

# **Daman**36

SPRING 2010

ISSUE

CELEBRATING 34 YEARS OF CONTINUOUS IMPROVEMENT

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Outlook by Larry Davis



DAMAN FEATURE

# Insights into manufacturing solutions

As a leader in developing technology for the fluid control industry, Daman looks for opportunities to pass on solutions and systems to help other manufacturers improve their processes.

## DAMAN FEATURE

**This feature spotlights an innovation Daman developed that holds universal appeal for any large bore drilling operation. Daman welcomes the opportunity to share insights from this homegrown solution with distributors who recognize similar process issues at other machining operations.**

**T**HE TEAM IN CELL C, WHERE CUSTOM MANIFOLDS are built at Daman, had a nagging problem. Methods used to clamp down large manifold blocks for machining were clunky and inaccurate. Plus, large parts demanded more setup time to get everything placed accurately on the machines.

So team leader Thom Sibley set out to find a solution. He worked closely with his continuous improvement manager, Neil Henderson, to devise a riser-based workhold system that offers all the flexibility and versatility needed to consistently

Typically, the production team needed longer setup times to properly clamp down the cumbersome blocks for drilling by the computer numeric control (CNC) machine. The new workholding concept has cut setup times for large manifolds by 75 percent.

**Solution leans out the process.**

With its horizontal orientation, the CNC can machine four sides of a part at one time.

"Each side is machined to the other," Henderson explained. "So the tolerances are accurate from hole to hole, in relation to themselves."

As more and more large manifolds appear on the production schedules, this versatile fixturing will significantly reduce setup time, regardless of design configuration or dimension. Plus, it is reliable.

"We wanted to make sure the accuracy and precision were repeatable," Henderson said.

By his measurements, a part loaded onto the fixturing pallet

will be positioned within  $\pm 0.005$  inch of the last one every time.

Both Sibley and Henderson have seen immediate improvements in end products machined with the new fixturing system. Now they are looking for the next way to improve their processes and methods.

A riser-based workholding device created in-house reduces setup times by 75 percent when used for large bore drilling in parts weighing up to 4,000 pounds.



mount large parts squarely onto machining pallets.

"We designed a modular fixture that we can use with any part," Sibley explained.

The fixturing is adjustable in 0.125-inch increments, which allows accurate placement. Now the team simply mounts the part in the fixture, sets the program, and lets the machine probe two axes to orient the program to the part.

Production teams use the fixturing device for machining parts that weigh between 3,000 and 4,000 pounds.

**Daman shares solutions.**

**For more information about how this riser-based workhold system may help your customers, contact Neil Henderson at Daman, 800-959-7841.**



## DAMAN PERSPECTIVE

## Sharpening the focus

**I**N AN ENVIRONMENT OF CONTINUOUS improvement, any scrap rate greater than zero is too high. But scrap rates that hover near 1 percent or beat long-standing averages attract attention from all around Daman.

Production Cells A and C have broken records

of 2010. With production running 24/7, five days a week, the 75 percent reduction in scrap has had a positive ripple effect on the team's production rates.

"We stay on schedule better, which leads to better on-time delivery," Sibley said.

Cell C also collaborated with its primary cavity tool manufacturer to set more precise standards for tools supplied to Daman. The improvement in tolerances has had a significant impact on scrap, according to Sibley.

### Focus continues on quality, details.

In Cell A where standard aluminum parts are produced, the team refined procedures to help operators focus on details.

on a regular basis when it comes to scrap. Team leaders point to better control over tooling, consistent operator processes and an ongoing focus on continuous improvement as primary reasons for the lower rates.

### Improved controls make a difference.

"Our chip ID program eliminates mistakes, such as loading the wrong tool or manually recording incorrect tool data," Thom Sibley, Cell C Production Team Leader, said.

Fewer broken tools and more accurate machining have caused Cell C's scrap rate to plummet from an average of 4 percent to just 1 percent by the start

"We had a record-setting year in 2009 for our scrap rate," Garold Kendall, Cell A Production Team Leader, said. "And we maintained our quality while improving the production cycle."

With production running smoothly, the team is focusing on improving other details of the production process. Team members are looking at ways to refine the deburring process, and they are reviewing inspection and packaging processes to ensure parts arrive ready for final assembly.

