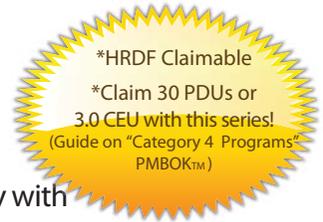




Corrosion & Materials Management Best Practice Series

 29th November – 3rd December 2010
Renaissance Hotel - Kuala Lumpur, Malaysia



Benchmark your deepwater corrosion control and materials selection strategy with industry best and maximise cost-saving for your organization!

MASTERCLASS 1 : Downhole Corrosion & Materials Management Best Practices (3 days)

MASTERCLASS 2 : Subsea Corrosion & Materials Management Best Practices (2 days)

RESERVE NOW

PRINCIPLE PROGRAM FACILITATOR



Dr. Anthony Cole

MiMMM, CEng, PhD
NACE Member
MI&Corr Ltd., UK.



TESTIMONIALS OF COMPETENCE

- 25 years of Materials & Corrosion experience in the E&P sector
- Member of NACE International
- Represented Netherland/Shell on ISO & API Technical Committees
- Developed over 20 patents
- Wrote the Corrosion and Materials Chapter of Shell's International Internal Standard "The Casing and Tubing Design Guide."
- Led courses in Shell for Corrosion Engineers & Production Technologists Europe wide
- Regions of project experience: Europe, Asia, Middle East, Africa and Russia

Capitalize on Dr. Cole's leading expertise to:

- UPDATE on the latest research and development of deepwater material & corrosion
- UNDERSTAND and LEARN best practices developed and implemented by leading companies
- IDENTIFY and MONITOR the causes of corrosion and material failure
- MITIGATE internal and external corrosion
- SPECIFY cost effective materials for safe operation
- BENEFIT from real life case histories and AVOID expensive material-related equipment failures
- LEARN the latest subsea recommendations of EEMUA 194
- GAIN INSIGHTS to new technologies like TubeFuse™, Expandables & Smart Wells Technologies
- SHARE experience and NETWORK with peers

Limited Attendees

The course has limited seats to ensure maximum learning and experience for all delegates.

Certificate of Attendance

You will receive a Certificate of Attendance bearing the signatures of the Trainer upon successful completion of the course. This certificate is proof of your continuing professional development.

Interactive Training

You will be attending training designed to share both the latest knowledge and practical experience through interactive sessions. This will provide you with a deeper and more long-term understanding of your current issues.

High Quality Course Materials

Printed course manual will provide you with working materials throughout the course and will be an invaluable source of reference for you and your colleagues afterward. You can follow course progress on your laptop with soft copies provided.

CALL: +65 6408 9775

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PROGRAM OVERVIEW

Oil and gas reserves in the shallow water are gradually depleting. Many oil & gas companies have started exploring or are in the process of developing their deepwater production. Due to the increasing demand for better deepwater reliability, efficiency and safety, the technological development has been massive. It is critical to understand and learn the latest knowledge on deepwater corrosion and material selection to ensure you make the correct choices first time around to keep your production flowing, equipment in optimal working condition and to avoid costly downtime, wastage and replacements.

Deepwater operators are facing complex problems in high pressure sour applications and system. The intervention costs are high and constantly rising, not to mention the increasing difficulty in inspection and the effective monitoring of equipment integrity.

PetroSync is presenting two programs in this Corrosion & Materials Management Best Practice Series. Key features of this series are the highlights of latest R&D and best practices employed in the current industry.

Program 1 is structured on the downhole corrosion issues and material selection for well application throughout the offshore deepwater well life-cycle.

Program 2 will annotate practical approaches in subsea production equipments and facilities design, operation and maintenance. Discussions will cover approaches, techniques and tools suitable to specify, monitor, control, and troubleshoot asset performance.

This training course is recommended for both discipline- and project-focused engineers with a basic understanding on the process. A combination of lecture, examples, and interactive sessions will be utilized, providing the attendees with an opportunity to engage in discussions and to participate in an effective learning experience together with Dr. Anthony Cole.



