

ROTATING EQUIPMENT RELIABILITY & MAINTENANCE

7-9 April 2014, Al Khobar, Kingdom of Saudi Arabia

Despite the best efforts and precautions, equipment failures do occur hampering the equipment performance and adversely impacting the profitability of the business. Rotating Equipment Reliability and Maintenance Conference aims to create a learning platform for all the maintenance and reliability professionals to share the best maintenance practices and discuss the strategies to improve reliability.

This three day conference will cover all aspects of reliability and maintenance including reliability centered maintenance, availability, machinery failures, risk assessment, spare parts optimization, techniques to facilitate equipment maintenance, root cause analysis, condition monitoring, maintenance planning and scheduling.

FEATURED PRESENTATION BY:



RICKY SMITH

Past Chairman of the Society for Maintenance and Reliability Professionals and Author of "Rules of Thumb for Maintenance and Reliability Professionals", "Maintenance and Reliability Metrics/ KPIs 101", "Lean Maintenance"

Title: Known Best Practice Maintenance and Reliability Metrics/KPIs and how to use them

- ▶ Internationally Known Best Practice Maintenance and Reliability Metrics/ KPIs
- ▶ How KPIs are aligned with Known Best Maintenance and Reliability Practices
- ▶ How to manage with a KPI Dashboard using Best Practice Metrics/KPIs to improve performance and asset health
- ▶ A few Simple tips you can use to implement these great KPIs/Metrics
- ▶ Lessons learned from many years of experience developing KPIs with internationally known companies (no company names will be used in this presentation)
- ▶ Common traps which distract us from focusing on the right metrics at the right time

How many times have you felt like your Maintenance and Reliability KPIs were not providing the information you need at the right time in order to make the right decision? Are your KPIs/Metrics telling you the real story about asset reliability? Making intelligent decisions using effective KPIs which are aligned with your maintenance and reliability processes is the only way one can truly manage asset health and performance. In this presentation I will share with you a few World Class KPI Maintenance and Reliability Dashboards. This presentation is all about sharing knowledge from around the world at one event. Join me for this high impact learning event and presentation.

ADVISORY BOARD



Ricky Smith

Author of the "Rules of Thumb for Maintenance and Reliability Engineers", "Lean Maintenance" and "Maintenance & Reliability Metrics/KPIs 101"



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Associate Professor, Rotating Machinery
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Qadeer Ahmed

Reliability Engineering Professional
Saudi Aramco

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ESTEEMED SPEAKER PANEL



Ricky Smith

Author of the "Rules of Thumb for Maintenance and Reliability Engineers", "Lean Maintenance", "Maintenance & Reliability Metrics/ KPIs 101" and Past Chairman of Society for Maintenance and Reliability Professionals



Chris Walsh, Condition Based Maintenance, Strategic Business Manager, **Petrofac**



Ali M. Al-Shurafa, Senior. Rotating Equipment Engineer, **Saudi Aramco**



Joe Ekanem, Head of Maintenance, **Addax Petroleum**



Harald Schmit, General Manager, **National Mechanical Engineering Company**



Ijaz Ul Karim Rao Director, **Velosi Asset Integrity Limited**



Raid Almomany Maintenance Manager **Southern Province Cement Company**



Ibrahim Kobbia Rotating Machinery Engineering Section Leader **ADMA OPCO**



Ziyad Mustafa Assad Owidah Lead Engineer, Reliability and Asset Management Department, **Marafiq**



Govind Kiran Kumar Reddy Planning Section Head, **DUBAL**



Ahmad AL Amoudi Acting Reliability Section Head **Petro Rabigh**



Daniel Mendez Group Manager, Rotating Equipment Department **Tecnicas Reunidas**



Jim Cooper Chief Engineer **Howden**



Dr. Ir. Hj. Mohd Abdul Karim Bin Abdullah, Group CEO, **Serba Dinamik Group**



Manish Kumar, Senior Rotating Equipment Engineer **Saudi Aramco Shell Refinery Company**



Ali Rafea Al Zahrani Machinery and Condition Monitoring Manager, **Saudi European Petrochemical Company**



Wael Ahmed El Akkawi, General Manager, Service Business Unit, **Alfanar Technical Services**



Bakheet Ali Al-Zahrani, Manager Stationary Mechanical, **Saudi European Petrochemical Company, SABIC affiliate**



Ibrahim Hadi Sr. Manager Maintenance **IbnSina, SABIC**



Samuel Thomas, Advisor Reliability and Asset Management Division, **Maaden Phosphate Company**



Krishna Kumar Reliability Centered Maintenance Lead **QatarGas**



Nasser Khalaf Senior Maintenance Planner **QAPCO**



Irshad Muhammad Senior Reliability Engineer **Qatargas**



Arafat M. Al-Jabri Technical Manager **Water and Electricity Company**



Saleh Saeed Al-Mozaie Engineer, Root Cause Analysis, **Marafiq**



Ayman Ejaimi Lead Reliability Engineer **Saudi Aramco**

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REASONS TO ATTEND

- Exhaustive agenda reviewed by the advisory board, that addresses the key challenges and issues faced in the Maintenance of Rotating Equipments
- Building Maintenance Strategies and discussing implementation techniques to enhance Reliability and Performance of Rotating Equipments
- Exclusive case studies and discussions by the key industry experts across the globe sharing thier experiences in managing challenges
- Networking platform to interact with the key industry leaders from top companies
- Pre Conference Workshop providing effective strategies and their functional implementation

