

## **DAY 1 Details of Enterprise Asset Management Systems Training Power Point sold at BIN95.com (128 slides)**

### Section 1 - 'Sam learns Enterprise Asset Management success' - CONCEPTS

#### Course Introduction

- Discovering the 'Hidden Factory'
- Value Stream Concept
- Enterprise Asset Management System
- Concepts in Enterprise Asset Management

#### **MACHINE DESIGN SETS THE LIMITS**

- Understand How Machines are Designed
- Everyone has an Important Part to Play
- Common Wrongs Humans Do To Machine

#### **THE HUMAN FACTOR IS THE GREATEST ENEMY**

- The 'Human Element' in Asset Management
- Reliability of Human Dependant Processes
- Work (activities and practices) is a Series Process
- The Reliability of Systems
- Reliability of Series Work Processes
- Improving Series Process Reliability
- Reliability of Parallel Work Process

#### **DEFECT AND FAILURE TRUE COST**

- The Truth is Hidden Under the Surface
- Where Profit is Lost in Business Processes
- The Purpose of Business
- Maintenance is an Economic Decision
- Impact of Defects and Failures
- Defect and Failure True (DAFT) Costs go Company-wide
- Failure Costs Surge thru the Company
- Separate the True Downtime Costs so you can see them for what they are
- Calculating the True Downtime Costs

Section 1 (Continued)...

## **THE PHYSICS OF FAILURE**

- The Physics Behind Equipment Failures
- Over-stressed Parts - Overload
- Over-stressed Parts - Fatigue
- Using Physics of Failure to Build Reliability
- Operator and Maintainer Error

## **THE LIFE CYCLE OF MACHINERY**

- Plant and Equipment Life Cycle
- When Operating Costs are Committed
- What Makes a Productive Equipment Life?
- Design-in a Low Cost Operating Life
- Maximizing Life Cycle Profits

## **EQUIPMENT RELIABILITY**

- Measuring the Likelihood of Failure
- Reliability of Parts and Components
- Equipment Reliability Strategies
- The Reliability of Parts and of Systems of Parts (i.e. Machines)
- Failure Prediction – Weibull Reliability of Parts and Components
- Reliability Mathematics
- Measuring Reliability for Components – Weibull Plot
- Measuring the Reliability of Systems - Crow/AMSAA

## **CONTROLLING EQUIPMENT FAILURE**

- The Degradation Cycle
- Failure Mode Effects Analysis (FMEA) Fundamentals
- Defects Cause Failure
- The Best are Proactive – They Do Defect Elimination and Failure Prevention
- The Problems start with Variation
- “A Problem happens whenever there is Deviation from the Current Standard.”
- Controlling Process Variation
- Benefits of Failure Elimination

Section 1 (Continued)...

## **RISK MANAGEMENT, RISK PREVENTION and RISK REDUCTION**

- What is a High Potential Incident?
- How the Swiss Cheese Slices Lined Up for the Titanic
- Understanding and Measuring Risk
- Similarity between Safety Incidents and Equipment Failures
- Risk Management Process
- The Application of Risk Based Principles to Maintenance
- Identify Your Equipment Risks and Priority Equipment
- Equipment Criticality
- Match Maint Strategy to Equip Criticality

## **MAINTENANCE IS A RISK REDUCTION FUNCTION**

- Choosing of Maintenance Type
- Life Cycle Risk Management Strategy Model
- Improve Safety and Reliability by Removing Risk
- Maintenance Strategies for Risk Reduction
- Match Maintenance Strategies to Risk
- Reliability does not cost money - Lack of reliability is what costs money

## **IMPORTANCE OF STANDARDS FOR MACHINES AND WORK**

- Set Reliability Standards and Start Standardizing Practices
- Design Organizational Systems and Structures that Support Reliability
- Multifunction Teams Promote Better Equipment Performance

## **KEY PERFORMANCE INDICATORS**

- Measuring Equipment Performance
- Measuring KPIs and Outcomes