



3 Days Intensive Learning with Ricky Smith, CMRP

COST  
**\$950.00**  
USD

# MAINTENANCE TECHNICIAN BEST PRACTICES

Virtual (Zoom) and Live at **Southern Wesleyan University**, Central, SC

4 miles from Clemson, SC and 30 Minutes from Greenville/Spartanburg Airport Airport

## DATES

## LOCATIONS

22-24 Feb

Classroom Training at SWU, South Carolina & Live Online

26-28 Apr

Classroom Training at SWU, South Carolina & Live Online

26-28 July

Classroom Training at SWU, South Carolina & Live Online

11-13 Oct

Classroom Training at SWU, South Carolina & Live Online



# COURSE OVERVIEW

Maintenance Technician Best Practices will provide any organization proven methods and concepts to help their organization obtain a highly level of Maintainability and Reliability.

This is an interactive training course covering Maintenance Technician Best Practices as proven by the best Maintenance organizations in the world. The objective of this program is to equip participants with Known Maintenance and Reliability Best Practices (World Class Maintenance) along with Maintenance Technician Best Practices which will provide technicians with knowledge which will better prepare them for to transition any Maintenance Organization to a highly level of effectiveness and efficiency.



Known Best Maintenance Repair Practices will be defined and demonstrated, along with numerous “hands on exercises) to enhance learning, and attendees will work in groups on real-world issues in each functional area in maintenance and reliability allowing learning from the instructor and fellow attendees.

This workshop used multiple exercises to enhance the training experience.

## What “you” should expect to take away from this training

- Better understanding of Maintenance and Reliability Best Practices and how to apply in any organization.
  - Knowledge of Maintenance Best Technician Practices
  - A simple plan one can implement when they return.
  - Feel pride in your Maintenance Work through the knowledge one has gained.
  - Less stress through new knowledge and skills gained.
- ... and so much more

## WHAT SHOULD “YOUR LEADERSHIP” EXPECT TO SEE WHEN YOU RETURN?

01

A more confident professional based on knowledge gained in the training.

02

A simple plan with “quick wins” and long-term sustainment

03

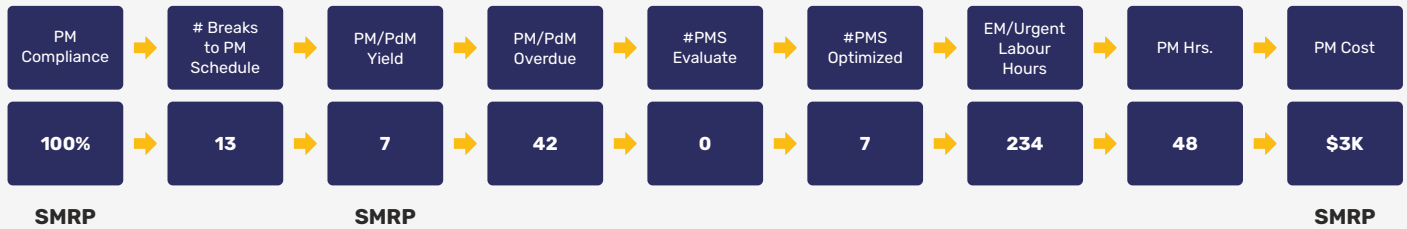
A simple but effective Maintenance Dashboard which can be implemented.

04

Procedure Templates and other items which can be used upon return.

# WORKSHOP OBJECTIVES

- Learn what are Known Maintenance and Reliability Best Practices and their alignment with Known Maintenance Technician Best Practices and how to apply in any organization.
- Review what is “World Class Maintenance”, workflow, attributes, and benchmarks.
- Develop Maintenance Leading and Lagging KPIs for any Organization and learn how to create Maintenance KPI Dashboards