KEY TOPICS

- Q **MAINTENANCE STRATEGIES** for Rotating Equipments based on Criticality and Risk Mitigations
- Q **BEST PRACTICES** in Maintenance Planning and Scheduling
- Q **EQUIPMENT FAILURES, CHALLENGES AND DIFFERENT WAYS** to manage them
- Q **KPI'S** of Reliability, Availability, Maintainability
- Q **BEST PRACTICES** for assessment, benchmarking of performance and health reviews of equipment and systems
- Q **COST INVOLVED** in Maintenance and how to minimize them
- Q **SPARE PARTS OPTIMIZATION:** Availability and Procurement of Spare parts
- Q **TECHNIQUES AND METHODS** of Shaft Alignment and their implementation

WHO SHOULD ATTEND?

Job Function:

Rotating Equipment Engineers	Electro-Mechanical Engineers
Maintenance Planners/ Schedulers	Generation Engineers
Senior Maintenance and Reliability Leaders	Maintenance Manager
Maintenance Superintendents	Maintenance Supervisor
Mechanical Engineers	Maintenance Engineer Advisor
Condition Monitoring Engineers	Maintenance Training Specialist
Vibration Analysts	Maintenance Consultant
Integrity Engineers	Reliability Engineers
Project Engineers	Equipment Reliability Department
Head of Operations	Quality Managements
Head of Plant Maintenance	TAR Coordinator (Turn Around)
	Lead Mechanical Comissioning Engineer

Industrial Split:

Oil and Gas Companies	Energy- Mining
Petrochemical Companies	Chemicals
Engineering, Procurement and Construction	Utility/ Power plants
Pharmaceutical Companies	Fertilizer Plants
	Iron and Steel Companies

DAY 1 | 7th April 2014

PRE-CONFERENCE WORKSHOP

8:30 Registration and Coffee

8:45 Opening Remarks from the Chair

9:00 Introduction to Centered Maintenance for developing effective maintenance strategies

Objectives:

- Introduction to Reliability Centered Maintenance
 - Identifying new challenges
 - Reviewing the key procedures and techniques of Reliability Centered Maintenance
 - How to build effective maintenance strategy using reliability centered maintenance
 - Determine the best possible ways to improve reliability
- Ziyad Mustafa Assad Owidah**, Reliability and Asset Management Department, **Marafiq**

9:30 Q WORKSHOP A Known Best Practice Maintenance and Reliability Metrics/KPIs and how to use them

Objectives

- Internationally Known Best Practice Maintenance and Reliability Metrics/KPIs
- How KPIs are aligned with Known Best Maintenance and Reliability Practices
- How to manage with a KPI Dashboard using Best Practice Metrics/KPIs to improve performance and asset health
- A few Simple tips you can use to implement these great KPIs/ Metrics
- Lessons learned from many years of experience developing KPIs with internationally known companies (no company names will be used in this presentation)
- Common traps which distract us from focusing on the right metrics at the right time

Ricky Smith, Author of the "Rules of Thumb for Maintenance and Reliability Engineers", "Lean Maintenance", "Maintenance & Reliability Metrics/KPIs 101" and Past Chairman of Society for Maintenance and Reliability Professionals



11:30 Prayer Break

12:00 Lunch

13:00 Q WORKSHOP B Total Productive Maintenance to maximize availability and productivity of equipments

Objectives:

- Understanding the construct behind Total Productive Maintenance
- Advantages of Total Productive Maintenance
- Managing Equipments by using Total Productive Maintenance
- Recognizing the right stage of TPM and executing the TPM procedures



14:30 Coffee Break

14:50 Q WORKSHOP C Vibration Analysis and Troubleshooting*

Objectives:

- Vibration Sources, Vibration Analysis Techniques
- Machine Failure and Mode Analysis
- Monitoring systems for vibration and temperatures of rotating equipment.
- New challenges (wireless and remote vibration systems)

Reserved for a representative from National Instruments



16:00 Closing Remarks from the Chair

8:00 Registration and Coffee

8:45 Recital from the Holy Qur'an

8:50 Welcome by Fleming Gulf

8:55 Opening Remarks from the Chair



Reliability of Rotating Equipments

9:00 Reliability, Availability, Maintainability

- Definition of Reliability, Availability, Maintainability and differentiating them
- Key Performance Indicators of Reliability, Availability and Maintainability
- Benefits of integrating Reliability, Availability and Maintainability
- Qualification and Quality Conformance and their differences

Samuel Thomas, Advisor Maintenance and Reliability Division,
Maaden Phosphate Company

9:35 Root Cause Analysis

- RCA Methods and Techniques
- Steps involved in root cause analysis
- Identifying Root Cause
- How to implement the actions to be taken?

Arafat Aljabri, Technical Manager
Water and Electricity Company

10:10 Coffee Break

10:40 CASE STUDY: Reliability and Maintenance Effectiveness Implementation in SAP-PM by Using RCM Approach

- Preparation of asset register and gap analysis results
- Failure modes and effects and consequence analysis (FMECA) exercise results
- Benchmarking of present Plant routines with other similar organization
- Finalization of Plant Maintenance routines and uploading into Plant SAP system

Ijaz Ul Karim Rao, Director
Velosi Asset Integrity Limited

11:15 Precision Maintenance Strategies for enhancing performance and reliability (to be confirmed)

- Introduction to Precision Maintenance
- Developing low cost maintenance strategies the achieve high reliability and case studies
- How to implement the precision maintenance procedures?

