# QCMC 2011

## Qualitrol Condition Monitoring Conference

6-8 February 2011

Hyatt Regency Dubai

# Preliminary Conference Program



Be sure to visit the Middle East Electricity Show immediately after QCMC 2011!

For more information, visit www.middleeastelectricity.com



February 8—10, 2011



### INVITATION



I want to extend a warm invitation for you to attend the first annual Qualitrol Condition Monitoring Conference (QCMC) in Dubai. The QCMC will concentrate on condition monitoring of the key electrical assets in electric power utilities and industrial plants: switchgear, power transformers and rotating machines. Over the past decade, equipment

condition monitoring has become an essential tool to plan maintenance, extend the time between outages and turnarounds, minimize maintenance costs and delay equipment replacement. However, condition monitoring can only be effective if owners of electrical equipment have a sound understanding of the design of the equipment, know its failure processes as well as the repair options. Thus the QCMC is devoted not just to presentations on condition monitoring tools, but also to educating attendees on the practical aspects of implementing condition-based maintenance in transformers, switchgear and large motors and generators. The QCMC is a technical conference, offering both in-depth half-day courses on condition monitoring methods, as well as papers on state-ofthe-art aspects of electrical equipment design, failure and repair. This information will be provided in a non-commercial environment by world -class experts offering a range of points of view. The QCMC will be an excellent opportunity to network with peers in different organizations. We have also arranged the date and location of the conference to enable participants to visit the Middle East Electricity trade show immediately after the QCMC. And of course, we hope you will find time to explore the many sites in and around Dubai – one of the most dynamic cities in the world.

I look forward to seeing you in Dubai.

Ron Meyer President, Qualitrol

### Meet the INSTRUCTORS



**Dr. Greg Stone** is an electrical engineer with a Ph.D. in electrical engineering from the University of Waterloo, Canada. From 1975 to 1990, Dr. Stone worked for the Research Division of Ontario Hydro, at the time the largest electric power utility in North

America. He eventually became responsible for the testing of high voltage equipment such as the 1200 large motors and generators in Ontario Hydro's system. Greg Stone was also one of the developers of online partial discharge test methods to evaluate the condition of the high voltage insulation in stator windings that are used on most large generators and many large motors in North America. Since 1990, Dr. Stone has been employed at Iris Power in Toronto, Canada. Greg Stone has published over 125 technical papers and has been awarded 3 patents. He has chaired several IEEE committees that created standards for evaluation and testing of rotating machines. He is past President of the IEEE Dielectrics and Electrical Insulation Society, and continues to be active on many other IEEE and IEC standards committees. He is a Fellow of the IEEE.



**Robert Brinzer** is business development manager for Qualitrol Diagnostic Monitoring Systems (DMS), Glasgow. He joined DMS in 2004 after over 16 years experience working for ABB High Voltage Technologies in Zurich, Switzerland where he ultimately was

responsible for GIS in-service reliability analysis and quality assurance. He has been involved with various projects to enhance the reliability of existing plants and the introduction of on-line diagnostic and monitoring solutions. He has also held positions in ABB as department/division manager of GIS service, manager of GIS project engineering and construction department quality manager. Prior to 1987 he was employed in Eskom South Africa, holding the positions of senior engineer substation design, project manager for 800 kV GIS substations and engineer in the projects department. He has had extensive field experience in installation, commissioning, maintenance and fault finding in high voltage substations and is especially involved in the optimisation of site operations and maintenance in order to increase plant availability.



**Dr. Bernhard Fruth** received a diploma in Electrical Engineering from the University of Technology Aachen (Germany) in 1981, and a doctorate in

Electrical Engineering (1986), in Polarization Mechanisms and Space Charges in Polymers from the Institute of High Voltage Technology. From 1985 to 1987 he was Chief Engineer of the Aachen High Voltage Institute, responsible for insulation technology research. During 1987 to 1992, Dr. Fruth was Head of High Voltage Technology section, ABB Corporate Research, responsible for condition monitoring of HV equipment, digital PD measurements, insulation systems for GIS, transformers. Development of PRPD pd systems. In 2000, he founded Power Diagnostix in Germany to develop monitoring systems and HV test equipment for rotating machinery and Transformer monitoring. Dr. Fruth is CTO of Qualitrol PD Tech Power Engineering AG in Switzerland, a Member of Swissengineering and electrosuisse, a Member of IEC Working group for on-line and offline rotating machines pd testing. He has published more than 60 papers on partial discharges and electrical insulation.

