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ASSET MANAGEMENT SOLUTIONS

...WHEN MANAGING ASSETS IS CRITICAL TO YOUR BUSINESS

Newsletter for June 2009

I appreciate receiving your comments on this newsletter and any suggestions for future topics. If there is someone you know who would be interested in receiving this newsletter, please feel free to forward the newsletters to them, or forward their e-mail address to me and I will include them in the distribution of future newsletters. If you wish to remove your name from distribution of this newsletter, please respond via e-mail. Please see "Contact Us" at bottom for e-mail address for feedback, comments and removal from distribution.

This month's newsletter is the final a part of a white paper from Ben Stevens. Ben can be reached at Ben@OMDEC.com.

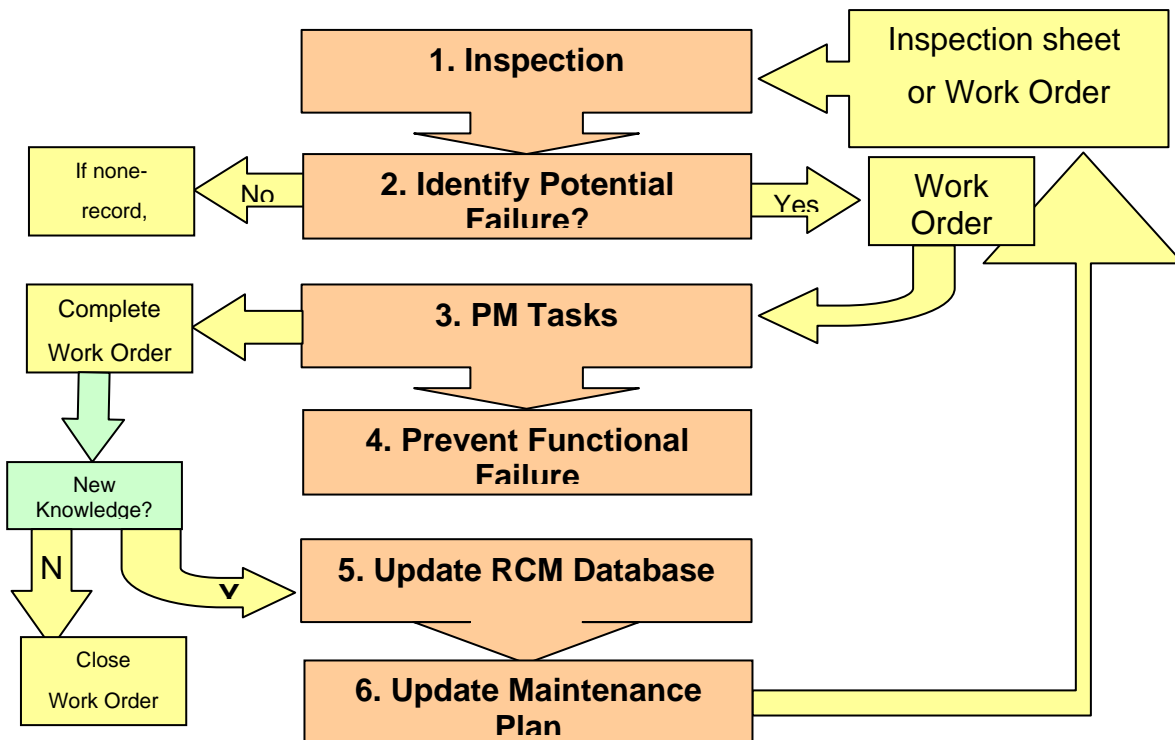
To keep this newsletter relatively short, this is intended to be a broad overview of issues for physical asset management, rather than a comprehensive discussion of the topic.

Seven Steps to Maintenance Heaven? (continued)

Step 5: Take a new look at PM's

Earlier we implied the linking of the RCM and CMMS databases. Clearly these are complementary in prompting a better understanding of failure and reliability. Contrary to common practice, the best output of an RCM analysis is not a row of dusty tomes on the top shelf of the engineering office; the best output of an RCM analysis should be an improved Work Order. And equally well, a very satisfactory output of a Work Order is an improved RCM record -- especially if it adds new knowledge or a new failure mode to the RCM analysis. By looking at the logical flow of activities, we can quickly see an immediate practical advantage of integrating CMMS and RCM thinking:

1. The Inspection prompts identification of measurable Potential Failures.
2. This leads to the preparation of a PM Work Order (or often, an immediate on the spot remedial or preventive action).
3. The PM tasks are specifically designed to prevent a Functional Failure. If we cannot tie the PM tasks to the prevention of a Functional Failure, then we must challenge the value of the PM.
4. Then (as noted in the previous section) take the Failure Mode from the RCM database and insert it in the Work Order.
5. Follow the steps in the previous section to update the RCM and the CMMS records.



