Written by Terry Wireman, C.P.M.M. Editorial Director
Wednesday, 01 February 2006 21:06

Terry Wireman, C.P.M.M. Editorial Director In the last two issues, we've discussed the cost of inefficient maintenance practices and the impact they have on a company's expenses. This month, we'll be focusing on an element I refer to as the "impact cost of maintenance and reliability."

Let's explore these impact costs in the context of a hypothetical production plant that finds itself in a sold-out condition. Everything that can possibly be manufactured is being sold to customers. When a line or critical piece of equipment fails during the production run, operations are halted until the equipment is repaired and returned to service.

What would this type of production disruption cost the company? Would the cost be calculated on the total lost sales dollars, or only on the lost profit?

First, consider the difference between lost sales revenue and lost profits. Profit is usually calculated by taking total income (sales) and subtracting total expenses (salaries, energy, etc.); the profit is what's left. If a production disruption reduces the total income by reducing the sales volume, then lost sales would have to be a factor in calculating the impact of the production disruption. This reduces the numerator in the impact calculation.

At the same time, expenses also may be increased during the production disruption. There may be overtime for the maintenance technicians making the repair, or there could be product lost (particularly in a continuous process operation). These increased expenses impact the denominator in the impact calculation.

While this sold-out plant scenario may seem simplistic, very few organizations consider all of the parameters when considering the cost of lost production. Visualizing the problem becomes even more clouded when a plant is not in a sold out condition. At that point, the impact on lost sales revenue becomes a matter of debate.

Can the lost production be made up and still meet the customer delivery in a timely manner? If the answer is "yes," then the sales volume may not be impacted. However, the denominator of the calculation will still be impacted.

Will expenses increase to make up the production? Here, the answer will be "Yes," since the equipment will have to be operated when it was scheduled to be shutdown. Accordingly, there will be increased labor costs (usually at an overtime rate) and increased energy costs as well. So, again, the true profits of a company will be impacted negatively.

But, we're not done calculating, yet. There is still another variable to consider.

What if the company has an extra line? Can the production crew be moved over to the spare line and run the product without any impact on profit? Possibly, but this line of reasoning leads to a much larger problem: a poor financial standing with investors. And why not? Profits, while important, are only part of the picture. The higher level indicator used to evaluate companies today is Return on Assets (ROA). This will be our topic of discussion next month.

In the meantime, if the information in this column has interested you, I invite you to join us at the Maintenance and Reliability Technology Summit (MARTS). April 17 - 20th, in Rosemont, IL, just outside Chicago.

On April 19th, I will be discussing the topic of "return," specifically "ROI for Reliability." During my presentation, I will show you how to present reliability issues using a methodology that is certain to appeal to the executive managers in your plant. For more information, visit www.martsconference.com I look forward to meeting you at MARTS 2006. **MT**