KAVAQ

100% RISK FREE GUARANTEE

Maintenance Excellence Workshops

2010, Bahrain

2 informative and intensive programs for Maintenance Professionals :

Preventive & Predictive Maintenance

12 - 14 December 2010

Root Cause Analysis

18 - 20 December 2010

Trainer's Profile

Pete is a highly recognized leader around the World in the areas of implementing maintenance best practices, developing effective productivity measurement and initiating long term operational improvement processes, within both the public and private sectors.

His value as a consultant has been enhanced through his direct leadership and profit and loss responsibilities within large maintenance and manufacturing plant operations prior to focusing upon consulting.

He is the author of over 200 articles and publications. And as a frequent speaker, he has delivered speeches and seminars on maintenance-related topics worldwide in over 20 countries.

Kindly forward this brochure to anyone who might be interested

Course Overview

Preventive Maintenance (PM) is the first line of defense for your physical assets, whether they are in a manufacturing plant, a university facilities complex, a hospital, a fleet of delivery trucks, a sports arena or a golf course. PM is that very important first step of performing PM tasks based upon time interval, miles or operating hours. And where PM leaves off, Predictive Maintenance (PdM) needs to take over and provide a "prediction" of potential failures based upon actual operating conditions.

This workshop will also briefly cover two more strategies that go way beyond PdM, Reliability-Centered Maintenance (RCM), and Risk-Based Maintenance (RBM). This practical course will:

- Present in detail the key elements of PM and PdM maintenance approaches plus RCM and RBM
- Explain their positive impacts on equipment reliability, productivity, and cost of maintenance
- Describe how to develop and install a tailor-made P/PdM program to obtain these results

It is an important "How to Do it Guide" for implementing, measuring results and successfully applying today's best practices for Preventive (PM) and Predictive Maintenance (PdM). This course will help ensure you have other basic practices in place for a profit and customer-centered operation.

Course Outline

Day One:

Introductions, Participants Review Areas for Improvement and Select Project Teams

- Today's Maintenance Challenge
- Maintenance Around the World
- How to Ensure Other Best Practices are in Place
- Developing Your Maintenance Excellence Strategy (Boeing Case Study)
- Using The Scoreboard for Maintenance Excellence to Define "Where You Are Now"

The Maintenance and Equipment Audit: Key Step before Starting PM/PdM

- Determine your current maintenance productivity
- Establish your current equipment condition and equipment performance (baseline)
- Determine the need for PM and PdM
- Calculate costs and benefits of P/PdM

Determining the Right PM System for Your Type Maintenance Operation

- Different types of PM
- PM organization and staffing PM Techniques
- How to determine PM requirements for your equipment
- Equipment cleaning and lubrication
- Equipment inspections, adjustments and servicing

Day Two:

How to Develop and Install a Good PM System

- The 10-step PM installation program
- Keeping an effective and useful equipment history
- PM work orders/PM checklists/PM reports

How to Plan and Schedule PM and Measure Results

- Determining PM frequencies and how to schedule PM
- Time-based or usage-based scheduling
- How to measure PM effectiveness and results
- Measuring and analyzing downtime and downtime trends

Predictive Maintenance Techniques, Applications, and Instrumentation

- Elements of PdM (mechanical and electrical)
- Equipment condition monitoring
- Predicting potential equipment breakdowns or expensive repairs

Specific PdM Techniques and Applications

- Vibration analysis/monitoring
- Shock pulse method
- Spectrographic oil analysis
- Ferrographic particle analysis
- Thermography/temperature measurement
- Non-destructive testing (NDT)
- Ultrasonic testing, and more

Day Three:

Getting Organized for PdM

- Planning for PdM; the preparatory steps
- Starting with a PdM pilot program
- Scheduling PdM
- Combining PdM with PM for greatest overall effect and least cost
- Organizational requirements

Measuring Results of PdM

- PdM database/data collection
- Costs of PdM (equipment/instruments, labor, and services)
- How to determine PdM benefits and return on investment (ROI)
- Decision factors for in-house vs. contracted PdM

Components of a Well-Organized P/PdM Program

- Equipment inventory/numbering system
- Spare parts inventory/forecast
- Sequence of tasks (PM and PdM routes)
- Equipment and maintenance performance indicators and trends

Combining Planned Maintenance, PM, Pd and TPM for Best Overall Results at the Least Costs

- Custom-making your maintenance system based on your equipment, plant location(s), and plant size
- Selling your solution to management (and getting the budget and management commitment)
- Phased installation for guaranteed results

Other Important Maintenance Best Practices

- Continuous Reliability Improvement (CRI)
- Making (RCM) Work for You
- Strategies for Total Productive Maintenance (TPM)
- Using (RBM) as a Risk Management Tool
- Maximize the Value of Your CMMS
- Using the CMMS Benchmarking System (SIDERAR Case Study on SAP)

Root Cause Analysis
18 –20 December 2010, Bahrain

Course Overview

While it is often used in environments where there is potential for critical or catastrophic consequences, this is by no means a requirement. It can be employed in almost any situation where there is a gap between actual and desired performance. Furthermore, RCA provides critical info on what to change and how to change it, within systems or business processes. Significant industries using root cause analysis include manufacturing, construction, healthcare, transportation, chemical, petroleum, and power generation. The possible fields of application include operations, project management, quality control, health and safety, business process improvement, change management, and many others.

