



# Masterclass Maintenance & Reliability Practitioners



In Person Training



Assessments



3 Days of Live Interactive Sessions



Learning Kit

13 - 15 May 2024

Tampa, Florida, USA

[www.biiworld.com](http://www.biiworld.com)



## **Instructor:** **Michael Eisenbise**

**Former BP Principal Reliability Engineer for BP Refining-Retired.**

### **Reliability Process Implementation Specialist** **40+ Years Experience in Maintenance & Reliability**

Michael has 43 years of maintenance technology and reliability experience.

Eisenbise is a Certified Maintenance and Reliability Professional (CMRP) with the Society for Maintenance and Reliability Professionals Certifying Organization (SMRPCO), a Certified Plant Engineer (CPE) with the Association of Facility Engineers (AFE), a Certified Plant Maintenance Manager (CPMM) with the AFE, and a Certified Reliability Leader (CRL) with the Association of Asset Management Professionals. He is a registered Professional Engineer (PE) in Florida.

Eisenbise holds a Bachelor's Degree in Engineering, a Master's Degree in Mechanical Engineering from Tennessee Technological University, and a Master's Degree in Maintenance and Reliability from Monash University in Australia.

Michael is a former Chairman of the Society for Maintenance and Reliability Professionals. (SMRP) and, current Chairman of the Houston Chapter of the Society of Reliability Engineers, and Regional Vice President for the Association of Facility Engineers – Region 9.



## Course Description



Companies today face increasing competition and decreasing margins in the global arena. A culture combined with visionary leadership, relentless pursuit of process and cost reduction done right are the ingredients required for survival and growth. Equipment must be safe, reliable, and process variability must be eliminated. Your employees must be motivated and supported with targeted training and a robust and efficient organizational structure. This course is designed to heighten the learning experience and to provide an immersive training environment that maximizes the interaction between attendees and the instructor, and between the attendees their peers.

## Certification



The Certified Maintenance & Reliability Professional (CMRP) program is the #1 leading credentialing program for certifying the knowledge, skills, and abilities of maintenance and reliability professionals worldwide. The CMRP is accredited by the American National Standards Institute (ANSI), which follows globally recognized ISO standards for its accreditation and processes. Earning this certification means earning a coveted credential recognized across all industries internationally.

To register for CMRP exam, click on the below link and follow the on screen instructions.  
<https://smrp.org/CMRP-Registration>

To find the nearest authorised testing centers, click on the below link  
<https://smrp.org/Certification/Test-Center-Search>

## Training Methodology



Classroom lectures with relevant and upto date case studies and exercises.

## Learning Objectives



- Improve your understanding of the best practices of Maintenance and Reliability centered around the SMRP's 5 pillars of excellence
- Define Known Maintenance and Reliability Best Practices
- Develop maintenance leading and lagging KPIs for an Organization
- Define the Maintenance Planning and Scheduling Process
- Develop a PM Procedure`
- Define failures modes for specific components and assets
- Learn what works and what does not working regard to improving equipment reliability





## Who Should Attend?

- Maintenance Managers
- Maintenance Superintendents
- Maintenance Engineers
- Maintenance Planners
- Reliability Engineers
- Plant Managers
- Engineering Managers
- Manufacturing Managers
- Production Managers
- Operations Managers
- Asset Managers

## Course Duration

24 hours spread over 3 days



# Day 1

09:00 - 10:30

🕒 90min

## Course Overview

- Safety - What to do in an emergency
- Introduction of Speaker
- Interactive test
- Introductions and course objectives & Course Overview

10:30 - 10:45 Coffee Break

🕒 90min

10:45 - 11:45

🕒 60min

## BOK Pillar 1: Business & Management

- Strategic versus tactical planning
- Creating strategic direction & plan
- Developing the business case
- Develop tactical plan
- Creating measurement and performance evaluation

11:45 - 11:55 Short Break

🕒 10min

11:55 - 13:00

🕒 65min

## BOK Pillar 1: Business & Management (Continued)

- Elements of a Plan
- Managing change (Discuss 7 steps of change and system not analyzing itself. )

13:00 - 14:00 Lunch

🕒 60min

14:00 - 14:15

🕒 15min

## BOK Pillar 1: Business & Management (Continued)

- Maintenance and Operations performance agreements

14:20 - 14:55

🕒 35min

## BOK Pillar 2: Manufacturing Process Reliability

- Understanding the manufacturing process &
- Implementing process/continuous improvement
- (Discuss talking to operators and vulnerability study)
- Barringer Process Reliability - plotting and benchmarking
- Manufacturing effectiveness techniques (die exchange)
- Safety, Security, Health, and Environmental (SSHE) issues (Discuss safety pyramid)

