

# **Ajax** *Innovator*

News, Events and Special Features From EJ Ajax

Fall 2016



## Manager's Message From Erick Ajax

### Making Stamping Fun Again

If you're a regular reader, you know I like to write about the areas of our business that are high-tech and more advanced. That's where the fun is.

But sometimes it's the fundamentals that win the game. Block and tackle stuff. In metal forming, that's stamping.

Stamping isn't new or exciting, but it's important. It's one of our core competencies here at EJ Ajax. We do a ton of stamping work for our customers. Up to 220 tons at a time, actually. That side of our business will not fade anytime soon, if at all.

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## The Lean Work Cell: It's About Timing.

There's actually quite a similarity between lean manufacturing and stand up comedy. For instance:

Comic musician Victor Borge was a master of comedic timing.

His perfect cadence and seamless flow from gag to gag allowed his audiences to keep perfect pace with his humor.

("Why are there three pedals on this piano?" Pause. "Who do they think I am?")

Getting the right material to the right work cell at the right time and in the right quantity used to be a very manual, often quite inefficient process.

No more. With our new state of the art work cell at EJ Ajax, we use servo presses and optimized work flow to produce more product in less time while reducing

material consumption and labor costs.

So, are we using lean manufacturing to eliminate positions at our plant? No.



Lean work cells are designed for minimal wasted motion, material efficiency, and maximization of human resources.

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## Events

### Connect with Erick Ajax, Don Wellman, and other EJ Ajax pros at 2017 AHR Expo Las Vegas.

AHR Expo is the featured annual event for air conditioning, heating & ventilation and refrigeration buyers and companies. EJ Ajax will be there!

Visit EJ Ajax in Booth # N11817 on January 30, 31 or February 1, 2017.



The EJ Ajax exhibit will be twice the size of last year's exhibit and will include more part examples and more demonstrations. We look forward to meeting everyone again in 2017 in January in Las Vegas!

Also, plans are underway for EJ Ajax to exhibit at several other industry trade shows and industry events in 2017.



Look for us at Design-2-Part events in 2017. And, please check [metalformingblog.com](http://metalformingblog.com) for more EJ Ajax event dates and locations.

## Feature Story - The Lean Work Cell

### It's About Timing (cont.)

EJ Ajax is using these methods to get more productivity, quality, and efficiency from the same number of people and hours. Seriously, if you knew the hoops EJ Ajax jumps through to attract top metal forming applicants, you'd quickly realize that the goal of lean manufacturing at EJ Ajax is NOT workforce reduction.

"Our workforce development investments are second to none, and yet we find ourselves doing more each year," said EJ Ajax Co-owner Erick Ajax. "Finding people with the right combination of aptitude and attitude is tough, and will be for the foreseeable future. If you want to build the business, there's no alternative to investing in both smart machinery and smart people."

At first glance, lean work cells may appear to be similar to traditional work cells, but they are inherently different. For instance, lean work cells must be designed for minimal wasted motion to avoid any unnecessary time and effort required to produce a metal formed part.

Excessive twists or turns, uncomfortable reaches or pickups, and unnecessary walking all contribute to wasted motion and may put error inducing stress upon the operator. Lean work cells help solve this problem.

### But, Traditional Methods Worked So Well...

You bet they did, and they still do. Busting the manufacturing process into steps has been an American manufacturing staple since Ransom Eli Olds (not Henry Ford) pioneered the assembly line around 1901 to produce his hot new Olds Curved Dash.

The stepped process enables each phase of production to minimize cost and maximize efficiency. Machines are placed apart from each other to maximize the throughput of each machine. This approach works slick, and is still used today.

But we're Americans. We never stop inventing. So we looked for ways to squeeze more benefit out of the process.

The traditional process is not without faults. Excess materials or parts can accumulate between machines, causing production bottlenecks. Plus, materials and parts must be transported between machines to keep things rolling along.

And here's the biggie: by increasing the number of machines involved in the production process **and** increasing the operating complexity of each machine, each employee must be very proficient in order to move from machine to machine without skipping a beat. You can see how a manufacturer can run short on skilled operators in no time. Helloooo, workforce development!

"We saw this coming," said Erick Ajax. That's why we've been pushing hard for years to develop our colleagues' capabilities and to build productive pipelines for new hires. The more you understand about lean work cells, the more you appreciate a well-trained, motivated workforce."

Plant automation benefits include improved product quality, lower costs, and more new capabilities.



## The Work Cell Setup

EJ Ajax is rolling out their lean work cell investment plans for their stamping operations in phases:

### 1. Prep The Space

First, the company prepared several thousand additional square feet of new production bay space to make room for the new machinery. This includes pouring special concrete footings designed to support the enormous weight and continual operating vibration of the machinery. Also involved is new, high-efficiency lighting installations that will help reduce operator eye stress and reduce power consumption.

### 2. Install The Machinery

EJ Ajax trucked in three new 220-ton AIDA presses, one with servo technology. Servo-enabled presses can be programmed for very high velocity operation without compromising results.



A single servo press can perform work that formerly required multiple machines, eliminating time-consuming pauses in the production cycle.

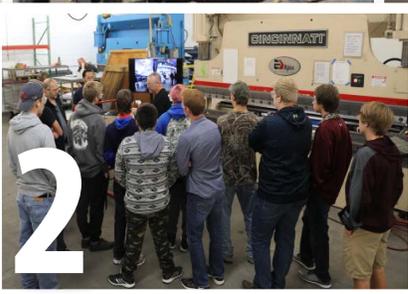
### 3. Design and Install Transfer System

In the months ahead, EJ Ajax will install a custom-designed transfer system that will convey raw materials or work in progress from one machine to the other within the same lean work cell.