Wael Ahmed El Akkawi, General Manager
Service Business Unit, Alfanoor Technical Services

11:50 Prayer Break & Lunch

STREAM 1 | Exploring new techniques for equipment maintenance

12:50 Steam Turbine Failure:

- Characteristics of the components of the Steam Turbine
- Understanding Failure Mechanism
- Arrangements of Steam Turbine and its Application
- Steam Turbine Availability and Failure Experience
- Best Maintenance Practices for Steam Turbines
- New Technologies in Steam Turbines

Bakheet Ali Al-Zahrani, Manager Stationary Mechanical
Saudi European Petrochemical Company, SABIC affiliate

13:25 Strategic Maintenance Approach: Continuous Monitoring and Condition Based Maintenance

- Reality of today: Optimise production, minimise maintenance cost.
- Standard system components i.e. sensors (wireless), signal processors, condition monitor, diagnosis, prognosis and decision support.
- Incorporating Asset Management ISO 55000 and competency certification as a strategic maintenance tools

Dr. Ir. Hj. Mohd Abdul Karim Bin Abdullah, Group CEO
Serba Dinamik Group

14:00 Maintenance Strategies for rotating equipments and Risk Mitigations

- Understanding the maintenance definitions
- Different approaches to perform maintenance and new challenges
- Condition based Maintenance and Monitoring
- Causes of Machinery Breakdown and how to minimize them

Ali Rafea Zahrani, Machinery and Condition Monitoring Manager

14:35 Coffee Break

15:05 Warehousing of spare parts

- Spare parts optimization: Determining the optimum quantities of spare
- Classes of Spare Parts: Insurance Spares, Unit Replacement Spares, Consumables
- Spare parts Availability and Procurement
- New Strategies based on Reliability and cost driven spare parts
- Improvements to be done during purchasing stage of the equipment

15:40 Deluge Water Pump Modifications

- Assessment and Analysis
- Performance verification

Ayman Ejaimi, Lead Reliability Engineer, **Saudi Aramco**

16:15 PANEL DISCUSSION – Performance Evaluation: Condition Monitoring vs Planned Maintenance

- Performance Tracking and continuous tracking of equipment condition
- Advantages and Disadvantages of Condition Monitoring and Planned Maintenance

Ibrahim Hadi, Sr. Manager Maintenance, **IbnSina, SABIC**
Krishna Kumar, Reliability Centered Maintenance Lead
QatarGas

STREAM 2 | Understanding Reliability, Performance and Enhancing Asset Technical Integrity

12:50 Effective closed loop Reliability incident Management system

- Real example of system Develop to manage Reliability incident.
- Prioritization of Reliability incident based on Risk.
- Effectively Managing Reliability incidents History
- Knowledge management of Reliability incidents Analysis RCA.
- Recommendation Management and communication vehicle to stake holders.

Irshad Mohammad, Senior Reliability Engineer, **Qatargas**

13:25 Reliability Challenges and Solutions for Steam Turbine Admission Valves

- Understand the common designs of steam admission valves
- Analyze the symptoms and risks of the faced problems (three cases)
- Implement practical solutions to restore turbine operation
- Use presented illustrations and cases as guide for similar problems

Ali M. Al-Shurafa, Senior. Rotating Equipment Engineer
Saudi Aramco

14:00 Five Why's – Problem Solving Technique to improve reliability in plant

- What is meant by Five Why's?
- Why do we need Five Why's?
- How to encourage people to use it by Kano Model?
- Examples of successful implementation

Saleh Saeed Al-Mozaie, Engineer
Root Cause Analysis, Marafiq

14:35 Coffee Break

15:05 Implementing Six Sigma to improve the Reliability of Rotating Equipments

- Six Sigma Process Improvement Strategies
- Use of Six Sigma Methodologies

Manish Kumar, Senior Rotating Equipment Engineer
Saudi Aramco Shell Refinery Company

15:40 Asset Management: Enhancing Asset Technical Integrity

- Asset registers and priority of strategy around criticality
- Designing Integrity, Sustaining and Operating with Integrity, when is necessary unit replacement
- Process Plant type influence in Asset Management, (Upstream, Downstream, chemical)

Representative from Saudi Aramco

16:15 Shaft Alignment Methods and Procedures

- Protocol for the implementation of good shaft alignment for Rotating Machinery
- Precision Alignment: Alignment Tolerance
- Symptoms of Misalignments
- Benefits of Shaft Alignment
- Thermal Expansion of Machine and Thermal growth calculation

16:50 Closing Remarks from the Chair

17:00 Closing Coffee and Networking

DAY 3 | 9th April 2014

8:00 Registration and Coffee

8:50 Opening Remarks from the Chair



Formulating Effective Maintenance Strategies based on criticality (Continued)

9:00 Reliability focused advanced engineering designing techniques to facilitate equipment maintenance on field

- New technologies
 - Design Reviews
 - Ergonomy
 - Software available
 - Team interaction from design to Machine Installation
- Daniel Mendez**, Group Manager, Rotating Equipment Department, **Tecnicas Reunidas**

