

BENTON FOUNDRY STORY

In this White Paper

Our thanks to Tim Brown
Vice-President, Benton
Foundry

TODAY'S MODERN FOUNDRY USES SUPERABRASIVES? CAN YOU AFFORD NOT TO?

by Engis Corporation

Our product development teamed up with Benton and Waupaca Foundries to produce a line of diamond-plated wheels for their grinding and cleaning operations.

Here's Tim Brown:

Hi, my name's Tim Brown. I'm vice president of Benton Foundry in Benton, Pennsylvania. Benton Foundry has been around since the 1800s. I've been here since 1975 when Fritz Hall took over. We've expanded from 18 tons a day, 22 customers, and about 80 employees to, we now pour about 160 tons a day, with 235 employees, and we have over 200 customers and 5,000 part numbers.

We have started back in the seventies with five-year plans to modernize the facility with the goal of a 300-ton a day facility for every department in the place. We're adding a complete new core room, which will take it from 5,000 tons of core throughput per year to 10,000 tons of core throughput.

We did things starting with the robots because we saw the most benefit from them. So what we did is started with the wheels and then went to the cutoff wheels and then went to the burst. Our total on amount of robotic grinding is now a hundred percent diamonds and all from Engis.

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One of the things that have made us successful is the ability to use the different abrasives on the same casting for the tool changeover. Many foundries will only use one abrasive in their process where we find it much more flexible and much easier to program and get a hundred percent of the casting ground inside the robot side of itself. We have changed over from a previous supplier to them several years ago and are at present using seven different abrasives from Engis in our process.

The larger the casting the more efficiency you see as far as pounds throughput per hour. And the big thing is the cost of abrasive when looked at a totally holistic manner that we've seen amid 6-figure savings on grinding, uh, material cost from when we were, uh, with the previous supplier and the other style abrasive versus now where we've gone with the diamond abrasives. It's literally cut the cost in half of materials and supplies. Plus you're getting more throughput per labor dollar as well.

We've decided a while back that we took a holistic approach to the foundry itself. We have no smokestack emissions. We have no discharge water. We've done some energy efficiency programs that the State of Pennsylvania has recognized us for. And when it came to dust collection, when you put in these robotic grinders, they require so many CFM of collection. You don't have an operator exposed to any kind of sparks or sand or whatever.

Now we've transitioned to starting a three-inch on our bench grinding and stationary grinding. We've also gone to the seven-inch wheel that we're trial testing at present. And hopefully, we'll go to the stationary wheel down the road after we prove the other two so that at that point our total process would be diamond wheels."