### Meet the INSTRUCTORS



**Mladen Sasic** has twenty years of international experience in design, production, installation, testing and maintenance of Power generation, transmission and distribution equipment. He obtained a Bachelor of Science in Electrical Engineering-Electrical Power Engineering degree from the University of Sarajevo. Mladen is a member of the Association of Professional Engineers of Ontario, Canada, as well as a member of

IEEE, CSA Technical Subcommittee on Safety Requirements for Electric Equipment for Measurement Control. He has contributed to the Handbook of Electrical Motors and has co-authored and presented more than 30 technical papers at various international conferences. Since 2007, Mladen has been a member of Iris Power and is currently Manager of the Rotating Machines Technical Services Group.



**Thomas Heckler** is the Director of WIKA's SF6 Gas Center of Excellence, managing a dynamic team of SF6 product experts and Strategic Account Managers spanning the globe. His 10 years of leadership has resulted in substantial business growth as well as the successful implementation of a product diversification strategy that elevated WIKA from a niche supplier to a multidimensional player in the T&D industry. As a result, WIKA is now

a world leader and innovator in SF6 Gas Density products , SF6 Analytic equipment, and self-sealing tank valves. Mr. Heckler's experiences give him a vast knowledge of SF6 gas in electric switchgear applications. Mr. Heckler joined WIKA in 1995 as a product manager for diaphragm seals and became market segment manager in 1997 for SF6 gas density monitoring equipment, which was then only a single product line. He graduated from the University of Applied Science Würzburg-Schweinfurt (Germany) with a degree in mechanical Engineering. His focus after his studies was simulation and stress calculations. He was heavily involved in the development of a wide range of products from cars to electric steel making furnaces and instrumentation.



**Fraser Cook** is Senior Software Engineer, Expert Services at DMS. After graduating with BSc (hons) Psychology from the University of Edinburgh (1999), Fraser studied Artificial Intelligence and gained an MSc from the Division of Informatics at the University of Edinburgh (2000). He joined DMS in 2001 to advance the expert systems incorporated in the DMS PDM system and in particular to

develop state-of-the-art classifying algorithms for Partial discharge patterns in GIS. Fraser is responsible for continued Expert System innovation at DMS and provides Expert Services Support to utilities and OEMs regarding the status of their GIS. Fraser has many years experience providing High Voltage test support, PD surveys, and fault location.



**Tom Breckenridge** formerly the Transformer Specialist for the Scottish Power group of companies in the UK is now Technical Director for TB TCS Ltd. Appointed convenor of a new Cigre working group WG A2-36 "Guide for Transformer Procurement Process" Member of IEC maintenance team on 60076-3 - Insulation levels, dielectric tests and external clearances in air. Member of BSI PEL/14 committee which maintains British Standards for transformers and shadows IEC TC

14. Provides specialist technical support in the field of power transformers. In particular support with specification production, procurement support, design reviews, manufacturing progress inspections, factory acceptance testing, transformer fleet asset management and supporting customers with in service failures.



David Templeton is Principal Engineer for R&D in Qualitrol -Diagnostic Monitoring Systems. He graduated from Strathclyde University with a B.Eng (Hons) in 1991 and M.Sc in Electrical Power Engineering in 1992. David joined DMS 15 years ago to develop PDM systems for sites throughout the world covering all areas including UHF sensor design,

installation, commissioning, training, PD analysis, HV test support with analysis, PD location with root cause analysis and working in conjunction with many power utilities and most major GIS manufacturers. Prior to DMS, he worked on an industrially sponsored doctorate designing prototype PDM systems for National Grid Company and Scottish Power while at Strathclyde University. David is an active member of the CIGRE working groups for unconventional PD measurements in GIS.