14:55 - 15:30

🕒 35min

## BOK Pillar 3: Equipment Reliability

- Maintenance and Reliability Pyramid (Distribute SAMI pyramid)
- Determining process and equipment performance expectations
- Establishing a maintenance and reliability strategy to assure performance goals (Include equipment reliability strategy and asset health monitoring)

15:30 - 15:45 Coffee Break

🕒 15min

15:45 - 17:00

🕒 75min

## BOK Pillar 3: Equipment Reliability

- Equipment hierarchy validation
- Equipment criticality vs equipment risk
- Basic elements of a maintenance strategy - lubrication plan

🕒 17:00

## Close of the day 1



# Day 2

09:00 - 10:30

⌚ 90min

## BOK Pillar 3: Equipment Reliability (Continued)

- FMEA/FMECA
- RCM to include CBM/PdM
- RCA
- 5 Why's
- Basic elements of a maintenance strategy - Failure mode based maintenance

10:30 - 10:45 Coffee Break

⌚ 15min

10:45 - 11:45

⌚ 60min

## BOK Pillar 3: Equipment Reliability (Continued)

- Basic elements of a maintenance strategy - Precision maintenance
- Writing effective PMs
- OEE
- Establishing policies and procedures
- Asset health monitoring

11:45 - 11:55 Short Break

⌚ 10min

11:55 - 13:00

⌚ 65min

## BOK Pillar 3: Equipment Reliability (Continued)

- Cost-justifying the proposed equipment reliability plan
- FRACAS
- RBD and RAM Modeling

13:00 - 14:00 Lunch

⌚ 60min

14:00 - 14:45

⌚ 45min

## BOK Pillar 4: Organization & Leadership

- Determining organizational requirements
- Analyzing organizational capability

- Personnel development/developing competency based learning
- Leadership development and growth
- Communicating maintenance and reliability plan to the organization

14:45 - 15:30

⌚ 45min

## BOK Pillar 5: Work Management

- Identifying work
- Developing a work prioritization system
- Effectively planning work - backlog management
- Effectively planning work - kitting
- Effectively planning work - shutdown turnaround (STO) planning

15:30 - 15:45 Coffee Break

⌚ 15min

15:45 - 17:00

⌚ 75min

## BOK Pillar 5: Work Management (Continued)

- Effectively scheduling work
- Documenting work execution
- Analyzing work history and following up
- Craft Productivity
- Planning and executing capital projects
- Effectively utilizing work management technology - CMMS/EAM systems
- Effectively utilizing work management technology - Data mining systems
- Effective materials management

⌚ 17:00

Close of the day 2





# Day 3

09:00 - 10:30

🕒 90min

## Other maintenance and reliability topics

- Maintenance metrics and formulas
- Maintenance and reliability definitions

10:30 - 10:45

Coffee Break

🕒 15min

10:45 - 12:00

🕒 75min

## Other maintenance and reliability topics

- Reliability in Design
- Teams
- TPM
- 5's
- Crow AMSAA

12:00 - 13:00 Lunch

🕒 60min

13:00 - 14:30

🕒 90min

## Other maintenance and reliability topics

- Weibull Analysis
- Condition Maintenance Techniques

14:30 - 16:00

90min

- Question & Answers Session

## Close of the day 3

## Suggested Reading Materials for CMRP Exam:

Maintenance & Reliability Best Practices  
by Ramesh Gulatti

Making Common Sense Common Practice  
by Ron Moore

Reliability Centered Maintenance  
by John Mourbray



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Please complete this form and mail it back to  
**mithun.siddartha@biworld.com**

**Event Code: AM TE 53**

## Delegate Details

1. Name: Mr/Mrs/ Ms .....  
.....  
Job Title: .....  
Email: .....
2. Name: Mr/Mrs/ Ms .....  
.....  
Job Title: .....  
Email: .....
3. Name: Mr/Mrs/ Ms .....  
.....  
Job Title: .....  
Email: .....

## Company/Organisation Detail

Name: .....  
Person to Contact:.....  
Email: .....  
Address: .....  
.....  
City: .....  
Country: .....  
Contact No: .....  
Type of Business: .....  
Website: .....

## Payment Details

**METHOD:** CREDIT CARD ☐ OR WIRE TRANSFER ☐

Please debit my

Visa ☐ Eurocard /Mastercard ☐ Amex ☐ Diners club ☐

Card Billing Address:.....

Street: .....City:.....

Zip/Postal: .....

Card Holders Name: .....

Email Address: .....