9:35 Preventive, Predictive and Proactive Maintenance

- When to use each one of them? Does the cost of your plant operation allows you to implement all types of maintenance?
- Benchmarking strategies
- Maintenance vs Cost operation

Ahmad AL Amoudi, Acting Reliability Section Head
Petro Rabigh

10:10 Coffee Break

10:40 Computerized Maintenance Management System (CMMS)

- Introduction to CMMS
- Implementing CMMS
- Choosing the right CMMS package
- Using CMMS for troubleshooting,
- How to get right information for real problem solving? Balancing between data and real facts

Raid Almomany, Maintenance Manager
Southern Province Cement Company

11:15 Critical Equipment Care

- Selection of critical equipment
- Selection of monitoring techniques, Fault Matrices
- Data collection and analysis, online offline
- Internet based results dashboard

Chris Walsh, Condition Based Maintenance, Strategic Business Manager, **Petrofac**

11:50 Prayer Break and Lunch

12:50 On site metal disintegration on Rotating Equipment

- Reducing downtime due to broken or seized bolts in your equipment: an overview plus case studies

Harald Schmit, General Manager
National Mechanical Engineering Company

13:25 PANEL DISCUSSION – Cost of Unreliability

- What is the importance of Reliability
- How reliability influence the profit?
- How can all the rotating equipments be fully available?



13:55 Air Preheater Design Features and Fan Selections Improve Boiler Plant Performance and Availability

- Critical factors and design alternatives to be considered to improve availability
- Techniques to reduce the unit heat rate when specifying or reviewing the performance of both the air preheaters and associated draft equipment

Jim Cooper, Chief Engineer, **Howden**

14:30 Coffee Break

14:55 LCC (Life Cycle Cost for Rotating Equipment)

- Different ways to approach machinery LCC
- Main drivers to be identified
- New challenges and tendencies on this area.

Joe Ekanem, Head of Maintenance, **Addax Petroleum**

15:30 Maintenance Planning and Scheduling for enhancing reliability and maintenance

- Difference between Planned and Unplanned activities
- Work Prioritization
- Plant optimization and equipment fit for purposes
- Operational windows for planning execution
- Factors to be considered
- How to extend machinery running without affecting plant operations

Nasser Khalaf, Senior Maintenance Planner, **QAPCO**

16:05 Failure Mode and Effect Analysis (to be confirmed)

- Understanding FMEA and why it is used
- Steps involved in developing FMEA
- Different Types of FMEA
- Associating FMEA to other process tools

Ibrahim Kobbia, Rotating Machinery Engineering Section Leader, **ADMA OPCO**

16:40 Closing Remarks From The Event Chair

16:45 Closing Coffee and Networking



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SPEAKERS BIOGRAPHY



Ricky Smith, Past Chairman of the Society for Maintenance and Reliability Professionals and Author of "Rules of Thumb for Maintenance and Reliability Professionals", "Maintenance and Reliability Metrics/ KPIs 101", "Lean Maintenance"

Ricky Smith has over 30 years of experience in maintenance as a Maintenance Manager, Maintenance Supervisor, Maintenance Engineer Adviser, Maintenance Training Specialist, and Maintenance Consultant. Today he is a Senior Reliability Advisor for Allied Reliability Group. Ricky has worked with hundreds of facilities, mines, refineries and industrial plants worldwide to develop reliability, maintenance, and technical training strategies in over 35 countries. Prior to joined Allied Reliability Group in 2008, Ricky worked as a professional maintenance employee for Exxon, AlumaX (one of three plants certified with World Class Maintenance status in the world), Kendall Company, and Hercules Chemical, providing the foundation for his reliability and maintenance experience. Ricky is the Past Chairman of the Society for Maintenance and Reliability Professionals (SMRP) Oil and Gas Special Interest Group (SIG) and served on the SMRP Metrics Development Team. Ricky is the co-author of the following books in Maintenance and Reliability (amazon.com)

- Rules of Thumb for Maintenance and Reliability Engineers by Elsevier Publishing
- Industrial Repair, Best Maintenance Repair Practices by Elsevier Publishing
- FRACAS: Failure Reporting, Analysis, Corrective Action System by MRO-Zone.com
- Planning & Scheduling Made Simple by MRO-Zone.com
- Maintenance & Reliability Metrics/KPIs 101 by MRO-Zone.com

Ricky is a Certified Maintenance and Reliability Professional (CMRP), Certified Maintenance and Reliability Technician (CMRT) with and the Society for Maintenance and Reliability Professionals (SMRP), and a Certified Plant Maintenance Manager with the Association for Facilities Engineers (AFE)



Samuel Thomas, Advisor, Reliability and Asset Management Division, **Maaden Phosphate Company**

Samuel has 35 years of experience in various industries like Petrochemical, Fertilizers, Nuclear and has worked as a Consultant, Design and Maintenance Engineer, Project-in charge, Superintendent-Reliability Department and General Manager Technical. He has been working in Saudi Arabia for past 15 years. Presently Samuel is Working as an Advisor in the Maintenance and Reliability Division of Maaden Phosphate Company in Saudi Arabia, the largest DAP complex in the world. Prior to this, he has worked in SABIC in Saudi Arabia as Mechanical Engineering Specialist in Maintenance and Reliability Division. Samuel has published 17 national and international technical papers and was a member of IAEA committee for studying Environment Impact of Radioactive Effluents.