**Dr. Martin Judd** is based in the High Voltage Technologies Research Group at the University of Strathclyde in Glasgow, Scotland. From 1985 to 1993 he worked in industry on advanced RF systems and components for Marconi Electronic Devices and for EEV Ltd, both based in Lincoln, England. Since moving to Strathclyde in 1993, he has applied his RF expertise to the challenges of partial discharge detection and location

using RF techniques. He contributed to the development of the first commercial UHF systems for monitoring GIS, particularly in the areas of sensor design and calibration. For the past ten years, Martin has been at the forefront of research into the application of UHF techniques for PD location power transformers. In particular, since 2007 he has collaborated with Qualitrol DMS to develop an effective PD location system for power transformers based on the well-established UHF technology. He has published more that 150 technical papers, mostly in the field of partial discharge diagnostics. Dr Judd is currently manager of Strathclyde's High Voltage Diagnostics Laboratory and has served on a number of CIGRE Working Groups as a technical expert. He is also a Chartered Engineer, a Member of the IET and a Senior Member of the IEEE.



Ali Naderian received his B.Sc. and M.Sc. degrees from Sharif University of Technology in 1998 and the University of Tehran in 2000, respectively. During studies, his part-time employment experience included ISC (1997-1999) for testing of switchgear and circuit breakers,

and ITS (1999-2000) for designing and manufacturing of power transformers. He was co-designer of a 3\*300kV cascade HV testing transformer. He compared commercially available RTV coatings for outdoor insulators in his PhD thesis during his research at the University of Waterloo, Ontario (2003-2006). He has been a project manager of high voltage testing at Kinectrics Inc (Formerly Ontario Hydro Research) since 2007 working on diagnostics of power transformers, high voltage cables, and outdoor insulators. He performs on-line and offline PD measurements for HV apparatus. His research interests include high voltage test techniques, dielectric frequency response, and partial discharge. He has published several papers, is actively involved in IEEE transformer working groups and is a registered engineer in the Province of Ontario.

### SHORT COURSE PROGRAM

### Sunday, 6 February

#### Rotating Machines—Emerald Room

#### 08:30-12:00

#### **Off-line Testing of Stator Windings** Instructor: Bernd Fruth, Qualitrol PD Tech

To determine the conditions of the stator insulation system, various testing and monitoring methods have been developed. This course presents off-line methods including Digital Lossfactor Analyzer (Tan Delta), the use of Mobile High Voltage Tests Systems and off-line PD testing. Demonstrations of software and the results of field experience will be included and discussion with delegates will be encouraged.

13:00-15:00

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**Operation of PDM at Substations** 

Instructor: David Templeton, D-M-S

Over the last few years insurance companies have

forced outages and loss of circuit availability, and in

cost of the associated primary equipment. There is

little doubt that saving only one forced outage in a

GIS located in a critical part of the network could by

monitoring system, or that having GIS equipped with

monitoring might result in a more favorable premium

The Fault File and Fault Finding and

Servicing Requirements of the PDM

PDM Equipment, Coupler Connection and

Interpretation of UHF signals from defects

and indentifying typical signal patterns

from the insurance company. This course covers:

itself justify the cost of installing an on-line

**OCU** Installation

some cases these have been more than ten times the

been faced with very large claims resulting from

#### 13:00-15:00 **On-line PD Interpretation in Machines**

Instructor: Greg Stone, Iris Power

This course provides information to interpret PD data from off-line and online measurements on motor and generator stator windings. The main PD display methods of pulse magnitude vs pulse count, phase-resolved PD and trend plots are reviewed. Criteria for deciding when the PD activity is "high" are presented, as well as basic methods to determine the root cause of the PD (for example, loose windings, thermal aging, manufacturing errors) are discussed.