PROGRAM 1

Downhole Corrosion & Materials Management Best Practices (3 Days)

With the ever increasing complexity of Well design and increasing application in aggressive HPHT and deep water environments materials degradation is becoming an ever more important issue. This Course will introduce engineers to the well types in common usage and allow them sufficient knowledge to manage materials and corrosion issues in a safe and cost effective way whether the Well is a simple bare-foot water injector or a technically advanced expandable SMART completion.

*Throughout the course case studies from a variety of locations will be used to illustrate the points being made.

* TubeFuse™, Expandables and Smart Wells Technologies will be discussed

Day 1 (29th November 2010):

Downhole Corrosion and Specific Concerns

The first sessions of the course provide the basis for the rest of the session by ensuring that all attendees are familiar with the fundamental corrosion, materials and component technologies which underpin the remaining two days. Following a team quiz the day concludes with an overview of the specific types of corrosion commonly found in downhole applications and methods to mitigate these.

- Wells and General Well Design
- Various Downhole Corrosion Mechanisms and Effect on Materials Properties
- Materials forming and the impact on corrosion resistance
- Quiz
- Specific Types of Downhole Corrosion - Case studies

Day 3 (1st December 2010):

Downhole Materials Selection

The third and final day of the course concentrates on materials selection for a variety of wells from simple producing wells in benign environments to HPHT, sour service wells and includes consideration of water injections and alternative production and injection swells. To cement understanding of the selection process the day finishes with a Materials Selection group exercise, which requires the candidates to consider a variety of well types and environments.

- Materials Selection
 - Steel Casing and Tubing Materials
 - CRA Casing and Tubing Materials
- Monitoring and Inspection, NDT
- Everything Else: Ancillary equipment, such as seals, water-alternate-gas (WAG) wells and discussion on topics raised during the preceding days
- Final quiz and Materials Selection Exercise
- Round-up and review (with an early finish on Day 3)

Day 2 (30th November 2010):

Materials in Well Construction

Day two kicks off with a review of the previous days quiz before detailing the types and properties of steels, corrosion resistant alloys and non-metallics used in downhole applications, including an overview of OCTG connection testing.

- Corrosion Prevention – Casing and Tubing
- Materials for Casing and Tubing
- Drilling and completion fluids
- The Wellhead and Christmas Tree
- Connections and Connection Testing
- Corrosion mitigation during acid stimulation
- Quiz

WHO SHOULD ATTEND

This program is intended for,

- Materials and Corrosion Engineer
- Integrity Engineer
- Well & Completions Engineer
- Production Technologists who would like a more thorough knowledge of well related corrosion
- Production Chemists and others involved in well-centric activities

And technical personnel that manage, perform, or participate in downhole materials selection, inspection, and corrosion management in oil & gas industry.

As offshore E&P reaches into deeper more extreme environments to satisfy the world's increasing energy demands, the need for safe and reliable equipment and cost-effective materials choices becomes ever greater. In this course, attendees are introduced to the fundamentals of corrosion, corrosion mitigation and materials selection with particular emphasis on subsea applications and the latest recommendations of EEMUA 194. Participants will be guided through the maze of materials required for components from the well to topsides and as diverse as umbilicals and seals, while corrosion mitigation and monitoring techniques are also covered.

*Throughout the course case studies from a variety of locations will be used to illustrate the points being made.



Day 1 (2nd December 2010): Subsea Corrosion and Metallurgy: Major Components

The first day of this course allows for an overview of corrosion and metallurgy, to ensure a good grounding for the following material, and introduces various corrosion mitigation methods relevant to subsea application including cathodic protection and coatings. It then turns to individual components in the subsea system and highlights particular concerns and failure mechanisms which need to be addressed for each of them; the major components of such systems are then detailed and materials selection decisions proposed. At the end of day one attendees will be confident to discuss subsea corrosion and materials.

- General principles of corrosion and materials
- Corrosion mitigation including coatings and cathodic protection
- Corrosion monitoring and inspection
- Wells, wellheads, xmas trees and manifolds

Day 2 (3rd December 2010): Subsea Corrosion and Metallurgy: Equipment & Materials Selection

Day two builds on the momentum of day one to explore additional and more ancillary components of the subsea system, such that at the end of day two attendees will have a complete oversight of their subsea materials requirements.