Both cell teams still have their goals set to achieve zero scrap rates. With their focus on continuous improvement, achieving that goal is within their grasps.

*Production teams have reduced average scrap rates from 4 percent to under 2 percent by focusing on continuous improvement initiatives.*

*Their goal: consistently keep scrap rates under 1 percent.*



## ENGINEERING SOLUTIONS

## In search of solutions

*Daman partners with a host of suppliers to improve its performance standards and ensure delivery of parts ready for assembly by the end user. Here are two examples of how suppliers have helped Daman meet recent challenges.*

### Updating technology

**F**OR DECADES, MACHINE OPERATORS HAVE used the same type of large-diameter drilling tools with adequate success. The tools have restricted the capabilities of today's advanced computer numeric control (CNC) ma-

Sibley and his team kept searching for a better solution. When their primary tool supplier recommended a new straight-shank, indexable drill series, they knew they had found the right answer. The tools drill large-diameter holes in three to four minutes, with little to no weakening or breakage. Plus, the results are predictably consistent, according to Sibley.

And that has opened up a new range of production possibilities for Daman's custom manifold team.

### Large challenge solved

**L**ESSONS LEARNED SOMETIMES evolve into everyday practices. A challenge last year to identify ways to apply a surface coating to a 4,000-pound part led to a solution used routinely now for large, custom parts.

Coatings need to meet required tolerances, provide protection from rust and facilitate final assembly, according to Mike McIntyre, Distributor Services-Custom.

As the final step in producing a part, schedules rarely allow time to ship parts long distances for finishing work.

Daman reestablished a relationship with a supplier in Wisconsin to provide surface treatments for large manifolds. The company's proximity to Daman's production facilities has meant short turn-around times so Daman can meet its delivery commitments.

"It's a solid relationship now that works for everyone," McIntyre said.



chines that can drill large holes faster and with more accuracy than their predecessors. Routinely, machine operators needed to reduce speeds and pressure to avoid breakage of drill bits.

"We needed an hour and a half to three hours to drill a 5-inch hole on our large manifold machine," Thom Sibley, Cell C Production Team Leader, explained.

## MARKETING NEWS

## Taking care of business

*Several indicators that the economy is improving and the recession is ending have given Daman, as well as friends and families, hope for a return to financial peace and stability. Here is a look at two signs of improvement.*

### Intentional recovery

**R**ECENT PHONE CALLS FROM DAMAN carried an encouraging message: Daman was recalling employees. For those who received the calls, it was welcome news.

"We increased our workforce by 20 percent in the first quarter," Dave Mischler, Vice President, said.

Daman has approached workforce expansion

The workforce expansion came soon after the company reinstated full-time hours and pay for employees to 2009 levels.

"We consistently communicated what we were going to do during the downturn," Mischler explained, "and now we are giving everyone the same kind of information as the business climate improves."

By all measures so far, Mischler expects to make more calls to rehire employees later this year.

### Spreading financial peace

**D**AMAN'S CIRCLE OF FRIENDS and family who seek financial peace widened this spring.

"We invited local employers to help their employees become debt-free and in control of their personal finances," Krysten Shoulders, Human Resource Manager, explained.

In February, Shoulders introduced Dave Ramsey's Financial Peace in the Workplace program to the local Renaissance Executive Forum, a business leadership group.

After sharing success stories from Daman's employees who have participated in the 13-week program, she encouraged the employers to offer Financial Peace to their employees. More than a dozen employees from the area will participate in the next Financial Peace program held at Daman.

"Many people's lives could be transformed through this outreach," Shoulders said.



in a methodical, objective manner.

"We intentionally waited until we were sure we needed these employees full-time and for the foreseeable future," Mischler said.

That meant verifying production orders represented a mix of products, as well as customers, to ensure the momentum could be sustained.



## OUTLOOK

## The Good, the Bad...

By Larry M. Davis

**B**AD NEWS FIRST: WE CLOSED 2009 DOWN 45 percent over the previous year. That was ugly! Part of the good news is that we managed to avoid red ink. During 2009, we judiciously watched expenses but not fearfully. We spent considerable time and some money improving and planning for better times. The fact that we lost money in 2001's less severe

recession while making money during 2009 speaks to improvements made last year and the preceding seven.