Your problems may not be as spectacular as the ones pictured above, but they probably have many similarities under the surface. This is the point of root cause analysis -- to dig below the symptoms and find the fundamental, underlying decisions and contradictions that led to the undesired consequences. If you want your problems to go away, your best option is to kill them at the root.

Course Outline

Day 1 – Introduction to Root Cause Failure Analysis (RCFA)

1. Introduction to RCFA

- Successful uses of RCA in maintenance
- Words and definitions used in failure analysis
- Reasons for applying RCA in maintenance
- Understanding the physics of why equipment fails
- Activity 1 – identify failure problems and issues Attendee are facing at work

2. Equipment Failure

- True cost of failure
- Common causes behind equipment failures
- Understanding the human element
- Latent causes of failure
- Creative disassembly

3. Process Reliability

- Mapping work processes as activity chains
- Interconnectivity of work processes across the life cycle
- Human error rates
- Activity 2 - Calculating the reliability of work processes

4. The RCFA Process

- The RCFA Method
- Cause and effect diagrams
- Fault Tree Analysis

5. Selecting When to Use RCFA

- Risk – measurement and management methods
- Identifying the size of risk in an incident
- Pareto charting to identify the important few
- Selecting the scale of RCFA to apply
- Involving the right people in an RCFA

6. The Steps of RCFA

- Protecting the evidence
- Investigating, documenting, understanding the failure event
- Establishing the investigation team
- Assemble data and analyse
- Recommend corrective actions
- Report and review
- Implementing the RCFA recommendations

Day 2 – Review the RCFA Process

7. Guided Application of RCFA

- Review of RCFA process
- Activity 3 – case study of an RCFA
- Activity 4 – open discussion on RCFA process

8. Conduct an RCFA with the Group under Guidance

- Activity 5 – Entire Group of Attendees perform RCFA on a bearing failure
- Activity 6 – Open discussion on RFCA exercise learning

9. The Importance of Precision for Equipment Failure Prevention

- Avoiding failure in equipment
- Precisions standards for equipment to work to
- Instilling precision standards into work practices
- Working to precision standards

10. Introducing RCFA into an Organisation

- Recognition of a problem and its impact
- The Change Management Process
- Involving and getting buy-in from the right people

Day 3 – Apply the RCFA Process

11. Practice an RCFA

- Review the RCFA process
- Activity 7 – Groups of Attendees conduct short RCFA
- Activity 8 – Open discussion on practice RCFA learning

12. Open discussion of means to address Attendees problems from Day 1

Review Course Learning

Close-out and Finish

Trainer's Profile

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Pete has helped such diverse operations such as British Petroleum, Nigeria Liquid Natural Gas, UNC-Chapel Hill, Atomic Energy Canada Ltd, Boeing Commercial Airplane Group, Caterpillar, Ford, Honda, Polaroid, Lucent, Heinz, General Foods, BigLots Stores, Sheetz Inc, Marathon Oil Corporation, Great River Energy, Wyeth-Ayerst (US & IR), Cooper Industries, National Gypsum, Sarasota County Government-Operations and Maintenance Division, Carolinas Medical Center, NC Department of Transportation, NC Department of Health and Human Services and the US Army Corps of Engineers. Pete has helped achieve success and return on investment in plant, fleet, healthcare operations and pure facilities maintenance operations as well as golf course maintenance and for the "green industry"

He received both his BS Industrial Engineering and Masters of Industrial Engineering focused upon management information systems from North Carolina State University. He is also a graduate of the US Army Command and General Staff Course, the Engineer Officers Advanced and Basic Courses, the Military Police Officers Course and the Civil Affairs Officer Course. He is certified as a Total Quality Management facilitator for the National Guard Bureau and the North Carolina Army National Guard.

Professional Career:

President/Founder —The Maintenance Excellence Institute: Established The Maintenance Excellence Institute in 2001 with consulting and training services focused on maintenance process improvement in all types of operations within both the public and private sectors.

Principal — Tompkins Associates: Responsible for the creation and direction of the maintenance consulting practice within Tompkins Associates including support to sales, marketing and management of consulting projects.

Director of Facilities Management, — North Carolina Department of Administration: Managed 225-employee physical plant operation with over $30 million annual budget and eight million square feet of facilities including the State Capitol of North Carolina. He was responsible for all physical plant operations, construction planning/renovation and inventory management.

Professional Associations: Pete is a member of the Association of Facility Engineers, the Institute of Industrial Engineers, the Society of Maintenance and Reliability Professionals, American Legion and Veterans of Foreign Wars. He has been involved in manufacturing operations management, systems MRP and CMMS implementations, facilities management, maintenance and governmental productivity consulting for more than 35 years.

Director, Productivity Management — North Carolina Department of Transportation (NCDOT) Managed an industrial engineering staff group that provided productivity and quality improvement services throughout NCDOT.