Chris Walsh, Condition Based Maintenance, Strategic Business Manager, **Petrofac**

Crisis Walsh, is a Fellow of the Institution of Mechanical Engineers, and has over 30 years experience in maintenance engineering. The last 15 years in maintenance of rotating machinery for the oil and gas industry. Chris lead maintenance engineering and condition monitoring groups in the coal, power and other process engineering industries specialising in vibration analysis and performance management of equipment. Chris is a member of the management team of maintenance engineering consultancy Plant Asset Management (part of Petrofac) and currently leads the Condition Based Maintenance strategic business globally.



Ali M. Al-Shurafa, Senior. Rotating Equipment Engineer **Saudi Aramco**

Ali M. Al-Shurafa is a senior vibration and rotating equipment engineer. Currently Mr Ali is based at Ju'aymah NGL Plant, Saudi Aramco. He worked previously as a faculty member at the Jubail Industrial College and prior to that he served as a commissioning engineer for the Saudi Electricity Company. Al-Shurafa is heavily involved in rotating equipment troubleshooting and reliability improvements. Mr. Ali developed and conducted many academic and industrial short courses and workshops. Mr. Ali is a certified Vibration Specialist (ISO 18436 Cat III) since 2002.



Ijaz Ul Karim Rao, Director **Velosi Asset Integrity Limited**

Mr. Ijaz Ul Karim Rao is based in VELOSI Abu Dhabi and Director for Asset Integrity Services with over 23 years of working experience in the oil and gas industry. He has been working on design and commissioning of process, safety, mechanical and piping system for different oil and gas projects. He had worked and managed different Asset Integrity Management Projects for both the upstream and downstream industry. He also worked for different Verification and Certification projects for ADMA-OPCO, BP, Total Fina Elf, Shell, Premier Oil and others. Presently, he is involved in Asset Integrity Management projects including RBI, RCM and other risk related activities for Middle East based companies (Saudi Aramco, ADCO, ZADCO, QP, Takreer, ADGAS and QP), in South East Asia (Murphy Oil, Talisman and BSR) and Equion Energy Limited based in Columbia, South America. He has pioneered a software product „VAIL - Plant“ – a full integrity management system for both onshore and offshore installations. This product caters inspection and maintenance management to the automation needs of an expanding base of clients.



Jim Cooper, Chief Engineer, **Howden**

Jim graduated with a first class honours degree in Mechanical Engineering from the University of Aberdeen in Scotland in 1972. He worked for Babcock Energy Limited for 9 years in their Research Centre in Renfrew Scotland working on subjects including both conventional and fluidised bed combustion. He has subsequently worked for Howden for 32 years and is presently the Chief Engineer of Heater Technology for Howden Global. In addition to heater development activities, Jim has spent many years studying the field performance of both air preheater and gas gas heater installations throughout Europe, the Far East, the Middle East and the US. He provides direct technical support on heater technology and applications to all of Howden's international Companies, has written and presented several international papers on the subject and holds a number of associated patents.



Dr. Ir. Hj. Mohd Abdul Karim Bin Abdullah

Dr. Ir. Hj. Mohd Abdul Karim Bin Abdullah, (PE.Mech. Engineering & Ph.D in Industrial Engineering) is the Founder and President of Serba Dinamik Group Berhad. He has acquired more than 26 years of hands-on experience in managing, supervising, lecturing and carrying out various tasks related to turbomachinery maintenance nation-wide in Malaysia and internationally and other integrated engineering and financial tasks. He has been involved in field management and supervision for overhauling of steam turbines, gas turbines, reciprocating & centrifugal compressors and pumps of various made / brand. He has been awarded the Best Enterprise and Manager of the Year 2013: Oxford Summit of Leaders, United Kingdom; European Award for Best Practices, Vienna 2013 and The STAR Business Award: Entrepreneur of the Year Award 2013



Ziyad Oweidah, Lead Engineer, Reliability and Asset Management Department, **Marafiq**

Ziyad Oweidah has over 17 years of experience in significant areas of growth and leadership during career and held leadership positions in maintenance, reliability, technical services as RCM lead Engineer Mechanical, Planning superintendent and supervisor in Maintenance (Desalination and Steam Turbine) at Marafiq company, currently he serve as Lead Reliability Centered Maintenance (RCM) implementation program in Marafiq Power plant from inception to final stage. conducted RCM analyses on various systems and developed maintenance strategies with objective to enhance plant reliability. Ziyad is certified as Skilled Level RCM facilitator by Shell Global Solution. He achieved his Bachelor Degree in Mechanical Engineering from King Abdulaziz University, Jeddah.



Joe Ekanem, Head of Maintenance, **Addax Petroleum**

Joe Ekanem is currently the Acting Head of Maintenance for petroleum multi-national, Addax Petroleum (Sinopec). A holder of a BSc degree in mechanical engineering (honors). He majored in Rotating Machinery Engineering and Management in Cranfield University, UK. Joe is a rotating machinery and maintenance professional with over 15 years of experience covering onshore/offshore oil and gas production maintenance.

