

Maintenance and Reliability Best Practices “World Class Maintenance”

One-Day Workshop

Maintenance and Reliability 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 and Reliability 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) and provide them with knowledge which will better prepare them to transition any Maintenance Organization to a highly level of effectiveness and efficiency.

Known Best Maintenance 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.



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

1. Better understanding of Maintenance and Reliability Best Practices and how to apply in any organization.
 2. Recognition of the gaps in your Maintenance Organization and how to close those gaps.
 3. A simple plan one can implement when they return.
 4. Feel pride in your Maintenance Work through the knowledge one has gained.
 5. Less stress through new knowledge and skills gained.
 6. Over 5 “hands on” exercises to enhance learning
- ... and so much more

What should “your leadership” expect to see when you return?



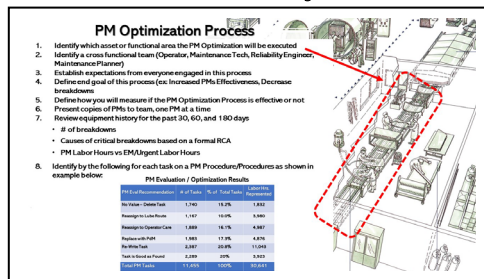
- A more confident professional based on knowledge gained in the training.
- A simple plan with “quick wins” and long-term sustainment
- A simple but effective Maintenance Dashboard which can be implemented.
- Procedure Templates and other items which can be used upon return.

WORKSHOP OBJECTIVES

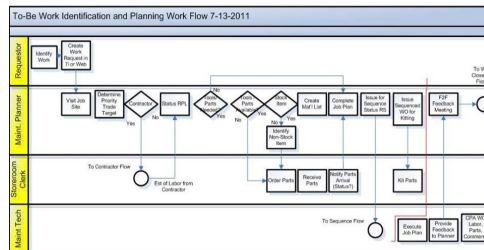
- ❖ Learn what are Known Maintenance and Reliability Best Practices and how to apply in any organization.
- ❖ Review what is “World Class Maintenance”, workflow, attributes, and benchmarks.
- ❖ Develop Maintenance Leading and Lagging KPIs for any Organization and learn how to create Maintenance KPI Dashboards



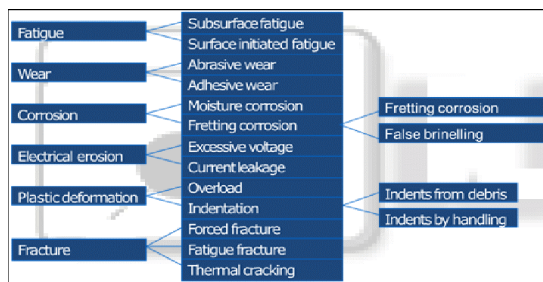
- ❖ Identify where Proactive Work comes from and why it is critical to success in any Maintenance Organization.
- ❖ Define what is Preventive and Predictive Maintenance and how they impact proactive maintenance.
- ❖ Learn how to perform a PM Optimization Process at your site.



- ❖ 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

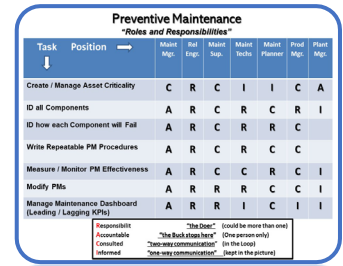


- ❖ How to transition Technicians and Production Leadership to Proactive Maintenance believes and attributes.

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



The image shows a RACI matrix for Preventive Maintenance. The columns represent roles: Maint. Mgr., Int. Insp., Maint. Sup., Maint. Techs., Asset Owner, Prod. Mgr., and Plant Mgr. The rows represent tasks: Create / Manage Asset Criticality, ID all Components, ID how each Component will Fail, Write Repeatable PM Procedures, Measure / Monitor PM Effectiveness, Modify PMs, and Manage Maintenance Dashboard (Leading / Lagging KPIs). A legend at the bottom defines the RACI codes: Responsible (one person only), Accountable (one person only), Consulted (in the loop), and Informed (keep in the picture).

Task	Position	Maint. Mgr.	Int. Insp.	Maint. Sup.	Maint. Techs.	Asset Owner	Prod. Mgr.	Plant Mgr.
Create / Manage Asset Criticality		C	R	C	I	I	C	A
ID all Components		A	R	C	R	C	R	I
ID how each Component will Fail		A	R	C	R	R	C	I
Write Repeatable PM Procedures		A	R	C	R	C	C	C
Measure / Monitor PM Effectiveness		A	R	C	C	R	C	I
Modify PMs		A	R	R	R	C	C	I
Manage Maintenance Dashboard (Leading / Lagging KPIs)		A	R	R	I	C	I	I

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

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

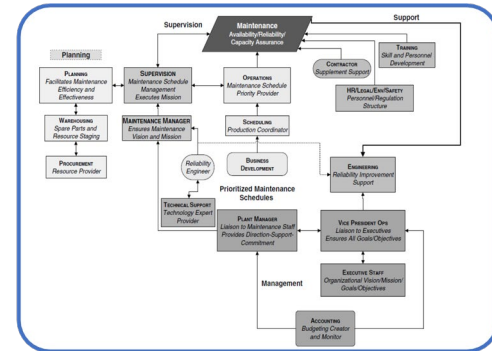
- ❖ Work Execution Definition
- ❖ Work Execution Leading and Lagging KPIs
- ❖ Work Execution Roles and Responsibilities (RACI)

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



Interested? Email Ricky Smith at rsmith@wordclassmaintenance.org