

**Charlie Cantrell, Darby Equipment Company, USA,** explains how a pipeline manufacturer and supplier benefits from nurturing a culture based on continuous improvement.



# HOW THEY DO IT

**I**n October 2014, a 22 - 36 in. hydraulic pipe bending machine was completed by Darby Equipment after only 39 manufacturing days. This turnaround time for producing the 48 000 lb bending machine represented an improvement of 137 days from just two years ago. One would think such an accomplishment might give cause for a brief celebration, a pat on the collective backs of the work team, or at least some high fives among welders or machinists. That might be true anywhere but at Darby Equipment. Instead, what happened next was a thorough examination to determine the next target for meeting Darby's goal of manufacturing any equipment in three weeks or less – from engineering to purchasing to weld to final assembly – while ensuring the highest level of quality that Darby's customers have come to expect.

**Figure 1. The service-ready condition of every mandrel and line up clamp onsite at Darby is tracked daily. The inventory board provides up to the moment information, directing the shipping team to all products ready for delivery to customers.**



### The workforce culture

Ryan Darby, Vice President of Operations calls it, “a methodology of continuous improvement.” It is engrained in the company’s culture and referred to in their mission statement. “Everyone here is encouraged and trained to be more than a hired hand. Our employees, regardless of their role, see themselves as problem solvers,” according to



Figure 2. The staple of the Darby improvement method is the daily coaching session.



Figure 3. Placing products in the field that are unmatched for reliability and performance is a Darby tradition.



Figure 4. The goal of Darby’s methodology is to place products in the field that contractors know they can depend on regardless of the working condition.

Darby. In place are systematic procedures for overcoming obstacles on the path toward reaching goals whether it is assembly, machining, welding, shipping, engineering, accounting, management or customer service. This includes setting targets or desired conditions resulting in progress toward the goals. The methodology is one piece of a multi-pronged strategy to achieve 100% customer and employee satisfaction.

At Darby, assumptions have no place. Inherent in the methodology is quantitative data driving all decisions to change a procedure or a policy. The use of data tracking in every area of operations enables Darby staff to self-govern their performance and identify weak links in the chain of tasks involved in any job, project or service. Gathered information identifies where small steps are needed for improvement and then verifies success.

Six years ago, Jake Strawn joined Darby as a service technician and has become a true believer in the operational methodology that continually helps him to do his job better. “If a problem arises in the field, something we’ve somehow not foreseen, we have a system in place that is data driven to help us find exact answers as to why it happened and how to do the correct thing or things to make it not happen again,” says Strawn. “As a service tech I’m confident by using our methodology we can analyse step by step to find the exact cause of a problem, fix it once and for all and not get that phone call again.”

Charlie McGuire has spent the last two of his 27 years as a welder with Darby. When he first arrived he was sceptical of the Darby methodology and the level of engagement he was allowed to have, having come from companies interested only in him “keeping his head down and just welding.” He realised when he came to Darby it was different. “Here they listen to what I have to say when it comes to doing a job better. Management understands I see little things everyday that can be done better and

faster, things they can’t possibly see and so they not only accept, but depend on my input.”

### Channels of communication

This is the environment of acceptance Darby cultivates with its methodology wherein staff is encouraged to assess their work on a daily basis to determine how to improve both performance and output. Channels of communication are





Figure 5. Darby group products.

always open between staff and management. The result is a consistent step-by-step quest to improve.

“The feeling of accomplishment I get from seeing something I’ve brought to the attention of my team, to see it accepted as the better way encourages me to continue with this process of improving the work. I know I’m valued not just as a welder or an employee, but as part of a team focused on the same goals of improving. It lets me know I have more to offer the company than just my welding skills,” says McGuire.

McGuire’s sentiment permeates the work culture of Darby. Staff and shop workers are free to make suggestions involving other areas when they see something that can help achieve the targeted goals in their area. This attitude breaks down the perceived barriers that invariably arise in a structured workplace and creates a cooperative environment that provides benefits to all.

Large graphs showing a breakdown of activities are on display in areas throughout the Darby facility. Data is gathered daily by a designated person and posted. The data shows projected targets for time spent to perform specific tasks involved in a process along with the actual time tracked in implementing the task. The data is not limited to task times. Darby also utilizes internal and external quality metrics and always monitors costs as a component of customer satisfaction. The displayed metrics provide team members with real time data for performance evaluations, and gives everyone involved information regarding areas where corrections or improvements can be made. The graphs also serve as the track record for a specific project, breaking down the work into incremental units that serve as guidelines going forward. Rarely does the actual time to perform a task equal the targeted time. This is by design according to Darby.

“We’re more interested in making progress toward our goals. That is the real focus. We may not meet our targets right away because we set them very high. But with every small step we get closer and someday we expect we will meet those high goals.”

### Input is essential

Nowhere has the Darby methodology of continuous improvement been more embraced than in engineering according to Jeff Rollow, Director of Engineering. “The very essence of quality engineering is continuous improvement, but without feedback from those tasked with making the product and those using it, we are limited to how much we can improve a product.” For this reason, Darby engineers maintain both an open door and an open ear policy that includes a

systematic capturing of input so nothing falls through the cracks. “Everyone here knows when they bring us an issue or an idea, they will be heard. We listen, document and analyse everyone’s input, sometimes even on the fly. This often produces a small but significant change at the design stage. The result is another small step toward a better end product.”

According to Bob Darby, President of Darby Equipment, the deployment of continuous improvement initiatives by son Ryan Darby into the family owned and managed company has significantly furthered a long-standing commitment to provide the finest manufactured products and customer service in the industry. “The company founder, Lee Darby instilled the principle of quality focused service and products into the business from the start and we’ve continued to embrace that principle every day. To that end we have a culture in place now that empowers everyone who works at Darby to maintain that legacy.”

### Bringing benefits to the customer

Data shows how Darby customers benefit from the company’s approach. Significantly reduced turnaround times, engineering improvements and innovations, faster response times to service calls and fewer onsite repairs are just a few of the benefits customers realise.

There is no reason to think the Darby approach will change, because everyone at Darby Equipment eats and breathes the company’s methodology. As a result, there is a synergistic cohesion that permeates the company’s culture. It cultivates an unwavering attitude that everyone, everyday is pulling on the same rope toward the goals of developing people, building partnerships, insuring quality and continuously improving. It is how Darby keeps its promise to its customers to expect a higher standard. Simply said, it is how they do it. 