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Saturday, 01 October 2005 00:00

RCM is widely regarded as the most comprehensive methodology used to understand how an asset can fail, and in turn, to determine what you have to do to mitigate the consequence of failure before it occurs. In its most effective and most widely accepted form, RCMII, this methodology consists of a very structured and rigorously applied seven questions that have to be answered in order to build an asset's maintenance program. Yet, despite its proven track record, many view full-blown RCM as a painful process that is resource-intensive, expensive and difficult to implement. This does not have to be the case. By adopting some common-sense strategies before launching into RCM, the experience will be a positive one that fosters ownership and teamwork among those involved, while creating a comprehensive maintenance program.

The most common RCM "pain point" is that it takes years to implement across an entire plant. Certainly, if the consequence of failure is high (for example, if you are maintaining a nuclear submarine fleet and failure means death), I would advocate the need to apply RCM on the majority of assets. But, in most industrial settings, RCM would more likely be justified on only a small percentage of your assets (typically 15-25 percent). It simply is not practical to apply RCM to each and every asset.

Although RCM may be viewed as a daunting task, the solution is to determine which assets are actually the most costly in terms of consequences and risk to the business and to target them first. You can then migrate down the prioritized list until ultimately all critical assets have been addressed. This approach allows you to balance the resource-intensiveness of RCM with other less comprehensive work identification methodologies, such as Maintenance Task Analysis, that can be quickly applied across the plant.

I recommend breaking the RCM analysis process down into two-week-long initiatives. In other words, select a system or subsystem that a team can work through, dedicating half days over a period of two weeks. They should be able to complete the analysis within this time frame, stay fresh throughout the process and have part of each day to tend to their other responsibilities. At the end of this two-week initiative, you will have defined a comprehensive program that can be reviewed with management and then successfully implemented.

Immediately following the first two-week analysis, you should begin implementing its results. As this is taking place, you can simultaneously embark on selecting and implementing your second two-week RCM initiative.

Always remember that people are at the heart of any successful RCM initiative. RCM methodology merely provides a framework for asset analysis—it can't determine the proper function of a key asset in your plant. People bring that knowledge to the process and are your greatest resource and key to success in defining the optimum maintenance program.

It is critical that teams include a cross-section of people from Maintenance, Operations and, often, Engineering to carry out the RCM process. It's also very important to assess whether you want to use the same personnel for each analysis or bring new people into the process each time. I recommend a rotational approach to ensure as much as possible that everyone participates and feels ownership for the new asset maintenance programs.

While equipment knowledge is vital, RCM participants also must be properly trained and understand the basic methodology. Orientation courses offered at various levels as a part of getting started are essential if participants are going to understand RCM and talk the talk.

Another common criticism of RCM is that it results in lots of hardcopy data that will collect dust on a shelf and never really be utilized. Before launching into RCM, investigate and take advantage of the latest reliability software to help maximize the friendliness and utilization of the output from your analyses. For newly-identified proactive tasks, condition data may be collected from a wide variety of sources ranging from predictive tools and handheld data collectors to manual check sheets. With the large amounts of data generated, you'll only want to focus on the non-normal values collected. If RCM is made easy to implement and people see success quickly, they will gain a lasting appreciation for it and readily embrace it as a way of life.

RCM doesn't have to be painful procedure. That's only the case when you try to do too much at once. By breaking it down into "bite-size"' pieces and ensuring the proper process, tools and training, it can be a rewarding experience that delivers significant benefits to the organization. Enjoy the experience!

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