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SPEAKERS BIOGRAPHY

His interests include turbo-machinery, gas turbines, compressors, equipment strategy & maintenance, life cycle cost (LCC) and CMMS implementation. He is a Chartered Engineer and member of several engineering bodies. Before joining Addax in 2012, Joe spent over 14 years with ExxonMobil in various positions within the oil & gas industry machinery maintenance.



Arafat Al-Jabri, Technical Manager
Water and Electricity Company

Arafat Aljabri has over 18 years of experience boasting his caliber from an Operations Manager at Saline Water Conversion Corporation (SWCC) in Operation to Desalination & Power Plant Manager. At SABIC, he served as Staff Production Engineer and then was a Root Cause Analysis (RCA) Team Leader at Marafiq. Arafat is currently working with Water & Electricity Company, Riyadh, Saudi Arabia as Technical Manager. Arafat is certified as Skilled Level RCA facilitator by Shell Global Solution. Arafat is also a Root Cause Analysis Certified Trainer and is using his expertise in leading RCA investigation teams. He is also an accredited Professional International Trainer in Creative Problem Solving & Decision Making by American Strategic Planning Center apart from other accreditations. He achieved his Bachelor Degree in Chemical Engineering from King Saud University in Riyadh and he concluded his EMBA from King Abdulaziz University, Jeddah.



Ali Bakheet Al-Zahrani, Manager Stationary Mechanical
IbnZahr, SABIC

Ali Bakheet Al-Zahrani has 21 years of rich experience in the maintenance, commissioning and decommissioning activities of Rotating Equipments. Presently, he is leading and managing the Rotating Equipments failures at IbnZahr (SABIC Affiliate). He has graduated from Jubail Industrial College in 1992 as an Electromechanical Engineer and started his career with IBN ZAHR in 1992 in the mechanical section. Earlier, he was in rotating section as rotating manager and recently he has been transferred to static section as stationary manager.



Nasser Khalaf, Maintenance Planner, **QAPCO**

Nasser is a maintenance engineer with almost 20 years of experience in the oil and gas, and petrochemicals field. He began his career as a mechanical maintenance specialist at workshop level back in 1996, within few years he upgraded his knowledge and experience in the field of plant inspection and corrosion monitoring and control. In 2004, he moved to maintenance planning, what gave him a tremendous experience in setting up maintenance plans, coordinating and managing shutdowns and preparing budgets. In addition to that he gained good knowledge and experience in CMMS by participating in SAP R/3 BLUEPRINT implementation. Being a super user, not only helped him in understanding various software aspects, but also gave him a chance to train others to use it efficiently and effectively. Currently, Nasser is a mechanical static maintenance activities planner in QAPCO (Qatar for Petrochemicals), responsible for preparation of different work packages for mechanical static maintenance team, enhancing the effectiveness of these activities and quality.



Wael Ahmed El Akkawi, General Manager, Service
Business Unit, **Alfanar Technical Services**

Wael Ahmed El Akkawi is the General Manager of Service Business Units at alfanar. He received a BS Degree in Electrical Engineering with high honors from the King Fahd University of Petroleum and Minerals (KFUPM), Saudi Arabia and received his MBA from the Imperial College in UK. With more than 18 years of experience both in maintenance services as well as products related to power plants and other utilities, Mr. Wael heads two strategic business units at alfanar, first being the testing and commissioning, maintenance and calibration services unit and the other for the re-engineering and maintenance of static and rotary equipment. He has been instrumental in prequalifying the company with several utility and private companies throughout the region resulting in the company achieving a sustainable growth in a very short period. Mr. Wael and his team has recently received several appreciations from high profile clients such as, Saudi Aramco, Kharrama, SABIC and other utilities in the region for his commitment on quality and responsiveness. As a maintenance specialist, Mr. Wael was personally supervised the repair and rewinding works of a 25000HP Motor as well as the repair and rewinding of 200MVA Transformers in its factory in Jubail, KSA, a distinction very few local companies in the Middle East possess.



Ahmad AL Amoudi, Acting Reliability Section Head
Petro Rabigh

Ahmad has a total of 22 years of experience in rotating equipment and reliability. He is currently the Acting Reliability Section Head at PetroRabigh. He joined PetroRabigh in 2008 and supported the commissioning and startup of the new complex. His responsibilities includes troubleshooting, commissioning, project specification, execution for rotating equipment projects and shop acceptance. Ahmad is considered as rotating equipment specialist. He started his career with Samref (Saudi Aramco-ExxonMobil Yanbu Refinery) in November 1990, ever since he is working in the field of machinery. Ahmad earned a Bachelor of Science (B.Sc.) degree in Mechanical Engineering from King Fahd University of Petroleum & Minerals (w:st="on" Saudi Arabia) in August 1990.



Govind Kiran Kumar Reddy, Planning Section Head,
DUBAL

Govind Kiran Kumar Reddy has 17 years of experience in the Power Industry, spanning a wide range of projects, technical, IT, Logistics, Procurement, commercial and management roles. He is currently working with Dubal, as a planning section head. He has an Engineering degree in Mechanical and has successfully completed Masters in Business Administration with Finance as specialization.



