposal contact:

**Kevin Baker** on **1300 138 522** or email: training@idc-online.com

# An intensive, practical 2-day workshop presented by

John Piperides BE Electrical

John is a professional electrical engineer with over 25 years experience in industrial maintenance, production, management, sales and improvement. He has held management positions in several manufacturing and sales companies. His diverse responsibilities have included contract negotiation, authoring and responsibility of departmental budgets, daily management of over 20 reports, practice



of cGMP, auditing in a pharmaceutical plant, and system administration and programming of diverse IT and embedded systems. He has been directly involved with industries including building management, pest control, mining, power utilities, food, pharmaceutical, steel, building products, sugar, paper and pulp, rail and airports.

John has completed many years of further education including developing, writing and delivering many work based courses and seminars. He has spent 10 years as a part time teacher at TAFE in electrical engineering, and 15 years delivering structured courses in thermography, power quality, instrument safety, motor drive theory, PLC, SCADA, and pest inspection.

# THE WORKSHOP

In two fascinating and intensive but easy-to-understand days you will learn the basic applied concepts of mechanical, electrical and instrumentation engineering. This will enable you to work more effectively with your engineering colleagues – no matter whether they are operators, tradespersons, technicians or engineers.

There are three main threads running through this course – initially mechanical engineering, then electrical engineering best practice and concluded with instrumentation (or industrial automation).

Mechanical engineering in simple terms deals with any equipment that moves; this is what makes it perhaps the most broad and diverse of engineering disciplines. The mechanical discipline essentially derives its breadth from the need to design and manufacture everything from small, even nano, individual devices, such as measuring instruments, to large systems such as machine tools and power plants.

The focus in electrical engineering is on the building blocks of electrical engineering, the fundamentals of electrical design and integrating electrical engineering know-how into the other disciplines within an organisation. Unnecessary theory will be minimised.

The dangers and risks from electrocution, shock, explosions and arc blast can never be eliminated but you can take definite steps to protect yourself and your co-workers.

The topics in instrumentation engineering commence with an introduction to instrumentation and measurement ranging from pressure, level, temperature and flow devices followed by a review of process control including the all important topic of PID loop tuning.

### PRACTICAL SESSIONS

This is a practical, hands-on workshop enabling you to work through exercises which reinforce the concepts discussed.

To gain full value from this workshop, please bring your laptop/notebook computer.

# FREE REFERENCE MANUAL as a hard-copy and eBook (VALUED AT \$223.90)

Our delegates don't just receive photocopied notes!

You will receive the comprehensive fully illustrated reference manual, as a hard-copy and eBook version, filled with hundreds of pages of tables, charts, figures and handy hints.



# **ENGINEERING FOR NON-ENGINEERS**

# **THE PROGRAM**

### **DAY ONE**

### **MECHANICAL**

- Mechanical Engineering Basics
- Engineering Materials
- Gears and Bearings
- Mechanical Drives
- Fluid Engineering
- Heat Transfer
- · Heat Hallslei
- Maintenance

# **ELECTRICAL**

- · Overview of the Electric Power Systems
- · Basic Concepts
- Electrical Generation, Transmission and Distribution
- Electrical Measurements and Applications
- Earthing
- Transformers
- · Power Quality
- Power Systems Protection
- Electrical Shock and Methods of Shock Prevention
- Hazards Due to Electrical Arcing and Heating

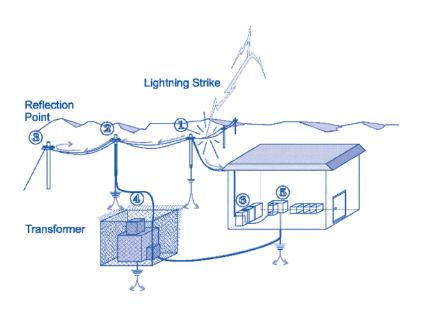
# **DAY TWO**

### **INSTRUMENTATION**

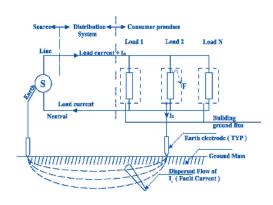
- Introduction to Process Measurement
- Pressure Measurement
- · Level Measurement
- Temperature Measurement
- Flow Measurement
- Fundamentals of Programmable Logic Controllers (PLCs)
- · Introduction to SCADA Systems

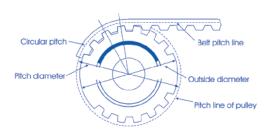
# SUMMARY, OPEN FORUM AND CLOSING

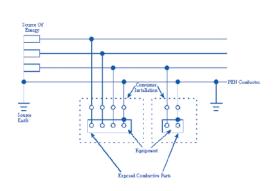
The fee for each workshop covers all materials including workshop manual, lunches and refreshments