15:30-17:00

#### Gas–Insulated Switchgear–Regency Room A

#### 08:30-12:00

#### **Partial Discharge Diagnostic Techniques for GIS** Instructors: Robert Brinzer and David Templeton D-M-S

Although the reliability of GIS is high, any internal breakdown which does occur invariably causes extensive damage and an outage of several days' duration is needed to effect the repair. During this time the associated circuit may be out of operation and the consequential losses can be high. Much progress in diagnostic techniques for gas insulated substations (GIS) has been made in the last few years, and they are used increasingly in factory testing, site commissioning and during the service life of the equipment The PD, therefore, has many effects - physical, chemical and electrical and in principle any of them could be used to reveal the presence of the discharge. This course covers the range of diagnostic techniques for PD detection:

- Light output
- **Chemical by-products**
- Acoustic emission

#### Electrical methods

The UHF Method

#### Transformers—Regency Room B

08:30—12:00	13:00-15:00	15:30-17:00
Advanced Off-line Diagnostic Techniques for	UHF Monitoring Techniques for Power	Assessing the Manufacturing Capability of a
Power Transformers	Transformers	Supplier – can they make it?
Instructor: Ali Naderian, Kinectrics	Instructor: Martin Judd, University of Strathclyde	Tom Breckenridge, formerly the Transformer
This course covers mainly 2 tests: DFR (dielectric	The UHF technique for detecting and locating PD in	Specialist for the Scottish Power group of
frequency response), and FRA (frequency	GIS has proved very effective. This course will	companies in the UK is now Technical Director for
response analysis).	address the question of whether similar techniques	TB TCS Ltd and convenor of a new Cigre working
	can and should be applied to power transformers.	group WG A2-36 "Guide for Transformer
	Foundational principles of the UHF method will be	Procurement Process". The course gives an
	covered, leading on to case studies which show the	introduction to all stages from specification and
	capabilities of the technique in terms of its	procurement of new transformers, through to the
	sensitivity and accuracy of PD location.	condition assessment and management support of
	Demonstrations of PD location software and the results of field experience will be included and	existing in-service transformers including failure
	discussion with delegates will be encouraged.	investigations.
	uiscussion with delegates will be encouraged.	, , , , , , , , , , , , , , , , , , ,

### **Managing SF6 Gas** Instructor: Thomas Heckler, WIKA SF6 gas is a critical component for electric switchgear and knowledge about proper management and maintenance practices is

critical to maximizing the lifespan of electric switchgear. Key focus areas include SF6 gas quality, leak location, density monitoring, handling, and gas connections. This is an introductory course providing a broad overview of each of these topics.

### SHORT COURSE PROGRAM

### Tuesday, 8 February

Rotating Machines	Gas-Insulated Switchgear	Transformers	
Emerald Room	Regency Room A	Regency Room B	
08:30—12:00 Basics of EL CID Stator Core Testing Instructor: Mladen Sasic, Iris Power This course will cover stator core design basics, the basic theory of EL CID testing, calculation of excitation levels and testing practices, the use of ELAN software, and data analysis and result interpretation.	08:30–12:00 Partial Discharge Measurement Using UHF Portable Monitor Instructor: David Templeton, D-M-S The DMS Portable UHF Monitor detects and records the UHF signals generated by partial discharges in a GIS. The Monitor is often used to undertake surveys in substations to provide early warning of developing faults, enabling them to be corrected before complete breakdown occurs. The course includes instruction on the hardware, software and interpretation of PD signals.	08:30—12:00 Transformer PD training using TMAXX online PD Monitor Instructor: Bernd Fruth , Qualitrol PD Tech The TMAXX is a HF Monitor that detects and records the HF signals generated by partial discharges in a Transformer. The Monitor provides early warning of developing faults, enabling them to be corrected before complete breakdown occurs. The course includes instruction on the hardware, software and interpretation of PD signals.	

13:30—15:00 Emerald Room **PDA/TGA/EL CID User Group Meeting**—The User Group invites feedback on problems and successes with on-line partial discharge testing and recommended improvements. Feedback on EL CID testing is also solicited. Open to PDA/TGA/EL CID owners only.

