



The right part at the right time

ABB is helping customers develop a comprehensive storeroom management process

Richard R. Rosales

The main reason for the existence of a storeroom is to supply a maintenance team with the parts and materials necessary for them to ensure that all plant equipment continues to operate at its maximum design capacity. In fact, Material, Repair and Operations (MRO) storeroom personnel state that their deliverable is “to provide the right part at the right time at

a cost-effective price.” Yet, in many MRO storeroom operations, customers complain that the right part is never in stock when needed, or there aren’t enough parts, or that original parts were replaced with cheaper parts due to a price reduction effort. Having to fly a missing part in from anywhere is very costly, especially at today’s oil prices.

To help customers develop a comprehensive storeroom management process, ABB provides the professional services needed to ensure the expected MRO storeroom deliverables. ABB is acutely aware that the establishment of a sound MRO storeroom operation is one of the key requirements of an effective equipment reliability program.

Reliability

Problems in a Material, Repair and Operations (MRO) storeroom usually occur from a lack of maintenance support and management focus, and an ineffective operating process¹⁾. To tackle these problems and fulfill the MRO storeroom deliverable of providing the right part at the right time at a cost-effective price, it is necessary to understand the specific areas related to such a deliverable.

“The right part”

What is meant by “the right part” and who determines what this should be? The process of determination begins at the engineering design stage where all equipment and component parts are identified. The decisions made on equipment selection are typically agreed to and approved by representatives of the production, maintenance

and engineering functions, and are based on experience with similar equipment, operating parameters and engineering specifications. During the later phases of a project, the detailed equipment and component part information is transferred to equipment records in the site’s CMMS (Computerized Maintenance Management System). This information is typically available to those who work with or support the equipment.

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The next step, carried out immediately prior to equipment installation, is to determine if the equipment or spare component parts need to be kept in the MRO storeroom. The decision for storing these items is made through the combined efforts of the production, maintenance and purchasing functions. The resources typically used to help make this decision include OEM recommendations, prior history of repairs on the same or similar equipment, the number of items of equipment at the site utilizing the same parts, and part availability from the local vendor. At this point all equipment and associated component parts have been identified using engineering specifications, and only those

parts that have meet these specifications are locally stored.

If the process is followed correctly, the organization can be assured that the selected parts stored in the MRO storeroom will be the right ones. To maintain this assurance, any part being reviewed as a potential replacement for an existing storeroom part must be approved by the same cross-functional group that determined the need for storing the original part and current users of the part. These processes must be in place to ensure that the “right part” is in the MRO storeroom.

“At the right time”

This element of the MRO storeroom deliverable has somewhat of a twist. What exactly is the “right time?” Does the “right time” mean “anytime?” If “anytime” is the “right time,” then this implies a reactive mode of operation in the field because it is not known when the spare part will be needed since it could be anytime. What is needed for “the right time” to materialize is an organized or scheduled time. A scheduled time implies that the need for a spare part was predetermined, and ideally this would have been identified with enough time to communicate this need to the MRO storeroom personnel. Therefore, a proactive rather than a reactive response requires that a system or pro-

A typical Maintenance, Repair and Operations (MRO) plant storeroom



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Ensuring the right part is available “at the right time” requires a proactive response in which a system or process is in place to properly identify spare part needs along with a scheduled date for future use.



Footnote

¹⁾ <http://www.mrotoday.com/mro/archives/uptime/StoreroomJU04.htm> (December 2007)

cess be in place to properly identify spare-part needs together with a scheduled date for future use. A well established work management process will provide the necessary information along with a scheduled need date for the equipment spare parts. Once the work management process has been established, then it can be said that the processes are in place.

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Cost-effective price

One possible reason for equipment failure is the price of spare parts. To begin with, equipment spare parts play a critical role in ensuring reliability. The function of engineering is to provide the specifications for equipment and associated parts used in the manufacturing area. These engineering specifications account for operating conditions and ensure safe, environmentally sound and reliable performance. Deviations from engineering specifications can potentially do more harm than good. Although vendors and parts manufacturers may claim their parts are just as good, this must be verified by involving those functions that originally defined the specifications for the equipment during the design phase. Less expensive parts sound like a bargain but the consequences of using them may yield very negative results, including environmental breach or serious injury, or both. To be cost effective does not necessarily mean purchasing cheaper parts: It means the total cost of ownership during operational life. In other words, a cost-effective price is what matters, not the cheapest price.

Cost-effective ownership encompasses a number of areas. The first concerns the overall performance of the product throughout its operating life. Spare part performance can be verified if historical experience with the product is utilized and if it is determined that the manufacturer employs proven

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quality manufacturing techniques along with performance tracking of the product. In short, product verification can only be assessed by involving the engineering, maintenance and production functions.

Another area related to cost effectiveness is the vendor service provided for the product. Vendor service can include technical assistance as needed, introduction of higher quality, more reliable parts along with stable pricing for extended periods of time. In this area the purchasing function takes the lead role in building long-term alliances with vendors and manufacturers to ensure consistent product performance with stable pricing. Purchasing must include the engineering and maintenance functions in qualifying vendors as preferred providers of goods. Additionally, a goal for the purchasing function would be the establishment of long-term itemized priced contracts for all stocked parts. Electronic transmission agreements could be utilized to minimize the costs associated with order placement, receipts and the payment of goods.

Having these processes in place will help provide assurances that the right parts being stocked were purchased at a cost-effective price.

Who can help?

ABB offers consulting services to help companies develop a comprehensive

storeroom management process that includes all of the elements of storeroom deliverables – “the right part at the right time at a cost-effective price.” Additionally, ABB offers services to develop and implement a robust work management process.

ABB consultants work with company representatives to identify the “as is” process and to develop the “to be” process. ABB’s approach includes the development of an implementation plan, execution of this plan and process review at completion. All the while, ABB²⁾ will work side by side with company representatives to train, coach and mentor company employees involved in the processes described above.

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Footnote

²⁾ ABB personnel are trained and certified by the global inventory and logistics organization, APICS.