Optimization of Industrial Plant Maintenance, Reliability and Operational Excellence

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Background

- In the context of present economic uncertainties and global competition, in order to be profitable and sustainable growth, Optimization of **Industrial Plant Maintenance and Reliability** is necessary.

Background:

- Survival of Manufacturing companies in Canada.
- Environment protection and compliance to the regulations.
- Employee Safety and Employee Retention.
- Reliable plant is Safe Plant.

How do we do this?

- Inspection and testing of critical equipment
- Safety of equipment
- Innovative Maintenance Management system.
- Root Cause Analysis to solve the problem for ever.

How do we do this?

- Work Control
- Reliability Centered Maintenance.
- Operator Care Program
- One point Lesson to avoid mistakes.
- Overall Equipment Effectiveness (OEE) implementation and Analysis.
- Planning and Scheduling.
- Reliability Engineering
- Spare parts stores management
- Multi-Skilled work force.

Strategies

- Reduce the cost of maintenance and increase the **overall equipment efficiency**
- Eliminate **non-value added** tasks
- Implementing **computerised Maintenance Management System**

Strategies

- Using condition based monitoring technologies
  - Ultra-Sound
  - Infrared Thermography
  - Oil Analysis
  - Vibration Analysis

Discussion

- We have to adopt innovative sustainable methods in Plant Maintenance to achieve **100% Plant Availability** with **zero breakdowns** with **minimum Cost**.
- It is challenging but achievable.

Discussion

- Reduce Change over times by implementing innovative methods. Recording the change over instructions. Keeping the record of best production runs. Training the other line operators for standby. Prepare the check list of tasks for the Changeovers. Optimizing the changeovers.
- Inspecting and Testing after Changeovers.
- Optimizing the machine fault Alarm system.
- Synchronising machine interlock system.

Conclusion

- We must use diverse maintenance strategies
  - **Reactive**
  - **Preventive**
  - **Predictive**
  - **Proactive**
- Why? So that we may:
  - **Prolong life of equipment**
  - **Improve Performance**
  - **Increase Overall Equipment Efficiency**
  - **Reduce the Operational Cost**

Conclusion

- **Keeping the plant, process and people safe all the time.**
- In other words, money is being consumed in the maintenance department, turning it into a profit making department **without compromising the safety of the workplace and workers.**

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Thanks!

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QUESTIONS, COMMENTS AND SUGGESTIONS.