

## Cost effective turnaround practices

by Robert Lasser

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Maintenance and turnaround planners methodically review every tower and vessel in anticipation of a planned shutdown. The “detailed scope letter” is intended to list the work that lies ahead. It often includes such things as structured packing that may have been eaten-through due to corrosion or pancaked trays. It could be plugged mesh pads, warped tray decks with missing valves, or much more. The “scope letter” is really a detailed road map of anticipated work and of the anticipated condition of the unit towers and vessels that are to be included in the maintenance or turnaround plan. The actual condition of the equipment may be found to be in much better shape than was anticipated or it may be found to be in much worse shape than anticipated. In extreme cases, all the internals could be beyond repair.

### ***Risk preparation...***

The most cost effective approach to equipment purchasing for outages is to eliminate the most difficult items that may be encountered. If a tower or process vessel has exotic alloy or patented items (few remain under patent) that cannot readily be supplied, the planners may decide to increase their ability to predict the parts needed by having the tower scanned. Based on tower scan data, the engineers and planners will purchase spare items months in advance. If not installed during the shutdown, these pre-outage purchased items may ultimately end up in plant stores for years. However, in this case, the risk was considered too great not to be totally prepared.

### ***Let inspections determine...***

Maintenance buyers know that this preparatory work by their colleagues cannot completely eliminate the need for “surprise” purchases. Not everything can be accounted for in detail in advance. There are always surprises. ***It is my experience that plants can actually save money on outages by allowing inspection to determine the condition of common tower and vessel items during the two-week, or longer, shutdown.***

Many complex items can be evaluated ***during*** the outage rather than making blanket purchases before the shutdown. These items should be identified, researched and possibly even be placed on a standby order (with expedited prices being established) well before the shutdown.

### ***Common items can be manufactured within days...***

We frequently help plants reduce their overall turnaround expenditures because we can manufacture many common items within days after notification—even items made of 410, 304, 316 and Monel steel alloys. Significant savings can be made on “discovery-only” items like mesh pads, random packing and tower tray hardware. Why pre-purchase all items before the outage when ultimately they may not be required in the tower? We frequently consign tray hardware and random packing to the facility so it can be restocked during the outage through an “as needed” program.

### ***Complex items can be fabricated on a just-in-time basis...***

Savings can also be made on more complex items such as valve trays, structured packing beds, liquid distributors, bed supports, and other fabricated items provided they are well defined before the outage. We offer pre-outage record research and planning proposal support to facilities at no cost. Value added vendors should support the plant efforts before, during, and after the turnaround or project. ACS provides record “as built” drawings of all fabricated items purchased to our plant customers, so during their next outage clear records will be available.

***Responding quickly...***

We often receive calls for custom tower and vessel internals for those unplanned outage requirements. Things our customers need as quickly as possible that just could not be predicted! We understand these needs, and have the dedication and ability to produce, even complex custom products, within an extremely short lead time (and deliver them at reasonable prices).

Keeping your facility’s shutdown or outage on budget and on time is the common goal for plant owners, contractors and equipment vendors. But why spend more than is necessary when you can be under budget on some key items and still be on time too? Perhaps you won’t be faced with “warehousing” expensive items and possibly end-up discarding them before the next shutdown in four years. Cost effective turnaround practices are always in your best interest. **For more information contact Robert Lasser with ACS Industries, Inc. 1-800-231-0077 or e-mail him at [rlasser@acsind.com](mailto:rlasser@acsind.com)**