### MONDAY, 7FEBRUARY

Track 1	Track 2	Track 3
Rotating Machines	Gas-Insulated Switchgear	Transformers
Emerald Room	Regency Room A	Regency Room B
Recent Problems with Air Cooled Motor and Generator Stator Windings Greg Stone Iris Power, Canada	Application of UHF Partial Discharge Monitoring System on GCCIA Interconnection Network ABB & GCCIA	Integrated Insulation Condition Monitoring of Transformers Krishnan Rajamani, Bernhard Fruth, Herbert Looser, Nicolas Junod QUALITROL PDTech Power Engineering, Switzerland
Repair Alternatives of Air-Cooled Turbine Generator Rotor and Stators After a Failure William Moore National Electric Coil, USA	GIS Service Concepts and Lifetime Enhancement <i>Siemens</i>	Insulation Life in Liquid-Filled Power Transformers Jean-Claude Duart, Dupont Energy Solutions, France and Radoslaw Szewczyk, Dupont Energy Solutions, Poland
Synchronous Machine Rotor Winding Problems Ian Culbert Iris Power, Canada	How to Design GIS Layouts and Extensions <i>Robert Brinzer, D-M-S, Scotland</i>	The Use of Fiber Optic Temperature Sensors to Control Transformer Cooling Jean-Noël Bérubé, Neoptix Inc.
New On-Line Methods to Detect Rotor Insulation Problems <i>Mladen Sasic</i> Iris Power, Canada	SF6 The Political/Environmental—Summary of Global Political Trends Thomas Heckler, WIKA, Germany	Conducting Design Reviews with the Transformer Manufacturer <i>Tom Breckenridge, UK</i>
Motor Repairs S. Ali Saudi Aramco Services, Saudi Arabia	GIS Components and Their Failure Modes Robert Brinzer, D-M-S, Scotland	Sensitivity Testing of a UHF Power Transformer Monitoring System Martin Judd, University of Strathclyde, UK
Recent Advances in Interpreting On-Line Partial Discharge Results Greg Stone Iris Power, Canada	Field Experience of Combined PD and BCM Monitoring Taiwan Power Research Institute, Taiwan	Presentation on Load tap changers <i>By Siemens service shop</i>
Recent Changes in IEC, ISO and IEEE Rotating Machine Standards Ian Culbert Iris Power, Canada	GIS Fault Forensics Robert Brinzer, D-M-S, Scotland	Presentation on DGA—PD <i>By Kinectrics, Canada</i>
	25 Years of UHF Measurement Comes of Age John Pearson, Founder—D-M-S, Scotland	Transformer insulation, aging issues, life expectancy <i>Ramesh Gopalan, Alstom Grid</i>

Please note: Additional papers will be added from OEM's, European Utilities and Middle Eastern Electrical and Water Authorities .

### Meet Some of the PRESENTERS



**Bill Moore**, P. E., is Director of Technical Services for National Electric Coil. Based out of Columbus, Ohio, his department provides high level technical support in the areas of product development, proposals, advanced engineering design, research and development, machine

data configuration and sales and marketing support. Prior to joining NEC in 1997, Bill held utility power plant management positions with Florida Power & Light, working at three different power plants, over a ten year time span. A licensed professional engineer in Ohio and Florida, he started his 32 year power industry career as a generator design engineer with Westinghouse. He has been awarded several design related generator patents and has published and presented over 65 papers in the power generation field. He is a frequent short course lecturer on generator industry issues at major conferences, and for utilities and insurance companies around the world. Bill is a member of the IEEE and a Fellow Member of the ASME and was past chairman of the ASME Power Division. He is a past recipient of the EPRI Innovator Award, and the "Author's Award" from Hydro Review Magazine, the Best Paper Award from the IEEE Pulp and Paper Section. He has a Master's and Bachelor's of Science degrees from the University of Pittsburgh, and Notre Dame University, respectively, along with an M.S. in Engineering Management from the Florida Institute of Technology.