Irshad Muhammad, Senior Reliability Engineer,
Qatargas

Irshad is currently working as Senior Reliability Engineer in Qatargas. Qatar gas is the premium LNG company. Irshad has expertise in Reliability Engineering & process improvement. Irshad is using his expertise in leading RCFA, Reliability Analytics, Bad Actors elimination & Reliability programs development & implementation. Irshad has previously led a team of Reliability Engineers as Reliability system specialist in NOVA Chemicals Canada, AB. Irshad is Certified Reliability Engineer (CRE) from ASQ and Certified Maintenance & Reliability Professional (CMRP) from SMRP. Irshad also holds Certified Six sigma Black Belt (CSSBB), CMQ/OE & CQE from ASQ. Irshad achieved his Bachelor Degree in mechanical Engineering from NED, Kh, PAK and attained his M.S Industrial Engineering specializing in Reliability Engineering/ process improvement from Wayne state university MI, USA.



Raid Almomany, Maintenance Manager
Southern Province Cement Company

Raid Almomany has 17 years of experience in all maintenance modules from inspection, planning, improvement, troubleshooting, budgeting and execution in cement industry. He lead the maintenance projects for developing and implementing the preventive maintenance and condition based monitoring which had been integrated and interfaced with CMMS purchasing and inventory modules. He is currently working as a Maintenance Manager at Southern Province Cement Company.



Saleh Saeed Al-Mozaie, Engineer Root Cause Analysis
Marafiq

Saleh Saeed Almozaie has 15 years of experience in Operations and Maintenance of Gas turbines, instrument equipment, pumps, compressors etc. In 2008 Saleh gave Apollo RCA training, In 2009 Saleh built RCA team in Jeddah power plant of Saudi Electric Company, and in 2011 he joined Marafiq Company as RCA Engineer where he trains technicians.



Ali Rafea Al Zahrani, Machinery and Condition Monitoring
Manager, Saudi European Petrochemical Company, SABIC

Ali Rafea Al Zahrani joined Ibn Zahr (Saudi European petrochemical company) Sabic affiliate in 2004 as machinery and condition monitoring engineer. In 2010, he was assigned as the manager of machinery and condition monitoring section in reliability department. He has a rich experience in rotating equipment reliability, maintenance strategies, commissioning, troubleshooting and vibration analysis. He is a certified Cat-II vibration analyst and a member of Sabic rotating domain expert. Ali Rafea Al Zahrani is a Mechanical engineering graduate from KFUPM 2003.

ABOUT OUR SPONSORS

GOLD SPONSOR : Howden



Howden designs, engineers and supplies air and gas handling equipment, including industrial fans, process gas compressors and rotary heat exchangers. Established over 150 years ago as an engineering firm, Howden has grown to become a worldwide organisation with over 6,000 employees and companies in 26 countries. As an OEM, we deliver spares, maintenance and repairs, engineered solutions and training into the aftermarket arena. We have knowledgeable and experienced technical advisors on a global basis. Our advisors are backed by engineering personnel who can support your needs through access to original drawings, design know-how and full, detailed information on parts.

GOLD SPONSOR : Alfancar Technical Services



Alfancar Technical Services (ATS), an integral part of the alfancar Group, has evolved as a leading service provider in the GCC and MENA regions for the rewinding, repairing and overhauling of Motors, Transformers, Turbines and Generators. With its state of the

art facility in the industrial hub of Jubail, ATS offers the most advanced repair and rewinding solutions for the maintenance of rotating equipment. ATS has the advantage of having the largest test bed and the most modern test lab at par to the international standards. The motors division also carries out a Motor Assessment and Life Assessment Programs to ensure the healthiness of the equipment. With services ranging from Selective Plating, servicing of explosion proof motors, etc., it also has the distinction of being the only facility in the Middle East to rewind a 200MVA transformer. ATS also has the advantage of having an integrated Preformed Coils manufacturing division ensuring the minimum lead time ensuring the highest quality.

GOLD SPONSOR : Serba Dinamik



SERBA DINAMIK INTERNATIONAL LIMITED (SERBA) offers an integrated engineering and contracting industrial solutions to the oil and gas and power sectors with specialisation in providing a comprehensive rotating equipment solutions from installation,

commissioning, troubleshooting and maintain, repair plus overhaul of various brands and make. SERBA have service centres set up in strategic location in various countries globally and maintain a professional pool of field service personnel who can be mobilised worldwide 24 x 7 basis. SERBA also offer Asset Management solutions in compliance to international standards to ensure client's asset integrity are in its optimum condition.

SILVER SPONSOR: Petrofac



Petrofac is a leading international service provider to the oil & gas production and processing industry, with a diverse customer portfolio including many of the world's leading integrated, independent and national oil & gas companies. Petrofac is quoted on

the London Stock Exchange (symbol: PFC). Petrofac designs and builds oil & gas facilities; operates, maintains and manages facilities and trains personnel; enhances production; and, where it can leverage its service capability, develops and co-invests in upstream and infrastructure projects. Petrofac's range of services meets its customers' needs across the full life cycle of oil & gas assets. With more than 18,000 employees, Petrofac operates out of seven strategically located operational centres, in Aberdeen, Sharjah, Abu Dhabi, Woking, Chennai, Mumbai and Kuala Lumpur and has a further 24 offices worldwide.

