

CPMS Newsletter

“As the Wrench Turns”

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Your Preventive Maintenance Philosophy. Do you have one?

Have you determined the right level of PM for your Maintenance Department? All the answers are right there on the Internet... it is just a matter of finding them. Recently, I found the following publication from the Office of Energy Efficiency and Renewable Energy.

http://www1.eere.energy.gov/femp/pdfs/omguide_complete.pdf

Here you will find a lot of great guidelines, best practices, and this O&M Guide is certainly worth reading. At this time, I direct your attention to chapter 5:

http://www1.eere.energy.gov/femp/pdfs/om_5.pdf

You have probably been asked what type of maintenance you are using at your plant.

- Reactive or Breakdown Maintenance
- Preventive Maintenance
- Predictive Maintenance
- Reliability Centered Maintenance

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The correct answer may be... all of them. When you build your equipment list in CPMS you are entering every asset in your plant where work may be performed. Each equipment number is its own cost center and your goal is to keep every “machine” available for use while minimizing the cost to maintain it.

The concept of Reliability Centered Maintenance means that you determine the level of maintenance an asset requires. Some examples:

- A pump with sealed bearings and not critical to your operation may be inspected periodically for leakage. But, it may have no maintenance requirements and is replaced when it fails.
- An automatic overhead door may have the tracks greased twice a year, a motor and chain checked, but no other Preventive Maintenance.
- A dough divider making hundreds of cuts per minute will have parts with a predictable lifespan. Predictive Maintenance may require a part which is expected to fail after eight months of heavy use, be replaced every six months even if it appears to be OK. Test equipment, such as a mega tester, can determine if a motor is beginning to go bad. The mechanic may be required to check if the AMP draw falls within a desired range.
- Reliability Centered Maintenance means that you have determined where each piece of equipment falls in one of the three categories above. A typical plant may look like:
 - <10% Reactive
 - 25% to 35% Preventive
 - 45% to 55% Predictive

Building your CPMS Master Schedule using RCM

Can your plant achieve the following savings by fine tuning your maintenance tasks?

- Return on investment: 10 times
- Reduction in maintenance costs: 25% to 30%
- Elimination of breakdowns: 70% to 75%
- Reduction in downtime: 35% to 45%
- Increase in production: 20% to 25%.

The answer is... maybe, but certainly worth the effort. Some Predictive Maintenance test equipment is very expensive and so you may use an outside contractor to perform tasks such as vibration analysis on your critical motors.



Here are some PM examples from real CPMS customers.

**LUBE TABLE TOP CARRIER CHAINS.
USE PQ AA-10 FG OIL**

**CHECK ACCUMULATOR. PUMP
PRESSURE SHOULD CYCLE BETWEEN
130 TO 190 PSI**

**RECORD TANK TEMPERATURE _____
SHOULD BE CLOSE TO 100 DEGREES C**

Compare those instructions to:

LUBE TABLE TOP CARRIER CHAINS

CHECK ACCUMULATOR PRESSURE

CHECK TANK TEMPERATURE

CHILLER #4

Report generated on: 6/7/00 03:56 PM
Acquired: 5/9/00 11:46 AM 1xM = 3579 RPM Averages: 12

Maximum level: 100 (+7) VdB at 2xM on 1R in low range

RECOMMENDATIONS:

IMPORTANT: MONITOR MOTOR BEARINGS FOR INCREASED VIBRATION

DIAGNOSES:

SERIOUS MOTOR BEARING WEAR

is indicated by:

92 (+16)	VdB	at	4.91xM	on	1A	in	low	range
86 (+1)	VdB	at	8.63xM	on	1A	in	low	range
95 (+35)	VdB	at	39.3xM	on	1A	in	high	range
88 (+27)	VdB	at	39.3xM	on	1R	in	high	range
83 (+22)	VdB	at	78.6xM	on	1R	in	high	range
93 (+31)	VdB	at	64xM	on	1A	in	high	range
82 (+23)	VdB	at	64xM	on	1T	in	high	range

We hope that you see the difference it makes in the quality of your maintenance when you give the mechanic just a little more info. Using the correct lubricant; determining if the pressure is in the allowable range; and if a temperature is right.

And the Winner is...

Congratulations to Ken Redden, at Klosterman Bakery, Morristown, IN. The question was: using the Equipment Failure report, how would you print those problems where mechanic John Jones was responsible for performing the PM on a list of equipment which failed?

And the answer was on the Equipment Failures report screen to enter John Jones in "Equipment with PM scheduled to this Employee Number".

CPMS Quiz

For \$100, if you print your PMs for the entire week with multiple equipment numbers per page, how would you change it to print one equipment per page and separated for each day of the week?

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