**Ian Culbert** is a Rotating Machines Specialist at Iris Power. Before joining Iris Power, Ian was an induction motor designer with both Parsons Peebles in Scotland and Reliance Electric in Stratford, Ontario. He then joined Ontario Hydro/Ontario Power Generation in 1977 as a motor and small generators specialist. Prior to his retirement from this company, in 2002, Ian was responsible for providing

support to Ontario Power Generation's nuclear plant engineers on motor and standby generator design, performance, maintenance, repairs and environmental qualification. Ian has co-authored several papers on motor and generator electrical component condition assessment, has been principal author of three EPRI motor repair and reconditioning specifications. He is also co-author of an EPRI book entitled "Handbook to Assess the Insulation Condition of Large Rotating Machines". Mr. Culbert is a Registered Professional Engineer in the Province of Ontario, Canada.



Jean-Claude Duart has been employed at DuPont since 1995, and currently works as Technical Manager Europe, Midle-East & Africa for the Energy Solutions Segment. He is a member of the CIGRE Working Group A2-35. He received his PhD in Electrical Engineering from the University of Toulouse in France in 1994.



**Radoslaw Szewczyk** graduated as MSc in Electrical Engineering in 1998 at Technical University of Lodz, Poland, where he studied Electrical Machines and Transformers Technology. He worked as a transformer designer for ABB and Pauwels (now CG). Since 2006 he works for DuPont Energy Solution as a Transformer Specialist Europe, Middle East & Africa. He is a member of working

groups of IEC, IEEE and CIGRE.

### CONFERENCE SOCIAL EVENTS

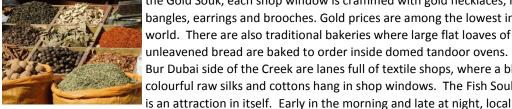
Each full day of the event will include refreshment breaks and prayer and lunch breaks.

We invite all participants and guests to join the organizers, instructors and presenters at the Conference Reception on Sunday evening from 18:00 to 19:30 in the Pearl Room.

On Monday evening, the Conference Dinner will take place in the Golf Park Room from 19:00 to 21:00. Please join all your colleagues at this event.

### LOCALATTRACTIONS

The **souks** on both sides of the Creek are attractive not only for their shopping bargains, but also as places for the sightseer and photographer. In the tiny lanes of the Spice Souk, the atmosphere and the scents of the past can be savoured. Bags of spices, incense, rose petals and traditional medicinal products are stacked outside each stall. Along the slightly larger lanes of



the Gold Souk, each shop window is crammed with gold necklaces, rings, bangles, earrings and brooches. Gold prices are among the lowest in the world. There are also traditional bakeries where large flat loaves of delicious unleavened bread are baked to order inside domed tandoor ovens. On the Bur Dubai side of the Creek are lanes full of textile shops, where a blaze of colourful raw silks and cottons hang in shop windows. The Fish Souk in Deira



fishermen unload mountains of fresh fish, which they sell in a frenzied bargaining session.

### Dubai Museum

Al Fahidi Fort, which houses the Dubai Museum, was built around 1787, and once guarded the landward approaches to the town. Renovated in 1971 for use as a museum, its colourful life size dioramas vividly depict everyday life in the days before the discovery of oil. Galleries recreate scenes from the Creek, traditional Arab houses, mosques, the souk, date farms and desert and marine life. One of the more spectacular exhibits

portrays pearl diving, including sets of pearl merchants' weights, scales and



sieves. Also on display, are artefacts from several excavations in the emirate, recovered from graves that date back to the third millennium BC.

#### **Heritage Village**



A traditional heritage village, located near the mouth of Dubai Creek in the Shindagha district, features potters and weavers practicing traditional crafts, as well as exhibits and demonstrations of pearl diving. It is a place where the visitor can take a step back in time and experience some of Dubai's culture and heritage.