BRONZE SPONSOR: National Mechanical Engineering Services



National Mechanical Engineering Services is a young, dynamic, global service provider to the oil & gas, power generating, and mining industry. NMES is located in Muscat, Oman, and has an extensive network of subsidiaries and agencies in the UAE, Qatar, Bahrain,

Belgium, Italy, Indonesia, Korea, and Argentina. Further expansion is currently under progress and targets the Kingdom of Saudi Arabia and Malaysia as the next countries where agencies or subsidiaries will be located. With a global client portfolio, catering to clients such as General Electric, Alstom, Siemens, Woodgroup, Occidental, GDF Suez, and Freeport mining, NMES delivers tailor-made solutions aimed at reducing or eliminating the downtime during repairs or shutdowns, resulting in more production time, lower turnaround costs, and overall better profitability for our client's stakeholders.

ASSOCIATE SPONSOR : Velosi Asset Integrity Ltd. (VAIL)



Velosi Asset Integrity Ltd (VAIL) is a subsidiary of Velosi International and one of the leading service providers in Asset Integrity Management (AIM) business. Our range of services covers both upstream and downstream of hydrocarbon industry

including oil and gas production, LNG and LPG plants, refineries, petrochemical and fertilizer plants. We have successfully executed numerous AIMS related projects for a vast number of clients including BP, QP, GASCO, ADGAS, TAKREER, ZADCO, KJO, SAUDI ARAMCO, PTTAR, SNGPL, OGRA, OGDCL, SSGC, PETRONAS, MURPHY, Talisman and many others. VAIL is also one of the leading providers of software solutions for asset integrity and reliability management for the oil and gas, petrochemical and power industries.

WORKSHOP LEADER : National Instruments



National Instruments is a technology pioneer and industry leader in measurement and automation, delivering today's most advanced technologies for monitoring and control. Since 1976, engineers and scientists, in virtually every industry, have used flexible,

high performance NI products to create reliable, user-defined systems. With the graphical system design approach, which combines graphical programming software and modular, open hardware, NI has redefined how engineers work throughout the entire product design cycle, resulting in reduced time to market and lower development costs.

ABOUT OUR SPONSORS

NETWORKING PARTNER : Barrak Al Fares Trading Est.



BARRAK AL-FARES has been actively involved in the industrial scenario in the kingdom for over 6 years now. We are supplying products, customized solutions, and specialized engineering services for the complete reliability needs of oil refineries, petrochemical

plants, chemical plants, desalination plants, power plants etc. Our principal office is based in Dammam, Saudi Arabia. However we also have expanded our operations in all Middle East countries like Bahrain, Qatar, UAE, Kuwait, Oman etc. In addition we are specialized in long term manpower supply for the construction, maintenance, Inspection needs of plants. We strive to maintain a high level of after-sales service for both repairs and spare parts. And we have a well trained team of engineers to perform services for condition monitoring and other reliability needs of plants.

NETWORKING PARTNER : SDT International



SDT provides ultrasound solutions that give our customers a greater understanding about the health of their factory. We help them predict failures, control energy costs and improve product quality while contributing to the overall uptime of their assets. Our core

philosophy is to deliver award winning hardware and software solutions and back up our client's with outrageous customer support and training to create the best ultrasound condition monitoring programmes in the world

NETWORKING PARTNER : LMS, A Siemens Business



LMS, A Siemens Business is the unique provider of a set of fully integrated solutions for the power generation, petrochemical, and other highly-advanced manufacturing industries. Our solutions include world renown engineering services, measurement

systems and virtual simulation software platforms. LMS, A Siemens Business is your dedicated engineering partner for all rotating machinery vibration, acoustic, and fatigue related applications and is the partner of choice for more than 5000 companies worldwide including Saudi Aramco, SABIC, Shell, Total, etc

NETWORKING PARTNER : SMH International



SMH is a certified ISO-9001 and OSHAS-18001 Operation and Maintenance company specialized in Rotating Equipment. Its main business operation is situated in Jubail KSA and manages a chain of satellite offices located in London-UK, Abu Dhabi-UAE

and Kerala-India. SMH's core business is to provide the essential services to Oil & Gas, Petrochemical, Refinery and Utility companies, ensuring uninterrupted productivity of their machineries and equipment particularly turbines, gearboxes, pumps, and other rotating equipment. We maintain a pool of expert technicians and engineers in and outside the kingdom who can respond to the immediate needs of our valued clients. Additionally, we maintain our own machining and fabrication facility, which is strategically located at the Industrial Support Area of the Jubail Industrial City allowing us quick response to our industrial clients' emergency needs.

EXHIBITING PARTNER : PRUFTECHNIK Middle East FZE



PRUFTECHNIK is a German high-tech company offering a product spectrum geared toward monitoring and establishing an early diagnosis of machinery in order to counteract machinery downtime, including remote monitoring experts who ensure our products

are helpful to find problems. PRUFTECHNIK is the inventor of precision laser alignment and holds many patents and international awards. We cover over 70 countries worldwide.

EXHIBITING PARTNER : ONEPROD



ONEPROD offers an extensive range of equipment and condition monitoring services to meet the needs of the oil and gas industry, including:

- o mobile systems certified according to ATEX standards for use in zone 0 and for the monitoring of secondary equipment,
- o online monitoring systems for critical items of equipment (including wireless solutions adapted to ATEX zone 0 environment as well)
- o the provision of a comprehensive range of services, including training, engineering, turnkey installations, structural expertise, etc.,
- o performance-commitment contracts to maintain equipment in operational condition