- Flowlines and risers
- Valves
- Fasteners, seals and gaskets
- Umbilicals and flexibles
- Hydraulic control and chemical injection systems
- Insulation
- Quiz (with an early finish on Day 2)

WHO SHOULD ATTEND

This program is intended for,

- Materials and Corrosion Engineer
- Subsea Engineer
- Maintenance &/or Inspection Engineer
- QA/QC Engineer

And technical personnel that specify, operate, maintain and repair subsea production equipments & facilities.

These personnel typically have a basic understanding of some part of the process, but want to increase their understanding on the best practices and be updated on the latest R&D achievement.

PROGRAM SCHEDULE

| | |
|---------------|--------------------------|
| 08:00 – 09:00 | Registration |
| 09:00 – 11:00 | Session I |
| 11:00 – 11:15 | Refreshment & Networking |
| 11:15 – 13:00 | Session II |
| 13:00 – 14:00 | Lunch |
| 14:00 – 15:30 | Session III |
| 15:30 – 15:45 | Refreshment & Networking |
| 15:45 – 17:00 | Session IV |
| 17:00 | End of Day |

WHY YOU SHOULD ATTEND

- To ensure that all objectives of the course matches yours, all PetroSync programs are developed after intensive and extensive research within the industry
- PetroSync programs focus on your immediate working issues to ensure that you are able to apply and deliver immediate results in real work situations
- Application and implementation of industry knowledge and experience are the drivers for our course design, not theoretical academic lectures
- PetroSync training focuses on practical interactive learning tools and techniques including case studies, group discussions, scenarios, simulations, practical exercises and knowledge assessments during the course. Invest a small amount of your time to prepare before attending the course to ensure maximum learning
- PetroSync follows a rigorous selection process to ensure that all expert trainers have first-hand, up-to-date and practical knowledge and are leaders of their respective industrial discipline

IN-HOUSE SOLUTIONS

SAVE COST • IMPROVE PERFORMANCE • REDUCE RISK

PetroSync understands that in current economic climate, getting an excellent return on your training investment is critical for all our clients. This excellent training can be conducted exclusively for your organization. The training can be tailored to meet your specific needs at your preferred location and time.

We will meet you anywhere around the globe.

If you like to know more about this excellent program, please contact Jerry Tay (Senior Conference Manager) on +65 6408 9775 or email jerry.t@petrosync.com

PROGRAM INSTRUCTOR'S PROFILE



Dr. Anthony Cole

MiMMM, CEng, PhD
NACE Member
MI&Corr Ltd., UK.



Dr. Anthony Cole, owner of MI&Corr, is a leading expert in Metallurgy, Corrosion and Engineering with over 25 years of experience. He spent approximately 15 years in Exploration and Production in countries as diverse as Libya, Oman and Bahrain and most recently spent more than 10 years at Shell International headquarters in The Netherlands and with Shell UK.

Dr. Cole was involved in the development of IP for Shell International and has successfully developed over 20 patents. One particular project he led resulted in the commercialization of TubeFuse, a patented autogenous system of joining tubulars, identifying potential savings of more than 120 million dollars in a single project alone. He represented The Netherlands/Shell on ISO & API Technical Committees, notably ISO 11960 and API 5CT –Tubular Goods.

He did extensive technical reviews on Shell's corrosion mitigation of offshore and subsea pipelines which resulted in significant improvements in its approach to corrosion management. He was also in charge of Shell's training for Corrosion Engineers and Production Technologists Europe wide on downhole corrosion & materials selection knowledge.

Dr. Cole led Shell's Corrosion Control in North & South Oman for four years before moving to Shell Headquarters in The Netherlands. He successfully led, reviewed and enhanced various corrosion control processes, pipeline inspection and maintenance operations for Petroleum Development Oman.

He is a Professional Member of the Institute of Materials, Minerals and Mining (MiMMM), a member of NACE and has been a Chartered Engineer (C.Eng.) for two decades.

ACCOMPLISHMENTS DURING DR. COLE'S SERVICE WITH SHELL INTERNATIONAL:

- Represented Netherlands/Shell on ISO & API Technical Committees
- Developed over 20 patents and commercialized of the TubeFuse patent
- Wrote the Corrosion and Materials Chapter for Shell's International Internal Standard: "The Casing and Tubing Design Guide"
- Produced courses and trained Corrosion Engineers & Production Technologists, Europe wide

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