

And while I am very excited about the future of manufacturing in general, and our company in particular, I do have a persistent concern: finding, training, and retaining the top colleagues we need to continue growing and investing in new methods and technologies.

Getting Ready For The Go Go Teens

The years 2015 through 2020 look extremely promising for manufacturers. Thanks mostly to America's increased domestic output of oil and natural gas, energy costs remain at manageable levels. This has enhanced the competitiveness of energy-intensive manufacturing companies like ours. Meanwhile, labor costs in China are increasing quickly, causing a "re-shoring" trend that is bound to gain steam as the benefits of off-shore manufacturing diminish.

Moreover, I continue to be amazed by America's business creativity. Creative business thinking is engrained in American culture. Where else but the U.S. would businesses such as Apple, Google, Amazon, and Facebook flourish? Great business ideas flow from basements, garages, and dorm rooms across America. Financing is generally affordable and available. Who knows what the next great American business innovation will be?

Here at EJ Ajax, we place a very high valuation on knowledge — it truly is a form of business capital. Adding the right amount of knowledge capital to material capital is a key business formula for us.

Currently in the U.S., we have the material side. But we're short on the people side. That's why EJ Ajax is spending more time, attention, and financial resources on human resources than ever. I don't see that changing anytime soon.

Being a third-generation business owner has gifted me with a unique perspective on business. I am better prepared to foresee the road ahead than I was in the past. And what I see is this; American manufacturers are poised to have a very productive decade. If we can get the right people in places, get them trained and on a solid career path, there's no stopping us.



Ryan Grigoleit and Sergey Levkovich receive congratulations from EJ Ajax co-owner Erick Ajax on October 3, 2014.

Congrats To Our Scholarship Winners!

Ryan Grigoleit of Dunwoody College of Technology and Sergey Levkovich of Anoka Technical College will receive scholarships and paid internships through 2016 at EJ Ajax.

In addition, Ryan and Sergey each received personal letters of congratulations from U.S. Senator Al Franken of Minnesota. Great work Ryan and Sergey!

Final Steps Of ISO Certification

This fall, EJ Ajax will complete the final steps in our ISO certification process. Our final auditing will be completed in November, with the certification celebration happening in December.

ISO standards will ensure that business operations at EJ Ajax are as efficient as possible, and will help the company increase productivity as well as providing access to new markets and growth opportunities.

www.EJAjax.com Phone: 763-571-1660 Email: info@EJAjax.com Fall 2014

A Metalforming Revolution at EJ Ajax

How Servo Presses Will Launch EJ Ajax into the Next Generation of Metalforming Technology:

EJ Ajax & Sons of Fridley, Minnesota, has finalized the purchase of two new AIDA Gap Frame Servo Presses scheduled for delivery during the 4th quarter of 2014. These new 220-ton presses will deliver many important

new benefits to EJ Ajax customers, including:

More speed – servo presses can be programmed for very high velocity operation without compromising results. Plus, a single servo press can perform work that formerly required multiple machines, eliminating time-consuming pauses in the production cycle while work



Servo presses shape metal carefully and intelligently instead of using brute force.

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Knowledge Capital and the Post-Industrial Society

By Erick Ajax
Co-owner, EJ Ajax & Sons

American sociologist Daniel Bell first coined the term "post-industrial" in 1973 in his book *The Coming of Post-Industrial Society: A Venture in Social Forecasting*. Bell predicted that America would transition from the production of goods to the production of services, with few companies remaining to directly manufacture hard goods. He was partially correct.

Indeed, service sector growth, especially in the areas of finance and investment, has been significant in the decades following Bell's writing. (Sadly, however, the financial sector is also accountable for taking us on one heck of a roller-coaster ride following the mortgage crisis of 2008.)



Technical colleges and the military are sources for a skilled workforce that can operate modern manufacturing machinery

What Bell failed to account for was American manufacturers' commitment and investment in people; our "knowledge capital". Successful manufacturers have learned to identify and develop the key skills and tool sets that their workforce needs most. We've certainly made that effort at EJ Ajax.

And while Bell's service economy may seem to be today's

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EJ Ajax Hosts Manufacturing Day Event

EJ Ajax hosted an all-day event on October 3, 2014 in conjunction with MFG DAY 2014. MFG DAY is a national event organized by industry leaders to address common misperceptions about manufacturing by giving manufacturers an opportunity to open their doors and show, in a coordinated effort, what manufacturing is — and what it isn't.

EJ Ajax hosted groups from area high schools, technical colleges, and also encouraged the public to attend. Tour guides from among the company's metalforming professionals provided insight into how the metalforming process creates high-quality products from sheet metal.

By working together during and after MFG DAY, manufacturers like EJ Ajax can connect with future generations, take charge of the public image of manufacturing, and ensure the ongoing prosperity of the whole industry.

Supported by a group of industry sponsors and co-producers, MFG DAY is designed to amplify the voice of individual manufacturers and coordinate a collective chorus of manufacturers with common concerns and challenges. The rallying point for a growing mass movement, MFG DAY empowers manufacturers to come together to address their collective challenges so they can help their communities and future generations thrive.

