

# Dotson Dispatch



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**This is the group that makes the flow of orders through Dotson Iron Castings seem effortless to the customers. They are shown here at a recent continual improvement session where they came up with an additional 38 ways to make the process smoother.**

# Rethinking Manufacturing

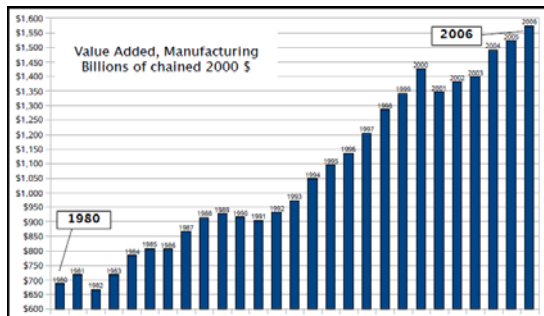
Since I started in manufacturing in the 1970s, 25% of the manufacturing jobs in the United States have left the country. We have fewer jobs in the industry than we had in 1950 and the population of the US has nearly doubled. Manufacturing as a percent of GNP is on a downhill slide.



Just a few years ago the politicians and the academics were questioning “do we even need a manufacturing sector.” Well,

after the financial sector crumbled, attention is once again being focused on creating real value.

The industry jobs and GDP % only tell part of the story. Looking at just the past ten years, productivity per worker has increased 48% and the total inflation adjusted output value has doubled in the past 20 years.



Unfortunately, because of global pressure and health care, this improvement has not dropped into the pockets of employees or the balance sheet of the companies.

Taking a closer look at the iron foundry industry, these trends have created many more losers than winners. In 1970 there were 2,000 iron foundries. Today the number is less than 400 and rapidly dropping during this recession. The reason is pretty clear. If foundries have not been investing in the recapitalization of their plants and engaging their workforce (improving productivity), it is impossible to survive the global pressure for lower prices and the increasing health care costs.

The foundry equipment suppliers (furnaces, molding machines, sand system, etc.) say that fewer than 10% of the 400 iron foundries have made any significant investments in their facilities in the past five years. And, there are only a handful of foundries that have had consistent recapitalization efforts year after year. (Dotson foundry has invested 7% of our sales in capital equipment in each of the past seven years.)

The rethinking of manufacturing is not just spending capital dollars. The real power of continual improvement comes from an engaged workforce. How to make that happen is a difficult cultural change within the organization. It is letting go of the “command & control” model and seriously moving decision making to the front lines. This movement is not just for the small items such as what color to paint; but, for the major pieces of capital equipment.

A very successful effort at Dotson has been our \$10,000 program. There is an employee group put together every time the company spends more than \$10,000 on a project. This team researches the equipment, visits other sites to see the equipment operating, sets the

expectations (performance and return on investment), oversees the installation and startup, and finally closes out the project. Since 1995, we have had 113 successful projects ranging from \$11,000 to \$2,500,000.

At Dotson, the Toyota Way model has been used to accelerate our continual improvement efforts. Our Gemba and Kaizen teams have taken a big bite out of the eight waste areas that exist in organizations: 1) overproduction, 2) waiting, 3) unnecessary transport, 4) over/incorrect processing, 5) excess inventory, 6) unnecessary movement, 7) defects, and 8) unused employee creativity. The results have been dramatic – production time has dropped from one week to one shift, year-to-date on time delivery is at 98.4% and PPM rejects are at 6,891.

Most iron foundries are stuck in a 1980s mentality and definitely have not been rethinking manufacturing. The foundry closing rate is accelerating. In evaluating the supply chain (and here is the blatant sales pitch), make sure that the supplier will be around in the future and don't put tomorrow's problems in today's solutions.

It is an exciting time for manufacturing. A time filled with challenges but also with tremendous opportunity. Through hard work, great people, good suppliers and customers, and a bit of luck, Dotson Iron Castings is positioned well to survive and grow in these turbulent times.

  
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