

The Financial Impact Of Inventory and Procurement

Written by Terry Wireman, C.P.M.M. Editorial Director
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This month, we continue our ongoing discussion on the financial impact of maintenance and reliability by taking into consideration issues related to spare part inventory and purchasing.

Maintenance material costs are related to the frequency and size of the repairs made to the company's equipment. The total number of parts, in addition to the stores' policies, purchasing policies and overall inventory management practices, contribute to the overall maintenance materials costs. How, though, are cost-effective policies and procedures developed, implemented and communicated?

It all begins with a proactive maintenance organization and reliable equipment. This places emphasis on the preventive maintenance program to initially reduce the reactive work for the maintenance organization to less than 20%. It is at this level that effective inventory and procurement policies can be developed and implemented. An organization can never achieve cost-effective inventory and procurement practices in a reactive maintenance environment.

When an organization has proactive practices, it can focus on developing the lowest total cost for the proper max-min levels, reorder points, reorder quantities, etc. Proper inventory practices also will require appropriate storage areas that are well organized, easily accessible and environmentally appropriate for the items being stored.

While this may sound expensive, consider what the cost of NOT having a proper inventory and procurement function for MRO (Maintenance, Repair and Overhaul) spares is. Consider, too, how having too high of a level of spare parts impacts the company's profitability. The holding cost for spares may be as high as 30% of the cost of the inventory annually. So, for a \$10M stores investment in stocking spare parts, the annual holding costs may be as high as \$3M. This is why there is constant pressure on maintenance organizations to reduce spare parts.

The counter-point to reducing inventory levels is the probability and cost of a stock-out that is requiring the spare part and not having it available. In a breakdown mode, with production disrupted, the costs could exceed \$10,000.00 per hour (or even more). Even with consignment arrangements and rapid delivery by suppliers, downtime costs may exceed the cost of stocking certain spare part items. Of course, the more proactive and mature an organization is, the more the effectiveness of inventory "Best Practices" will be enhanced.

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What are the benefits that typically can be achieved? As far back as 1979, there was a study of companies (published in Industry Week magazine) that improved their inventory and procurement practices as part of a maintenance improvement initiative. The average results reported by the participating companies highlighted:

- a 17.8% reduction in total inventory levels
- a 19.4% lower material cost

Accordingly, if we use our \$10M inventory example again, these results would translate into a \$1.78M reduction in total inventory levels and a \$1.94M reduction in annual material costs.

While the above figures would need to be scaled based on the size of a company's inventory, the savings would be proportionate to the inventory investment. Clearly, the current condition of the organization would need to be factored into the study. The more mature the organization's inventory and purchasing practices, the lower the savings. On the other hand, if the organization had few controls in place, its potential savings could approach the results reflected in the referenced study.

So far we've examined labor and material expenses for the maintenance organization. Next month, we'll begin examining the cost impact that maintenance has on overall company expenses. **MT**