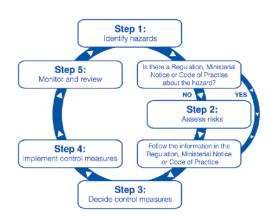


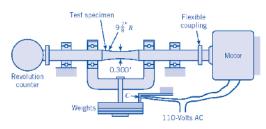












# MECHANICAL, ELECTRICAL AND INSTRUMENTATION ENGINEERING FOR NON-ENGINEERS

DELEGATE DET	AILS					
Contact:	ontact: Company Name:					
Company Address:						
Suburb:		State:	Post Code:			
Phone:		Fax:		Email:		
Mr/Ms: Mr/Ms: Mr/Ms:		Job Title:		Email:	Email:	
		Job Title:		Email:		
Mr/Ms:	Mr/Ms: Joi		Title: Email:			
Mr/Ms:		Job Title:		Email:		
Should you have mo	re people interested in atte	ending this v	vorkshop, please conta	act us via email: idc@idc-online	e.com	
WORKSHOP DE	TAILS		PAYMENT DETA	AILS	Note: Pi	rices are INCLUSIVE of GST
MELBOURNE - 19 & 20 February 2015			Please Note: Full payment is required prior to the commencement of the workshop.			
Hotel Ibis (on Therry Street), Melbourne			BOOKING FO	R ONE DELEGATE:	\$1995 x1 delega	ates = \$
SYDNEY - 23 & 24 February 2015 Rydges Camperdown, Sydney			BOOKING FOR FOUR DELEGATES: \$1995 x 3 delegates = \$  The fourth participant is FREE			
7.6	, , , , , , , , , , , , , , , , , , , ,	EARLY BIRD BOOKING OFFER: (if booking on or before 22 January 2015)				
		YES, I qualify and would like to receive my 4 FREE eBooks				
Please register by 29 January to avoid disappointment			PLUS 20% OF	the registration price	LESS 2	20% = \$
			I wish to pay by	Chagua mada nava	TO ble to IDC Technologies	TOTAL = \$
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HOW DID YOU HEAR ABOUT THIS WORKSHOP? (PLEASE TICK)			☐ Company Order Number:  Please charge my ☐ Mastercard ☐ Visa Expiry D			ry Date: /
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Searched online (Google, Yahoo etc)			Cardholder's Signature  On the reverse of your card, above the signature,  If the Cardholder's address			
Recommended by a friend/colleague  Other (please specify)			is a security number. In order to authorise your card transaction, we require the last 3 digits:			
BILLING INFORMATION (PLEASE INVOICE TO)						
DISCOUNT OFFER - SAVE \$1995						
	ER - SAVE SIBBS GATES, PAY FOR 3	S¥	Please send invoice to: Company Name:			
Register three people on a public two-day workshop and			Company Address:			
receive your fourth registration FREE  * discounted and free registration to be used for the same			Suburb: State: Post Code:			
workshop in the sam						
REGISTER	Fax:	Mail:		Email:	Web Site:	ENQUIRIES:
NOW:	1300 138 533	IDC Technologies PO Box 1093		idc@idc-online.com	www.idc-online.com	<b>Phone:</b> 1300 138 522

# **WORKSHOP DETAILS**

- · Workshops start at 8:30am and finish at 5:00pm daily.
- Registration is from 8:00am on the first day.
- The workshop fees are per delegate and include a reference manual, handouts, lunches and all refreshments.
- Full payment is required prior to the commencement of the workshop.

# **EARLY BIRD BOOKING OFFER**

Please note that the Early Bird Booking Offer is only available to those registrations received by 22 January 2015 and paid prior to the commencement of the workshop.

# CONFIRMATION

Confirmation of receiving your registration will be sent within 48 hours. Official confirmation and details of the workshop will be sent to you prior to the workshop date. Please wait for official confirmation before making accommodation and/or travel arrangements.

# **CANCELLATION**

A fee of 20% will apply for written cancellations received 7-14 days prior to the commencement of the workshop. Cancellations received less than 7 days prior to the workshop are not refundable however substitutes are welcome.

Venues to be confirmed upon registration. Venues are subject to change. Instructors may change without notice.

IDC Technologies has no affiliation with suppliers or manufacturers and therefore presents a completely unbiased factual view of the industry.

# **100% MONEY BACK GUARANTEE**

IDC Technologies' engineers have put considerable time and experience into ensuring that you derive the maximum value from each workshop. If you feel by lunch time of the first day that the workshop is not appropriate, please let us know so that we can arrange a 100% refund of your fee.

# **PRIVACY INFORMATION**

If your address details are incorrect, or you wish to remove your name from our mailing list, please contact us by phone, fax or email.

At times we make use of lists that cannot be cross-checked against our own database and you may receive a duplicate. If so, please pass this on to an interested colleague.

# **CONTINUING PROFESSIONAL DEVELOPMENT (CPD)**

This program is designed to meet your continuing professional development requirements. A certificate documenting your attendance will be awarded at the end of the workshop. This serves as important evidence of your continuing professional commitment to your career. This workshop may count towards fulfilling your Engineers Australia CPD obligations - Engineers Australia's CPD Policy can be found at their website: http://www.engineersaustralia.org.au/