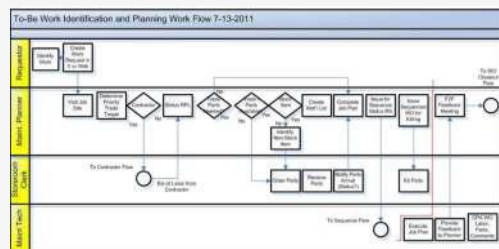
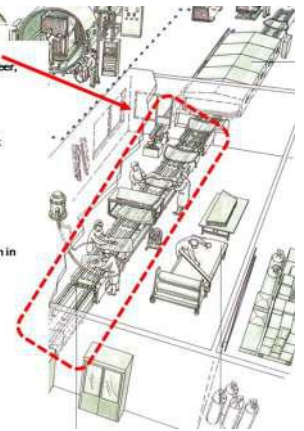


- Identify where Proactive Work comes from and why it is critical to success in any Maintenance Organization.
- Define what is Preventive and Predictive Maintenance and how they impact proactive maintenance.
- Learn how to perform a PM Optimization Process at your site.

## PM Optimization Process

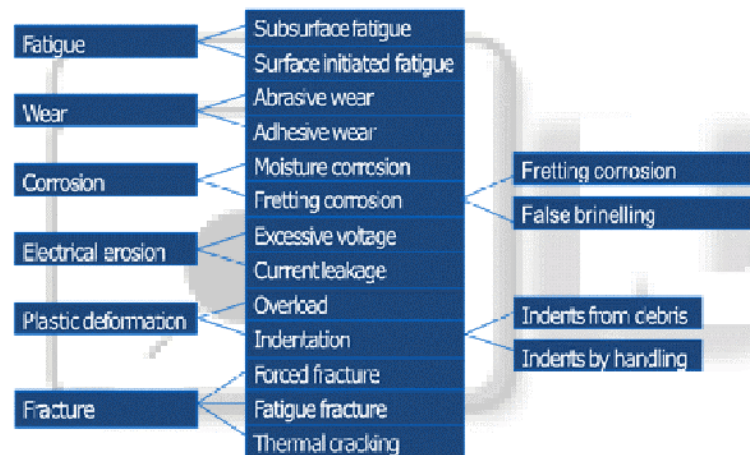
1. Identify which asset or functional area the PM Optimization will be executed
2. Identify a cross functional team (Operator, Maintenance Tech, Reliability Engineer, Maintenance Planner)
3. Establish expectations from everyone engaged in this process
4. Define end goal of this process (ex: Increased PMs Effectiveness, Decrease breakdowns)
5. Define how you will measure if the PM Optimization Process is effective or not.
6. Present copies of PMs to team, one PM at a time
7. Review equipment history for the past 30, 60, and 180 days
  - # of breakdowns
  - Causes of critical breakdowns based on a formal RCA
  - PM Labor Hours vs EM/Urgent Labor Hours
8. Identify by the following for each task on a PM Procedure/Procedures as shown in example below:

PM Eval Recommendation	# of Tasks	% of Total Tasks	Subtasks Reassigned
No Value - Delete Task	1,740	15.2%	1,832
Reassign to Lube Route	1,147	10.0%	3,260
Reassign to Operator Care	1,680	16.1%	4,987
Replace with PdM	1,888	17.3%	4,876
Re-write Task	2,587	20.8%	11,043
Task is Good as Found	2,289	20%	3,923
<b>Total PM Tasks</b>	<b>11,435</b>	<b>100%</b>	<b>30,641</b>



- Learn why a Maintenance Planning and Scheduling Process Map is so critical to optimization of wrench-time.

- Define Failures Modes for Specific Components and Assets
- How to transition Technicians and Production Leadership to Proactive Maintenance beliefs and attributes.





