Inventory Control

By Joel Levitt

If you could get the parts you need, at the lowest cost, without downtime (due to parts) then you don't need to maintain much of a maintenance parts inventory. The reality usually is that the speediest source is also frequently the most expensive. Many parts are difficult to get on short notice. Even with a fully equipped stock room, equipment has downtime due to unavailability of parts.

Accounting Issues

In many organizations when parts are purchased for maintenance they are directly expensed. They are not assets of the organization. Manufacturing inventory is an asset and is on the asset side of the ledger (same side as cash or receivables). Keep this in mind when discussing maintenance inventory with top management especially accounting oriented people.

The function of maintenance inventory is to support the performance of the maintenance function. The building and maintenance of an inventory will reduce the overall cost of providing maintenance and in some cases radically reduce downtime. Decisions about inventory **always lead back to an economic justification.** Non-economic justifications of high inventory usually cover holes in the control of the maintenance function.

Concept of `Insurance Policy' inventory items

There is a class of parts that has to be considered differently than other parts. Certain parts have long lead times and high downtime costs (for the associated equipment). These parts can be considered insurance policy parts. They are kept in stock **even if they are never used**. Consider them like your organization considers fire insurance. You never wanted to use it but if you have to you're glad it's there.

An excellent example concerned the inventorying of a spare crank shaft by a southern utility company. The engine was a large scale turbine. The crank shaft cost a few hundred thousand dollars and had a lead time of 24 months on a replacement. The cost of downtime for this turbine during peak load was almost a hundred thousand dollars per hour (cost of purchasing power from the grid). This insurance policy was well justified.

Do you have specialized, hard-to-get parts? Are these considered insurance or do they affect your performance measures (such as turns per year or inventory dollar value).

Symptoms of Inadequate Inventory Control

The following problems indicate that inventory is not under proper control. Review your operation to see if these symptoms are present.

1. Inventory for units no longer in service.
2. Inventory cannot be reconciled; parts can be added to or taken from inventory without proper paperwork.
3. Purchase orders issued after item was received, items purchased with petty cash.
4. Little knowledge of location, inventory level, turnover.
5. No established min/max, reorder points, E.O.Q's.
6. No competitive bids, sweetheart deals with certain vendors.
7. Parts purchased but never used, no accountability of parts used.
8. No proper storage, unlimited access to parts room.
9. No physical inventory taken, hoarding of parts outside of parts room by mechanics.
10. No analysis of equipment to estimate spare part requirements

These symptoms indicate holes or voids in your organization's control of inventory. In small operations you may have to put up with some of these situations because of inadequate volume to justify the control structure and people. However, **even the smallest operations can justify some level of control.**

There is a common misconception that computerization can somehow get your inventory situation under control 'once and for all.' The fact is that without physical and procedural controls computerization will only make the situation worse. The wonderful advantages of computers flow only to organizations committed to the controls. Once controls are in place computerization will greatly simplify the clerical work and the analysis.

Joel Levitt, Director International Projects JLEVITT@LCE.COM
Life Cycle Engineering | 4360 Corporate Road Office | Charleston, SC 29405
843.744.7110
Mobile +1-267-254-0061
www.LCE.com