Now we have in the CMMS, a record of an unexpected occurrence of a Failure Mode in critical equipment, plus the steps to repair our knowledge. Ease of access of the RCM database from the CMMS thus prompts us to continuously evaluate our PM program, and also becomes integral to creating a regime of Living Reliability.

Step 6: Streamline the work and materials processes

Managing the process of maintenance is time-consuming and expensive. The paper-based methods are slowly

giving way to electronic data transfer – which allows for instantaneous passing of work from one step to the next. Many of the better CMMS systems have built-in work-flows that suggest ways of reducing the work steps and increasing efficiency.

There are approximately 15 standard work processes that form the daily work of maintenance – from work requests to work order completion, from materials issues to failure analysis and so on. To streamline these, requires close attention to the details of each and a rigorous approach to questioning why each step is needed. The following is a standard methodology which will assist in understanding the purpose of each step in the process and therefore reducing the unnecessary steps.

1. Map current management processes step by step
2. For each one, understand the objective and the purpose
3. Analyse the cost, time, quality, service level, responsibility and resources for each step
4. Ask the questions why are we doing it; how can we achieve the same function with less effort; can we safely eliminate this step? This is potentially a huge job, so focus first on the obvious duplications and unnecessary tasks, and then on the time-consuming and expensive ones. The objective of this step is to streamline, simplify, quicken, safely eliminate.
5. Set overall targets for improvement and develop the new processes to meet these targets
6. Set performance measures plus the means, frequency and responsibility for recording and reporting them
7. Implement, measure and publish results
8. Review results, review the reasons for success and failure; and set new targets.

The three processes that typically yield the best results from an improvement program are, not surprisingly, work planning, work execution and materials management. These should be the first targets for process improvement.

Step 7: Focus on Spare Parts Management

Here there are a variety of different approaches depending on what you want to achieve.

1. If you want a do-it-yourself program to improve the management process of ordering, receiving, issuing, restocking and disposing of inventory, then the 12 step approach included in our November 2008 article is the way to go. This is based on the practical application of good management techniques largely through the EAM system. These methods can be readily learned in a two or three day training program.
2. If you want to optimize the on-hand inventory using the above techniques, then look for a supplier to guide you through the implementation of these management processes - setting goals and KPI's, followed by training and then on-the-job monitoring of results. Depending on the size of the inventory and the numbers of people you wish to involve in the process, this would normally require about two to four weeks on-site.
3. If you want to research the on hand requirements of expensive parts so as to balance cost and system reliability, then SMS (Spares Management Software) will do this very nicely. This applies advanced statistical methods to standard inventory and cost data to determine the “right” level of spares according to the reliability, availability and cost criteria required. Capital cost reductions of 50+% are standard using this approach.
4. If you want to use an on-going analytical approach that constantly monitors your existing inventory levels and recommends buy quantities and dates, plus surplus-for-disposal amounts, then an on-line approach is the response. The transaction data from your CMMS/EAM will be analyzed to confirm or re-set re-order points, determine EOQ's and min-max levels and provide monthly reports on the required inventory

transactions - all automatically via a secure website.

5. If you are looking for a very in-depth analysis of the reliability and logistics of components (more usually appropriate to military situations), then look for a supplier who has the resources and software to deliver these.

This paper has presented a series of steps that will address the in-going issue of how to develop an improvement program for maintenance. Can they all be achieved – emphatically “yes”. Can they all be done together? – equally emphatically “no”. They have been presented in the most logical sequence for the average company, and each step will build on the previous ones. All will require dedicated and focused effort, but all will return many times that effort in improved maintenance.

For any questions or comments, Ben can be reached via e-mail at Ben@OMDEC.com.

Upcoming

Please advise me, if there are other topics on maintenance management, project management, or physical asset management issues that would you would find of interest.

The C-MORE (Centre for Maintenance Optimization and Reliability Engineering) centre at the University of Toronto is organizing their 5th annual IMEC (International Maintenance Excellence Conference) conference for September 9 to 11, 2009. For more information, see: <http://imec.ca> .

PEMAC will be organizing their annual MainTrain 2009 conferences, this year with a new venue in Atlantic Canada at St. John’s, NL. MainTrain will be in Edmonton, AB on September 28 to 30, 2009; in St. John’s, NL on October 26 to 28, 2009; and in Toronto, ON on November 23 to 26, 2009. For more information, see <http://www.maintrain.ca>

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