EJ Ajax created a special website just for the event. The site is located at HeavyMetal2014.com.



Visitors view metalforming equipment during a plant tour on MFG DAY 2014 on October 3.

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economic driver, it's actually a precursor to manufacturing growth. Consumers who work at service companies want new homes, cars, appliances, furniture, and thousands of other manufactured goods just like everyone else. All that demand eventually flows to manufacturers.

Where did Bell imagine these manufactured goods would come from? China, Japan, and Mexico perhaps? Again, only partially true. Foreign manufacturing has grown considerably, sure. But American manufacturers enjoy several key advantages that other countries lack. Among them:

Fast Turnaround and Just-In-Time delivery — It can take three weeks or more to ship products from China to ports in the U.S. That's OK for toys and dolls, but not for many other manufactured goods. Our company can literally deliver metalformed products the next day if needed. Many of our customers would accept nothing less.

Training and Education — U.S. technical colleges, the military, universities, and other training facilities provide

us with a highly skilled workforce that can operate today's complex manufacturing machinery. My plant is loaded with just that type of machinery. Unskilled labor is not qualified to turn on the power switch, much less use these machines to produce pristine, error-free manufactured goods. Our commitment to training and education makes us better.

Clean & Safe — Today's American plants are cleaner, safer, quieter and more productive than ever. Worker injuries are down. America leads in this regard.

Based on the grinding experience following 2008, I've learned to value our company's people (we call them colleagues) as a tangible business asset rather than a payroll expense. We could no sooner operate without the knowledge and experience of our colleagues than we could without our buildings or machines. Our colleagues are the primary repository of our knowledge capital. Seriously, our colleagues are not line items on the asset side of our balance sheet, but they could be.

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is transferred from one process to the next. The result is more parts in less time.

Lower cost — minimized die wear and longer tool life offered by servo presses virtually eliminate the need for expensive re-tooling. This enables long, highly-efficient production runs with fewer steps and reduced scrap. Servo presses also help eliminate undesirable outcomes that increase costs, such as reverse tonnage, snap-through, part-edge rollover, and springback.

Higher quality — servo presses are ideal for forming advanced metals that have superior strength-to-weight ratios, such as high-strength, low-alloy (HSLA) steel. HSLA steel is sought-after by companies who want to produce the lighter, stronger products that consumers demand, but HSLA steel has been difficult to form using traditional flywheel-driven presses. Servo presses handle HSLA steel beautifully and are also very precise; accuracy can be measured down to the micron.

More choices — the infinitely programmable stroke profile of servo presses gives product designers and engineers a much wider variety of metalforming capabilities to choose from, helping them improve the design and performance of their finished products. Servo presses can also perform in-die functions such as staking and welding. The metalforming possibilities are almost endless.

"Servo presses are a revolution in metalforming," said EJ Ajax Co-owner Erick Ajax. "We're in our third generation in the metalforming business, and this is the most important innovation we've seen in decades. Simply an amazing new technology."

Mr. Ajax said his company has expanded production space to accommodate the two new servo presses. The company also allocated new space for production team meetings and training, he said.

What Makes Servo Presses Better?

Long story short: servo presses shape metal carefully and intelligently instead of using brute force.

With a traditional mechanical press, impact energy is delivered from a spinning flywheel down through connecting rods, which then drive a ram that produces maximum tonnage at some point just above bottom dead center. A mechanical clutch engages and releases

the drive. Following impact, the main drive motor has to work hard to get the flywheel back up to full speed before the tool impacts the material again.

This is a perfectly good machine setup for many applications and will remain a staple of the metalforming business for years to come. But the shortcoming of a traditional mechanical press is this: it can't slow down. If it does, the flywheel won't deliver enough torque to form the metal properly.

A servo press, however, can deliver maximum torque at any speed, so a shorter, more efficient stroke can be specified by the operator. Within that stroke, the servo press can be programmed to descend quickly, and then move slowly to "work" the metal very accurately with multiple short strokes, and then return quickly to its normal height while clearing the formed work. Moreover, new capabilities at the bottom of the stroke, such as programmable dwell, allow the workpiece to settle in perfectly before the final metalforming steps occur. This adds greatly to the lifespan of the die.

Varying the dwell time also enables advanced in-die functions like staking, heating, and welding. This high level of control also enables metalformers to use water-soluble lubrication instead of high-viscosity lubrication. This simple-sounding switch eliminates a time-consuming cleaning step downstream in the process. Just one more way that servo presses can increase speed and reduce costs.

For more information about how servo presses can benefit your business, please contact Don Wellman of EJ Ajax at 763-571-1660.

EJ Ajax Featured In USA Today News Video



EJ Ajax Metalformer Emily Cramble was featured in a USA Today news video that aired nationwide on September 27, 2014.

In the video, Emily explains her role when working with a Salvagnini laser cutter at EJ Ajax. You can view this USA Today news video on metalformingblog.com.