



Lean Tools To Beat Material Madness

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Counter those price increases and surcharges with the 5S System

Material price escalations exceeding 100 percent; surcharges on top of surcharges; lead times are in excess of 40 weeks on certain items. What can a precision machined products company do to make the best of this current material market maelstrom? How about using lean tools to help minimize the impacts of the current market conditions?

5S System

The effectiveness of the 5S system of improving shopfloor manufacturing has been proved by countless implementations in many facilities in many industries. However, for many precision machining shops, the application of 5S principles to the material purchasing process can pay significant dividends in improved delivery and customer service, and can increase the percentage of successful quotes that a shop might otherwise have lost because of



material unavailability.

Here is one way that you might apply 5S thinking to the material procurement process for our industry:

Sort your material requirements into material grade and size categories. With today's prices and long lead times, it will probably pay you handsome dividends to minimize the number of specific sizes that you need per grade. This will permit flexibility to make parts in a similar size and grade range from two or three stock sizes rather than having five or six item-specific sizes to order, inventory, track and expedite.

Straighten your existing materials inventory and orders to give you a clear view of your raw material on hand and on order situation. Look to see if any of your "orphan items" might be applied to make another product. With today's material prices, you might find that having

a material "tag sale" makes perfect business sense. But, you need to know your inventory.

Sweep your inventory and order book of unneeded items and orders. The PMPA Material and Equipment Exchange provides one way to help you sweep away the surplus-to-your-needs inventory by selling that surplus to shops that have a need for these materials. Occasional postings on the PMPA Manufacturing and Technical Listserve surface when a material need becomes critical for a shop. You just might have that item as surplus in your inventory.

Standardize your material order procedures and quoting process so that you consistently order the multiple-application, standard size feedstock instead of multiple orders of long lead time-specific items. Determine your needs by reviewing order book and customer commitments

(Continued on page two)

In This Issue...

- Lean Tools To Beat Material Market Madness
- HSAs: Health Savings Accounts
- Why Do I Need To Have My Business Valued?
- Why Join PMPA? Technology
- Member Profile: The Thuro Companies
- Reminder: Management Update Conference
- PMPA Calendar Of Events



Lean Tools To Beat Material Market Madness continued



as well as supplier lead times and flexibility. This will require getting your engineering and sales departments on board for this effort.

Sustain the process. Now that you have done all you can to minimize waste in your system of excess material item counts, it's time to get customers to help you to further reduce the waste. Explain to your customers how their demand time is now a small fraction of the material order cycle. Their commitment to longer-term forecasts for materials on lead time orders can help you assure

that material is ready for production when needed. Show your customers how you are standardizing stock sizes to minimize lead time and maximize your ability to say "yes." Ask for their assistance to help shrink the negative consequences by giving you firm commitments that reflect the material market's lead times.

One of the eight kinds of waste identified by lean is "waiting." Of the eight wastes, waiting is the one that is usually unrecoverable. Loss of opportunity, because you can't get the material, is the most objectionable form of this waste in our shops. Standardizing starting stock sizes for items made from otherwise identical materials can be the difference between getting

more than cover the cost of refiguring the yield loss of the additional stock removal, as well as quoting the appropriate price to whittle the part out from a larger-diameter "mother size."

Applicability of lean tools and 5S isn't limited to only shop operations. The raw material procurement process seems like a great place to try to lean your system and improve your competitive advantage by getting to "yes" quicker than the shop waiting for a specific size of barstock.

Implementing lean upstream in your system allows all of the benefits to compound further through your process. Leaning your procurement

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Apply the 5S system to your material procurement system. The profit will more than cover the cost...

the order (based on your ability to make parts from material available) and missing yet another opportunity and blaming it on the supply chain and "unbelievable" material lead times.

Apply the 5S system to your material procurement system. The profit will

to use a single stock size for a number of related parts reduces the complexity and time needed downstream in the shop for machine changeover and setup of the next part. That results in less downtime and thus more billable machine hours and production.