These and other lean work cell additions and improvements will help keep EJ Ajax in a leadership position in stamping.

## The Future Of Manufacturing

EJ Ajax hosted students from area high schools during MFG Day, October 7, 2016. Here's a few snapshots from the day's events.



1. Students from Fridley High, Anoka High, and Paladin Career and Tech High School, all in Minneapolis, visit EJ Ajax on the Heavymetal2016.com bus tour.
2. Students get a live GoPro view of a 5-axis press brake.
3. EJ Ajax Sales Engineer Dan McGee demonstrates SOLIDWORKS 3D CAD and Radan software.
4. Fridley, MN city managers attend the EJ Ajax tour.
5. Students pose in front of US Bank Stadium end zone rear projection.
6. Students get a live GoPro view of a laser cutting machine.
7. Scanning a student's hand with the FARO Arm measurement device.

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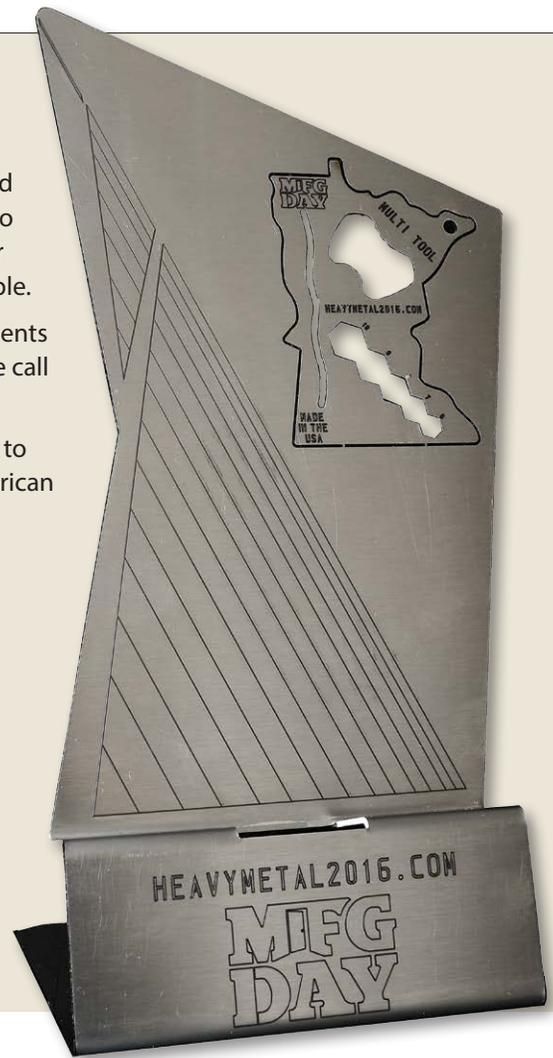
## The Future (cont.)

High school students represent a key communications target for EJ Ajax. Yet while our investments in MFG Day and other events often do not yield immediate results in the form of ready-to-work applicants, we continue to throw a shoulder to these events. But we must compete with many other entertainment and information channels for the attention of young people.

One of the best ways that we attract the attention of career-minded students is through our internship, scholarship, and apprenticeship programs. We call these our career “ships” and encourage young people to “get aboard.”

EJ Ajax has created a video that helps to explain how the programs work to attract, train, and recruit young people who represent the future of American manufacturing.

View and share this video at [vimeo.com/ejax/ships](http://vimeo.com/ejax/ships).



## Manager's Message (cont.)

This summer, we chose to invest in more stamping capacity and presses. And we did it here in the good old USA rather than take it outside our borders.



We're running against the wind in this respect. Many other manufacturers are moving their stamping operations outside of the U.S. in order to reduce labor costs and avoid capital expenses. I get that. I've

considered doing the same. And I rejected the idea.

It's not easy to invest in stamping. It's a commodity process, therefore margins aren't that great. Stamping's not a capability you can use to attract the best new customers.

And the investment is not small. Our new bay required 60 tons of reinforced concrete poured 28 inches deep in order to keep the machinery rock solid. Why swim in a deep pond with so many other frogs?

Workflow! We want to get the right material to the right workstation in the right quantity at the right time. We believe workflow is the key to unlock manufacturing growth

now and in the future. But it's darn difficult.

Flexibility is a big part of the solution. Capacity is what gives you flexibility. Nothing cramps our style like bottlenecks. We want material to enter a work bay, get processed in that bay, and ship from that bay. Lean as you please.

This is nothing new, of course. Groundbreaking books have been written about topics related to kanban and just-in-time manufacturing. Excellent manufacturing companies have operated for generations with the goal of reducing queue limitations. These days it's simply a matter of doing it better than the other guy.

Two years ago, we had two presses that could run 220-ton operations. Now we have four, including one with servo technology. We can run several different product lines, faster and more efficiently than before. That capacity opens up new workflow opportunities that will add value to everything we do for our customers.

Check out our blog at [metalformingblog.com](http://metalformingblog.com) for the latest on these and other developments here at EJ Ajax. And don't forget to visit us at 2017 AHR Expo Jan. 30 through Feb. 1 in Las Vegas. We'll be in the North Hall, booth N11817.

Hope to see you there!