### **Archaeological Sites**

There are four main excavation sites in Dubai, at Al Qusais, Al Sufooh, Jumeirah and Hatta. The first two are graveyards dating back more than 2,000 years. The Jumeirah site reveals artefacts from the 7th to 15th centuries AD. These sites are not yet open to the public. However tourists or tour operators may obtain a special permit from Dubai Museum to visit the digs.



### HYATT REGENCY DUBAI

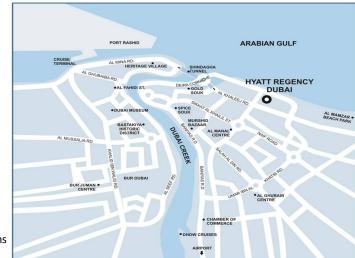
Welcome to Dubai, one of the most exciting cities in the world. Ideally located between Europe and Asia, along wonderful beaches of the Arabian Gulf and bordering breathtaking deserts, it is a place where tradition meets modern life. From ancient history and traditional souks to architectural masterpieces, world-class shopping and the ultimate in luxury, Dubai has all it takes to make your stay in the UAE extraordinary.

Hyatt Regency Dubai is a contemporary luxury hotel, conveniently close to the traditional Gold and Spice Souk, as well as the Heritage Village and Deira City Centre, Dubai's first mega mall. This makes Hyatt Regency Dubai a popular hotel in Deira, allowing guests to enjoy the endless activities the city has to offer or to relax with their favourite pastime directly on the hotel premises.

Hyatt Regency Dubai hotel has a nine-hole pitch and putt course, as well as a crazy golf course, a spa offering body treatments and skin care, a fitness centre, an ice rink, tennis courts and more. From the Dubai Museum to beaches, recreational parks, horse or camel racing, shopping, golf courses, sightseeing or city tours, there is hardly anything you cannot find in Dubai.

Hyatt Regency Dubai offers guests exquisite dining experiences in any of the 5 restaurants, and 7 bars and lounges—from poolside snacks to the 25th floor revolving restaurant.





#### Distances from hotel to main transportation hubs:

Dubai International Airport—12 km Dubai Metro (green line station) - less than 1 km

#### **Transportation Services:**

Limousine & Car Rental can be arranged through the hotel Concierge

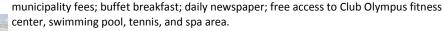
Taxi to from Dubai International Airport takes 20 minutes and costs approx AED40.

Hyatt Regency Duabi offers free parking for guests staying in the hotel.

### HOTELRESERVATIONS

Guest rooms have been reserved for QCMC2011. Gulf View Rooms are available at the special rate of AED720 for single and AED790 for double occupancy per night. A number of Regency Club Rooms

are also available at AED1080 for single and AED1150 for double occupancy per night. This rate includes all service charges and



These rates are available from Feburary 4th to February 9th. Please use the attached hotel reservation form to make your booking.



Hyatt Regency Dubai PO Box 5588, Dubai, United Arab Emirates Tel: +971 4 2096661; Fax: +971 4 2096662 ™ Email: reservations.hyattregencydubai@hyatt.com; www.dubai.regency.hyatt.com

## QCMC 2011-Conference Registration

Registration Includes: Admission to all conference sessions on Monday; one copy of Conference Proceedings; user group meeting. Also included are morning and afternoon Refreshments; Lunch on Sunday and Monday; Reception, Conference Dinner. Short Courses are not included in the Conference registration fee.

### PLEASE PRINT CLEARLY

ast (Family) Name:			First Name:			
Company						
			Zip/PostalCode:			
Business Telephone:		Fax:	Email:			
Please indicate dietary pre	eferences:					