As you read through the articles in this issue, we detail two of the 21 significant improvements made last year. Conservatively, more than 60 others required fewer resources. Productivity numbers are up, and

our scrap is down. Two years ago, scrap was tracking 4 percent. Given that a large percentage of our sales are original design and build, 4 percent was respectable. But we really wanted 2 percent. Last month, we posted a 1.6 percent scrap rate, and ran under 1 percent for two concurrent weeks.

These improvements are singularly aimed at one target: Helping our customers be successful.

Over the years, we have partnered with suppliers who allow us to operate at peak performance while continually pushing the bar higher for ourselves. Our leaders are passionate innovators in their own right. All of this translates into fewer pre-and post-sale headaches for our distributors. It is no accident that we count the best and brightest hydraulic engineering minds among our most loyal customers.

As always, there is more to do.




## DID YOU KNOW

## CC option now standard

Two common cavities are now considered a standard option for Daman manifolds, according to Ted Middleton, Distributor Services-Custom. With the relief cavity designs complete, lead times for orders with the "CC" option are significantly reduced. Look for the option under Ordering Information in Daman's Hydraulic Valve Manifold Catalog. The catalog is available online, [www.daman.com/catalog](http://www.daman.com/catalog).

## Dropping pounds

Brad Morgan and Bob Hernandez have gained each other's respect – and lost over 130 pounds combined. The two production team members have their own motivations for losing weight, but they offer each other encouragement to stick with their fitness routines. Morgan set clear goals to regain mobility and energy after a serious sports injury left him immobile for six months. Hernandez wants to shed the weight he gained after he quit smoking a year ago. With their self-motivation, determination – and support from their co-workers – both know they are on a path to better health.

## A peace about finances

Living debt-free brings an inner peace that many Daman families are experiencing for the first time. And with that peace comes a more focused, energized attitude toward work, according to Krysten Shoulders, Human Resources Manager. Shoulders has led more than 65 families through Dave Ramsey's 13-week Financial Peace in the Workplace.

Comments from participants are heart-warming and overwhelmingly positive, Shoulders said. Best of all, two families who took the class are now debt-free. And they intend to stay that way.

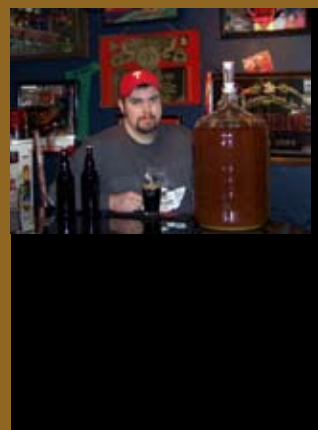
## Spotlight: What's brewing at the McIntyres'?

A familiar aroma wafts from Bob McIntyre's basement these days. The Cell C team member has taken up home brewing as a hobby, creating an assortment of ales, stouts and porters.

McIntyre has always enjoyed microbrews. With some encouragement from his family, he started experimenting with home brewing on his kitchen stovetop in 2008. Today, he brings gallons of fermented grains to full boil in his basement where he has set up a mini-brewing center.

"You can definitely smell beer in our house," he said, which is okay with his wife, as well as friends.

Occasionally, McIntyre has shared samples of his brews with co-workers at Daman and has received good reviews, so far, he says. That is enough incentive for McIntyre to consider entering some club competitions this year with MegaBrew, a local home brewing organization. He also has his sights set on judging – he has a taste for it.



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Hydraulic Valve Manifold News is published regularly by Daman Products Company, Inc.

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## DAMAN WINWORK NEWS

## We hear you.

**W**E ALWAYS APPRECIATE HEARING FROM OUR customers. Always. Even when the message carries its fair share of criticism.

Customers have shared all kinds of feedback with us about our recent launch of a flange product line. Pricing – highs and lows – has topped the list of

comments and helped us better gauge where our flange products fit in the marketplace. Our introduction of the flange catalog online also prompted valuable responses. Within the first three months of our launch, we saw a significant increase in the number of visitors to our Web site.

Some customers also have asked us to broaden the flange line. We quickly added ductile iron flange adapters to the product mix, which has caused yet more valuable feedback. And we have realized that we need to expand our story about our custom flange capabilities, thanks to customer comments.

We would like to hear more. Let us know what you like – or don't like – about our flanges, manifolds or other products. Your comments, feedback, and yes, even criticism, help us continuously improve our products, responsiveness and communications.

