

# Dixie Iron Works achieves beyond the goal

By Thayer Bennett

More than an objective for improvement, in this case the goal was also a book by the same name: *The Goal*, by Eliyahu M. Goldratt. Dixie Iron Works harnessed the principles (ToC) that the book described, added the energy and insight of a skilled manufacturing consultant, and took bold steps that would intimidate most corporations; reinventing itself with remarkable results.

The Alice, Texas maker of high-pressure flow control equipment for the oil industry increased profitability by an almost unbelievable 2500%.

Dixie Iron Works has grown from \$6 to \$20 million in sales in the past nine years. By following the practical thinking outlined in *The Goal*, Dixie has been able to make powerful, constructive changes to its operations, marketing, sales, and organizational strategies.

Although Dixie Iron Works has been in business since 1933 and had a successful history of serving the drillers and the producers in the south Texas oil patch, in the early 90s, the equipment maker was struggling to survive. Changes in the industry had moved the market out of the company's geographical area and area of expertise. Profitability was a real problem. Joe Merritt, Dixie president at the time, realized that the Theory of Constraints (ToC) was the answer he needed. With his VP-Manufacturing, Gerard Danos, he conducted some very successful experiments based on the book. Satisfied with the results, he then hired consultant Mark Woepfel to orchestrate a full ToC implementation. Woepfel had been recommended to Dixie by *The Goal*'s author.

Dixie learned to evaluate the impact of constraints in order to increase throughput rather than rely on cost cutting measures to increase profits. The company then rebalanced production flow to meet customer demand rather than capacity. Wrong assumptions, such as placing primary emphasis on individual worker efficiency, were replaced and workers were guided to only produce what could be sold. Resources were "utilized" in a way that moved the system towards the goal and were no longer merely



"activated" to run regardless of whether or not there was an order to be filled.

The first part of the implementation worked much like the book in terms of tracking down and breaking constraints on the shop floor — with impressive bottom line results. Early in the implementation, a modest \$8,000 in tool modifications put an inactive machine back

in service and increased plant capacity by 25%. Consequently, Dixie was able to cancel an order for a new machine to perform the same functions and saved nearly \$150,000.

Internal bottlenecks were broken repeatedly as Dixie developed the ability to move any constraint to where they wanted it to be. Breaking internal constraints wasn't enough; it was soon discovered that the constraint was outside the company — it was the market. In order to continue to grow profits, sales had to be improved and newfound capacity filled.

Dixie created an internal pseudo-constraint called the "control point." Then, the company looked at products that consumed time at the control point in order to exploit not only time value, but throughput value. The result of the analysis was the realization that the most profitable products were those in Dixie's own branded line of globally marketed products, while "traditional" products contributed far less to the bottom line than originally thought. In fact, Dixie's biggest single customer — representing approximately 20% of annual revenue — was purchasing the company's least profitable products. Not only was the throughput small; filling orders for this customer consumed administrative time and resources that could be allocated to Dixie's own product line.



It was painfully obvious that focus needed to shift to Dixie's own products and away from products made for their traditional customer base. Clearly, some of Dixie's customers, including the largest, had to go. But how do you make a success of firing such a large chunk of your customer base? Dixie not only had the potential growth of its own revenue to think about, but relationships that dated back as long as 20 years. These long time Dixie customers needed alternative

suppliers to provide the same products at the same high level of quality. Gerard Danos not only helped find them, he either sold or gave those suppliers the specialized equipment Dixie



had developed to do the work. Danos, who today owns Dixie Iron Works, admits the transition was not easy, but adds that he would "...do it again in a heartbeat because

it was so fruitful for Dixie in the end." He also admits that it took "major guts."

But, getting rid of low throughput business was not enough. Dixie still had to generate additional sales. A policy constraint involving distributors was identified and removed. Rather than continuing with them on a consignment basis, distributors were offered price incentives for buying inventory. The net result for the distributors was lowered prices (and increased profits) and consequently, they now contribute a full quarter of Dixie's sales revenues.

Gerard Danos attributes the continuing success of Dixie Iron Works to the ability to identify where a constraint is likely to emerge, thereby gaining enough lead-time to invest in equipment or jump-start the market initiatives necessary to maintain ongoing improvement. Dixie has moved "beyond *The Goal*" by determining, on an ongoing basis, where "common practice" flies in the face of "common sense." Management, persistently marshaling the courage to opt for common sense, has continued to improve the bottom line.

The lessons of the Theory of Constraints continue to guide Dixie Iron Works strategy today and Mark Woepfel, as President of Pinnacle Manufacturing Consulting, continues to advise the not-so-small-anymore Dixie on an as-needed basis.

For more information on the Dixie Iron Works product line of quality MSI valves, fittings, adapters, flow lines, chokes and manifolds, write them at 300 West Main Street, Alice, Texas 78332, call their sales department at 361-664-6597 or visit them at <http://www.diwmsi.com>

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