

SAVINGS FROM THE FRONT LINES

Doing the Math on Your Moldmaker's Value

About this series: For those charged with raising the sales of a mold building company, differentiating one's company from the competition is fundamental. This quarterly series features actual examples of the front-line representative of a mold building company presenting new approaches to improve the customer's profitability.

A moldmaker likes a challenge, and that is what was received when A-1 Tool Company (Melrose Park, IL) was approached by a West Coast container manufacturer. The molder had been manufacturing a product for some time and had many molds used for its production, but now there was a desire to alter the molds in order to reduce the part weight due to the rising cost of the plastic material.



Mike Schillaci, Vice President of Sales for A-1 Tool. Photo courtesy of A-1 Tool..

Mike Schillaci, Vice President of Sales, related that this customer had previously tried to reduce the wall stock using the current mold design and gating by just reducing the wall thickness of the part. The customer invested time and money on the effort only to see it fail due to flow length. That's when the customer turned to A-1 Tool.

Having already worked with similar projects, the A-1 team knew that although its customer's original

request for help working with existing tooling was not an impossible one, another approach was viable and so they presented a new solution.

"With this project, we began by looking at aspects including those our customer may not have considered," explains Schillaci. "With every project, we try to meet with customers early on so that we can influence the part design. Our sales personnel have the experience and skills needed to warn of such things as bad steel condition, drafts needed for textures and changes that could make secondary labor less intense and costly."

Schillaci and A-1 Tool's President Geoff Luther met with the customer and reviewed the problem, and then proposed building a new tool—though that was not the original customer request. Questions that were asked:

- "What is the estimated production quantity?"
- "How long do you have to fill the pipeline?"
- "What molding equipment will be used or what is available?"
- "Is automation required or an option?"

"We quoted options on design elements that could influence any tests or shipping requirements they may run into," Schillaci says.

For example, the thinner wall could fail a drop test, so design options were quoted, such as structural ribbing or reshaping the bottom of the container—changes that could be made with minimal influence on the tool and the customer's budget.

"Upon initial sampling, if the product doesn't pass every test, the options we quoted are already budgeted for and therefore can be implemented quickly," he explains.

Material Cost Savings to the Penny

The savings from cycle time reduction and reduced rejects can only be generally estimated, but Schillaci detailed the material cost savings to the penny.

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Because the original tool could not be effectively altered and saved for production, A-1 Tool's new approach, given the savings gained over the life of the mold, made the investment in a new tool a savvy financial decision for the customer.

Calculating the Savings

A-1 Tool was able to do the math for its customer (**see sidebar**) on this project to prove out the savings gained by implementing a new mold build and these were the results:

- Faster cycle times. This project yielded an impressive 15 percent gain in speed of production.
- Fewer rejects—Structural tests were considered at the design stage and the product met customer requirements, including visual testing (texture or draft issues, etc.) ensuring an aesthetically pleasing, quality molded product.
- Significant material savings over the original mold design: \$800,000 per year. The original molds have been running for about 10 years and it is expected the new molds will run for at least that long.

"The original can weight was 5.2 lbs, and the new mold with reduced part weight is now 3.6 lbs. or a weight reduction of 1.6 lbs.," he explains. "If material costs \$ 0.65 per lb. times 1.6 lbs. then that equals a savings of \$1.04 per can. If the mold runs at 144 shots per hour times \$1.04 per can, you are looking at \$149.76 savings per running hour. Further, at 23.5 hours per day times \$149.76 per hour, the savings comes to \$3,519.36 per day that the mold is in production. If the mold is run 19 days (leaving out weekends and holidays) per month times 12 months per year, then it's running 228 days per year. Using 228 days times \$3,519.36 per day you gain \$802,414.08 in total dollar savings per year. All of this is based on the price of plastic and how many days a year the mold is run."

"We offered contingencies and provided tangible data that could be taken back to management to justify the idea of not only building a new mold, but for building a better one," states Luther.

There is nothing more costly than a tool that doesn't perform to its maximum potential. Producing the lowest cost part is the whole reason a tool is built. Challenging traditional approaches of the past is an opportunity for profitability on the part of both the moldmaker and the customer.

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