Reliability, Availability, Maintainability & Safety (RAMS)

Technical Proposal

Scope

training course addresses the needs of a diverse audience with an interest in All activities involved. in keeping a system in working order, including:

• Operation Engineers who have oversight responsibility for Plant operations

• Maintenance Engineers with direct line responsibility as well as staff support responsibility for delivering on effective Plant Maintenance

• Plant Start-up and Commissioning Managers and Engineers

• Technical personnel & supervisors involved in supporting Plant Start-up, Maintenance, and shutdown

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Terms To Understand

1. Comprehend the definition of maintenance.
2. Gain a comprehensive understanding of the definition of management.
3. Distinguish between effectiveness and efficiency.
4. Acquire an understanding of the P-F curve.
5. Explore maintenance policies and their corresponding approaches.
6. Examine maintenance actions, encompassing correction, corrective, and preventive measures.
7. Implement procedures for Root Cause Failure Analysis (RCFA) to identify and address the underlying causes of failures.
8. Grasping the distinction between leading and lagging Key Performance Indicators (KPIs)
9. Comprehend the methodology and perform calculations for Reliability, Availability, Maintainability, and Safety (RAMS) Key Performance Indicators (KPIs).
10. Efficiently managing Overall Equipment Efficiency (OEE) involves a comprehensive evaluation of

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Availability, Performance, and Quality metrics to optimize production processes and enhance overall operational effectiveness.

11. Acquire a thorough understanding and proficiency in calculating key reliability metrics, including Mean Time Between Failures (MTBF), Mean Time to Repair (MTTR), Mean Time Between Maintenance Actions (MTBMA), Mean Maintenance Time (MMT), Mean Time To Failure (MTTF), and Mean Time To Acknowledge (MTTA).
12. Conduct reliability prediction analysis to anticipate the performance and longevity of a system or component.
13. Develop a comprehensive understanding of Weibull analysis, a statistical method employed for reliability engineering to model and analyze failure patterns over time, facilitating informed decision-making in the optimization of maintenance strategies and product reliability.

Technical Proposal

Outline

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Reliability, Availability, Maintainability & Safety (RAMS)

- Maintenance Management Approach
- Maintenance Policies
- Maintenance Actions (Correction, Corrective and Preventive)
- Root Cause Failure Analysis
- Leading & Lagging KPIS
- Individual & cumulative Data
- RAMS
- Overall Equipment effectiveness & six big losses
- Optimal Maintenance Program
- MTBF, MTTF, MTTR, MTBMA, MMT& MTTA
- Failure Patterns
- Reliability Prediction
- Weibull Analysis

Schedule Proposal

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Reliability, Availability, Maintainability & Safety (RAMS)

- Total number of course days are 5 days --8 Hours / Day
- Total course hours are 40 hours
- The course includes 30 minutes break each session

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