Card Holders Signature: .....

Card Number

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Credit Card CVV2/ CVC / CID Number:

Visa / Mastercard    Amex (4-digit code      
(3-digit code on the back) on the front)

Valid from:   /   Expiry Date:   /

I agree to BII debiting my card

### Authorization and Acceptance of Sales Contract & Terms & Conditions

I hereby declare I am authorised to sign this contract and terms  
& conditions in the name of the company/organisation:

Name:.....

Date:.....

Signature:.....

**Delegate Fee** ☐ **USD 2299 Per Delegate**  
**Delegate Fee** ☐ **USD 1999\* Per Delegate**

**\*(Early Bird until Dec 31st, 2023)**

**(Delegate fee does not include CMRP Exam fee)**

USD 20 administration charge and any applicable withholding or any other tax or fee will be applied

### TERMS & CONDITIONS:

1. Payment terms: BII World LTD requires the full payment of the invoiced amount within 7 working days from the issue date of the invoice. BII World LTD reserves the right to refuse entry to any client who does not pay the invoice in full and on time. The registration fee includes: Training documentation and admission to all training sessions.

2. Cancellation by client: The client has the right to cancel his/her participation in the event. Cancellation must be received by BII World LTD in writing either by mail or fax. If the client cancels the event, he/she will get two options:

**A. CREDIT NOTE:** Choose 2-year credit note, BII World LTD will send all the schedule training event details throughout the year. Delegate has the right to choose and attend any of the training programs (valid 2 years).

**B. NOMINATION:** In this option delegate can nominate/refer someone from his/her group/company to attend the particular training program on behalf of the actual delegate.

3. Cancellation by BII World LTD : While every reasonable effort is made to adhere to the advertised program, circumstances can arise which may cause changes in the program, including but not limited to changes in the content, date(s), or special features of the planned event. Such circumstances include but are not limited to acts of terrorism, war, extreme weather conditions, compliance with government requests, orders and legal requirements, failure of third-party suppliers to timely deliver, and failure to register the minimum target number of attendees for a given event. BII World LTD reserves the right to change the content, date(s), and/ or special features of an event, to merge the event with another event, or to postpone it or cancel it entirely as appropriate under the circumstances. Client agrees that BII World LTD shall not be liable for any cost, damage or expense which may be incurred by client as a consequence of the event being so changed, merged, postponed or cancelled and client agrees to hold BII World LTD harmless and to indemnify BII World LTD in case of liability caused by any such changes, mergers, postponements or cancellations.

4. Cancellation of the event: In case BII World LTD cancels an event, then client can choose any of the below mentioned options:

- (a) BII World LTD will refund full payment to the client within 15 business days.  
(b) Client can choose the credit option for 2 years, for more details please read term no-2 part (a)

5. Postponement of the event : In case BII World Ltd postpones the event to a new date, then client can choose any of the below mentioned options.

(a) The client can attend the course on the postponed dates.

(b) Client can choose the credit option for 2 years, for more details please read term no-2 part (a)

6. Client's identification information. By signing of this sales contract and these terms and conditions the client gives full right to BII World LTD to share the client's identification information, i.e. client's name, address, email addresses, phone numbers and names of representatives and website with other clients who participated in the same event. The client has the right to opt out of this clause by written notice to BII World LTD.

7. Governing law: This contract shall be governed by and construed in accordance with the laws of the Province of Alberta, Canada. Any disputes arising under or in connection with this registration form shall be settled before the competent court in Canada.

8. Indemnification: To the fullest extent permitted by the law, you agree to protect, indemnify, defend and hold harmless BII World LTD, its owners, managers, partners, subsidiaries, affiliates, officers, directors, employees and agents, from and against any and all claims, losses or damages to persons or property, governmental charges or fines, penalties, and costs (including reasonable attorney's fees) (collectively "the Claims"), in any way arising out of or relating to the event that is the subject of this contract, and regardless of negligence, included but not limited to, Claims arising out of the negligence, gross negligence or intentional misconduct of BII World LTD employees, agents, contractors, and attendees; provided, however, that nothing in this indemnification shall require you to indemnify BII World LTD indemnified parties for that portion of any Claim arising out of the sole negligence, gross negligence or intentional misconduct of the BII World LTD parties.

9. Other currencies. In case that client requests payment in other than official currency (USD), BII World LTD reserves the right to apply 5% currency risk surcharge to the actual exchange rate.

10. Other Conditions: Any terms or conditions contained in the client's acceptance which contradict or are different from the terms and conditions of this registration document shall not become part of the contract unless individually negotiated with BII World LTD and expressly accepted by BII World LTD.