	US \$	AED
Conference Registration—please indicate the Track you wish to attend	\$300	1200
Track A: Rotating Machines Track B: GIS Track C: Transformers		
Short Course Registration—please check the courses you wish to take:		
Sunday morning:		
1. Off-Line Testing of Stator Windings	\$75	300
2. Partial Discharge Diagnostic Techniques for GIS	\$75	300
3. Advanced Off-Line Diagnostic Techniques for Power Transformers	\$75	300
Sunday afternoon:		
4. On-Line Partial Discharge Interpretation in Machines	\$75	300
5. Operation of PDM Substations	\$75	300
6. Managing SF6 Gas	\$75	300
7. UHF Monitoring Techniques for Power Transformers	\$75	300
8. Assessing the Manufacturing Capability of a Supplier—Can they make it?	\$75	300
Tuesday morning:		
9. Basics of EL CID Stator Core Testing	\$75	300
10. Partial Discharge Measurement using UHF Portable Monitor	\$75	300
11. Transformer PD Training using TMAXX PD Monitor	\$75	300

Method of payment: Credit Cards will only be charged in US\$. Wire transfers can be made in either US\$ or AED.

Type of Credit Card:	MC	VISA		
Credit Card No:			Expiry Date:	
Name on Card:		Sic	ianature:	

Cancellation Policy:

- Prior to January 1st, all fees paid will be returned less a \$100 administration fee.
- After January 1st, no refunds will be given, however, substitutions will be permitted.

#### To register on-line, visit www.irispower.com

Or Email This Completed Form To: resi.zarb@qualitrolcorp.com



www.qualitrolcorp.com www.irispower.com www.dmsystems.co.uk

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Qualitrol Cond	ition Monitoring Conference,	Dubai, UAE			971 4 2096662		
	5 - 9 February 2011		E	E-mail: res	ervations.hyattre	gencydubai@h	yatt.com
BOOKING DETAILS:							
Last Name (Mr/Mrs/Miss):			F	First Name:			
Arrival Date:		Flight:			Time:		
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Telephone:		Fax:					
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Nationality:		Place of Issu	ue:				
PLEASE RESERVE: (Please tick t	the appropriate box)						
No.	Gulf View Room (King/Twin)	Single R	Rate	AED 720	Double	Rate	AED 790
No.	Regency Club Room (King/Twin)	Single R	Rate	AED 1080	Double	Rate	AED 1150
Preference: Smoking	Non-smoking	Remarks:					
* Late Check Out till 1800 Hrs - 50% * Check Out After 1800 Hrs - Full n Regency Club Rooms additional Be	room rate kk until 23 March 2010. From then onwards th 6 of the group rate will be applicable ight charge on the group rate will be applicable enefits: * Access to Regency Lounge* Dinner d nd drop off from /to Dubai International Airport	rinks with canapes, *Traditiona	I afternoon te			y Wi-Fi access in the	e lounge
Limousine Transfer Required:	* Standard Limousine	at AED 160 net per way for Sta	andard room.	And Complimenta	ary pick up and drop o	off for Regency Club I	Room
MARHABA:							
Meet and assist service may be	provided from the arrival hall to the c	ustoms:			* Standard	Marhaba at AED 125	5 net per person
VISA APPLICATION: The visa can be arranged at:							
<ul> <li>* AED 450 net per person, s The process takes approx</li> <li>* For Visa , Duly filled aplica of credit card required .</li> </ul>	hould all the required documents be imately three working days, not inclu tion form, Credit card authorization f narges will be posted to your room ac on form.	ding Thursday & Friday. orm allowing hotel to Blo					o your arrival.
<b>RESERVATION GUARANTEE:</b> Reservations will be guaranteed Credit Card details:	upon completion of the following info	rmation.					
American Express	Diners Club	Mastercard		Visa		Other	
Card Holder:			Expiry Da	ate:			
Card No:			Signature	:			
* a photocopy of the front and back	of the credit card is required to process the bo	oking					
<ul> <li>Cancelled between 04 February</li> <li>Any "no-show" on the specificity of the specific test of test</li></ul>	vill apply: - 04 February 2011, one (1) night charge y 2011 - onwards – Full stay will be char ied date of arrival will result in an equ responsibility for personal items, whic a. Personal insurance coverage for va	<sub>ged</sub> livalent to 100% of the ac ch are damaged or lost p	rior to, dur	ring or following			