3.9 Proactive Maintenance

The next level of maintenance is called proactive maintenance. A Proactive Maintenance program is the capstone of the RCM philosophy. Proactive maintenance improves maintenance through better design, installation, maintenance procedures, workmanship, and scheduling. Proactive maintenance is fundamentally different from the other approaches.

Proactive maintenance seeks to improve performance, in addition to maintaining asset availability. It uses monitoring and diagnostics to determine both equipment health and performance. Maintenance is performed on healthy equipment if a performance improvement can save or make money.

Rigorous use of proactive maintenance can make maintenance highly profitable. The eight most commonly recognized proactive techniques to extend machinery life are the following:

a) Specification for new/rebuilt equipment.
b) Precision rebuild and installation.
c) Failed-part analysis.
d) Root-cause failure analysis.
e) Reliability engineering.
f) Rebuild certification/verification.
g) Age exploration.
h) Recurrence control.

The characteristics of proactive maintenance are the following:

a) It uses feedback and communications to ensure that changes in design or procedures are promptly made available to designers and managers.
b) It employs a life-cycle view of maintenance and supporting functions.
c) It ensures that nothing affecting maintenance occurs in isolation.
d) It employs a continuous process of improvement.
e) It optimizes and tailors maintenance techniques and technologies to each application.
f) It integrates functions that support maintenance into maintenance program planning.
g) It uses root-cause failure analysis and predictive analysis to maximize maintenance effectiveness.
h) It adopts an ultimate goal of fixing equipment forever.
i) It periodically evaluates the technical content and performance interval of maintenance tasks (PM and PT&I).