# DAY 1: MAINTENANCE AND RELIABILITY

## Maintenance and Reliability

### Overview

- Definition of Maintenance
- Definition of Reliability
- What does “World Class Maintenance” look like and where was it created?
- World Class Maintenance Benchmarks
- Maintenance Leading and Lagging KPIs
- Work Identification
- Definition and expectations from PM and PdM
- The PF Curve and How does it Work.
- Repeatable Procedures
- Repeatable Procedure Exercise
- The RACI Model to define Roles and Responsibilities.
- RACI Exercise

### Preventive Maintenance

- Failure Modes and how to manage and mitigate them
- Developing and Managing a PM Program/Process
- Steps required to develop an Effective PM Program

- Writing a Repeatable/Effective PM Procedure
- Preventive Maintenance Roles and Responsibilities (RACI)
- Managing a PM Program
- Preventive Maintenance Leading and Lagging KPIs
- 14 Steps of a PM Optimization Process
- How to Manage a PdM Program
- Preventive Maintenance Exercise
- CMRP Practice Test

### Predictive Maintenance (PdM) / Condition Monitoring (CBM)

- Definition of PdM and CBM)
- The Objective of PdM / CBM
- Vibration analysis
- Ultrasonic analysis
- Infrared analysis
- Oil analysis
- Laser-shaft alignment
- Motor circuit analysis
- Non-Destructive Testing
- Day 1 Review
- 2 things you learned today.

# DAY 2 - WORKFLOW PROCESSES

- World Class Maintenance (Alumax Mt Holly – John Day PE, one of the founding members of SMRP)

## Maintenance Planning

- Maintenance Planning Definition
- Maintenance Planning Workflow
- Maintenance Planning Leading and Lagging KPIs
- Maintenance Planning Roles and Responsibilities

## Maintenance Scheduling

- Maintenance Scheduling Definition
- Maintenance Scheduling Workflow
- Maintenance Scheduling Roles and Responsibilities (RACI)
  - Maintenance Planning and Scheduling Exercise

## Work Execution

- Work Execution Definition
- Work Execution Leading and Lagging KPIs
- Work Execution Roles and Responsibilities (RACI)

## Work Order Closeout

- Work Order Close Out Definition
- Work Order Close Out Leading and Lagging KPIs
- Work Order Close Out Roles and Responsibilities (RACI)

## Maintenance Dashboards

- Objective of Maintenance Dashboards
- Maintenance Dashboard Fundamentals
- Steps to Creating a Maintenance Dashboard

## Why Use Best Maintenance Repair Practices?

- Human Induced Failures
- Repeatable Procedures
- Maintenance Skills Assessment
- Safety First, Safety Always

## Parts and their Failure Modes

- Bearings
- Electrical Devices
- Chain Drives
- Centrifugal Pumps
- Hydraulic Pumps
- Control Valves
- Couplings

## Components and their Failure Modes

- Dust Collectors
- Fans, Blowers
- Gears and Gearboxes
- Lubrication

## Hydraulic Systems

- Pumps
- Reservoirs
- Filtration
- Control Valves

# DAY 3 – BEST MAINTENANCE COMPONENT PRACTICES

- How to Prepare for the CMRT (Certified Maintenance and Reliability Technician) Exam
- Lubrication Best Practices
- Maintenance of Electrical Devices
- Maintenance of Hydraulic Systems
- Maintenance of Large Motors
- **Exercise:** Day in the Life of a Proactive Maintenance Technician
- **Exercise:** Day in the Life of a Proactive Maintenance Planner
- **Exercise:** Day in the Life of a Proactive Maintenance Supervisor

# Final Exercise

Creating a Plan to transition your organization to a higher level of reliability and maintainability

If you would like to attend see the next page for the registration form or if you have questions of need more information send an email to [rsmith@worldclassmaintenance.org](mailto:rsmith@worldclassmaintenance.org)

## HOW TO REGISTER?

### Course Fee

Workshop Only	USD <b>\$950.00</b>
Workshop plus CMRT Exam	USD <b>\$1550.00</b>

### 3 Ways to Register

E: [register@metriusglobal.com](mailto:register@metriusglobal.com)

T: +1 (920) 389-1975

W: <https://metrius.academy/>

### In-House

If interested to run this course in-house please contact us at:

T: +1 (920) 389-1975

E: [register@metriusglobal.com](mailto:register@metriusglobal.com)

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