

SKILLS OF A PROACTIVE MAINTENANCE TECHNICIAN

BY RICKY SMITH, CMRP, CMRT

IN PARTNERSHIP WITH:
THE MAINTENANCE COMMUNITY BY UPKEEP



“A maintenance technician seeks no reward or praise; they take pride in knowing the equipment/assets are running to specifications.”

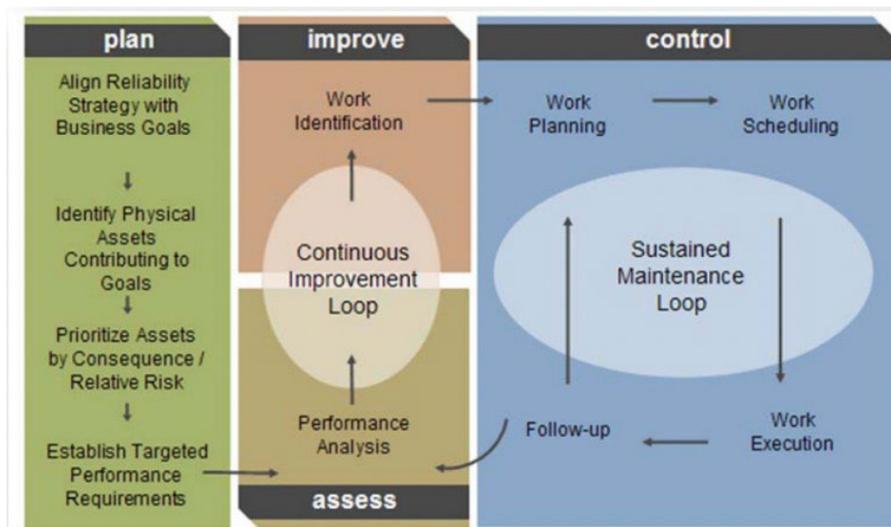
TECHNICIAN'S MAINTENANCE KNOWLEDGE REQUIREMENTS

What skills should a proactive maintenance technician possess?

- Maintenance Best Practices
 - Proactive Maintenance Principles
 - Preventive Maintenance
 - Predictive Maintenance
 - Maintenance Planning and Scheduling



- Maintenance Execution
 - Proactive
 - Reactive
 - Maintenance Rework
 - Repeatable Procedures
 - Maintenance Materials Management
 - Leading and Lagging Maintenance Metrics
 - Root Cause Analysis Techniques and Triggers
 - Safety / Environmental Compliance
 - Mechanical / Electrical Technical Knowledge
 - Discipline in Work Execution to Specifications
- **Maintainability and Restoration Practices**
 - Maintenance Process Maps are used to align everyone and to ensure processes are repeatable and provide the same results every time and if not, the process can be changed.



- Best Repair/Restoration Practices are followed based on "Known Best Demonstrated Practices"
- Use of Maintenance Balanced Dashboards to measure effectiveness and efficiency of Maintenance Processes



“ A balanced scorecard is a strategy performance management tool - a semi-standard structured report that can be used by managers to keep track of the execution of activities by the staff within their control and to monitor the consequences arising from these actions.

(Source: HP Reliability)

Maintenance Technician KPI Dashboard



PM & PdM Compliance = PM & PdM work orders completed by due date ÷ PM & PdM work orders due

PM / PdM Yield = Corrective Work Identified from Preventive and Predictive Maintenance Work Orders (hours) ÷ PM & PdM (hours)

Schedule Compliance (%) = [Scheduled Work Performed (hrs) ÷ Total Time Available to Schedule (hrs)] × 100

Rework (%) = [Corrective Work Identified as Rework (hours) ÷ Total Maintenance Labor Hours] × 100

Stock Outs (%) = (Number of Inventory Requests with Stock Out ÷ Total Number of Inventory Requests) × 100

Emergency Labor Hours (%) = (Total number of EM Labor Hours ÷ Total number of Labor Hours Available

Technicians are motivated by knowing their "score in the game".

Roles and Responsibilities must be defined for all Maintenance Technician's role in Proactive Maintenance. How do you know you need to define Roles and Responsibilities?

- You see people deviating from acceptable practices
- Everyone blames everyone



- Reactive Maintenance is apparent
- When you hear these phrases:
 - That is not my job
 - Everyone is accountable
 - I thought we agreed this equipment would be down today
 - Why is our wrench-time so low?
 - Everyone seems to be "dodging the bullet"



Create a Maintenance RACI Chart that clearly defines: Who is Accountable? Who is Responsible? Who is Consulted? And who is Informed? For specific maintenance tasks.

Maintenance Technician "Roles and Responsibilities"						
Task	Maint Tech	Maint Supervisor	Plant Manager	Stores Manager	Maint Planner	Reliability Engineer
Weekly Tech Training (30 minutes)	R	A	I	C	R	C
PM Execution	R	A	I			C
Scheduled Work Execution	R	A	I	C		
WO Close Out	R				A	
Maintenance Task Qualification	R	A			C	C
CMRT Certification	R		A			C
FRACAS Evaluation	R	R	A	C	R	R

<p>Responsibility</p> <p>Accountable</p> <p>Consulted</p> <p>Informed</p>	<p>"the Doer"</p> <p>"the Buck stops here"</p> <p>"in the Loop"</p> <p>"kept in the picture"</p>
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ELECTRICAL/MECHANICAL TECHNICAL KNOWLEDGE REQUIREMENTS

- Fundamental Requirements of Effective
- Preventive / Predictive Maintenance
- Safety First, Safety Always
- Failure Mitigation Strategies for:Chain
 - Drives
 - Compressors Control Valves
 - Conveyors
 - Couplings
 - Fans and Blowers
 - Gears and GearboxesHydraulics
 - Lubrication
 - Machinery Installation
 - Mixers and Agitators
 - Packing and Seals
 - Motors and Drives
 - Power Supplies
 - Fasteners
 - ...and so much more





**Join me for a three-day workshop on
“Best Maintenance Technician Practices”.**
**For more information, send your request to
rsmith@worldclassmaintenance.org.**

**Join me for “Maintenance Technician Best Practices” Workshop
“February 22-24, 2022”**



- **Live at Southern Wesleyan University (4 miles from Clemson, SC and 30 Minutes from GSP Airport)**
- **and Virtual via Zoom**

The objective of the course is to align Maintenance Technicians with Maintenance and Reliability Leadership in “Known Best Maintenance and Repair Practices”. This alignment will bring down barriers most organizations face when trying to optimize asset reliability.

- To enhance communication between maintenance, reliability, production, and plant leadership and maintenance technicians.
- To provide the vision of proactive and maintenance to all maintenance technicians.
- To increase knowledge and skills for maintenance technicians through education and knowledge sharing.
- To define roles and responsibilities between technicians and managers.
- To reduce turnover of maintenance technicians because of lack of understanding between management and hourly technicians.
- ...and so much more

For information send request to rsmith@worldclassmaintenance.org

**If you are interested in hosting this public workshop or
onsite send me email at rsmith@worldclassmaintenance.org**