



ON THE ISSUES

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Photo Courtesy of Scot Forge

FORGING OUR FUTURE



The arsenal of democracy rests on North America's forging industry. Forges in 38 states, Canada and Mexico mold the metals and alloys for warships, planes, spacecraft, combat vehicles, missiles, rockets, bombs, ammunition, artillery pieces, and more.

CLEAN ENERGY'S FUTURE IN FORGING

They also forge heavy components for clean energy and power generation systems and supply vital components to a host of industries that are propelling the 21st century economy, from equipment to make semiconductors to electric vehicles components.

THE THREAT OF BARGAIN-HUNTERS

But unfair trade practices and customers who overlook North American producers in favor of lower prices have siphoned off billions of dollars' worth of work. That has left the nation and its armed forces at risk of losing the capacity to ramp up in a major crisis.

FORGING BUILDS A STRONG FUTURE

To better compete, companies are updating aging infrastructure, automating production processes, identifying new sources of raw materials, and nurturing the highly skilled work workforce that will be necessary to remain robust well into the future.





“Forging started 4,000 years ago. The reality is the longer something’s been around, the odds are higher it will still be around in the future.”

JOHN CAIN, CEO AND CHAIRMAN OF THE BOARD OF
SCOT FORGE COMPANY

The Forging Industry Association asked three industry leaders to outline how their companies support national defense, energy independence, and to share their perspectives on the challenges and possible solutions for an industry at a crossroads.



Chelsea Lantto

Chelsea Lantto is president of Trenton Forging Company in Michigan, which specializes in stainless steel, carbon and alloy forgings, and is the Forging Industry Association's Chairperson, and member of the Public Policy, Women in Forging, Safety, and Workforce Development committees.



Mike Morgus

Mike Morgus is president of Ellwood Quality Steels in Pennsylvania, a leading supplier of high-quality carbon, nickel and copper-based alloys and stainless-steel ingots, and a FIA board member.



John Cain

John Cain is CEO and chairman of the board of Scot Forge Company, a leading producer of forged products for a range of defense and power generation systems, with facilities in Illinois and Wisconsin.

Q & A

WITH THE HEADWINDS FACING THE FORGING INDUSTRY, WHAT'S AT STAKE FOR NATIONAL SECURITY?

JC: Things atrophy and then we become vulnerable, and then we've got to reinvest in a hurry—inefficiently and almost desperately—to get us back to where we now look like we're more of a deterrent. Because none of us want to fight, right?

CL: If the commercial forging industry is not strong, the capacity and the capability is not going to be there in a time that the military is really going to need us. What we're talking about is being commercially competitive enough to make sure that we are viable into the future so that we are available when the military needs us.

WHAT ARE SOME OF THE MISSION-CRITICAL PRODUCTS THE FORGING INDUSTRY SUPPLIES FOR NATIONAL DEFENSE AND ENERGY INDEPENDENCE?

CL: We forge components that go into the M-240 machine gun. We also produce various tie-down rings for military cargo transport. Two years ago, we started making components that are critical for a quick assembly medical evacuation ramp.

MM: We produce a number of military applications: tracks for tanks; parts for mechanical drives; missile tube assemblies; structural components for subs; and the nuclear plant in the submarines. We also support NASA and the Artemis moon project.

JC: We do a lot of work with clean energy—mineral extraction for electric vehicles, hydropower, solar, wind. We do a lot of projects with the Department of Energy's (DOE) national labs. We are a critical part of the ecosystem that it takes to do all these things, starting with exceptionally good raw materials.

We are helping a lot of the national goals we have with space exploration, energy security, decarbonization—a lot of the things that make modern civilization work.

MM: We're not just supporting our military and the Army and Navy but energy independence and all of the other national goals.

WHAT ELSE COULD NORTH AMERICAN FORGERS PRODUCE, BUT HAVE LOST TO OFFSHORE SUPPLIERS?

JC: Huge stainless-steel valves and valve gates for hydroelectric power systems. Just like Hoover Dam. There was a 'Buy America' call out in a contract. The prime contractor said they can't be bought in this country anymore. And we've made those things for 40 years. When somebody says something can't be made here, or the capacity or the capability doesn't exist, we clearly can show them that it does.

The DOE comes here, and they say, 'we had no idea this could still be done in the country.' We just want to put out the welcome mat, open the doors so they can come and see. There's a lot more here in this country domestically that we want them to understand so their decision quality can improve.



DO YOU THINK THE MESSAGE IS GETTING THROUGH?

CL: The Department of Defense (DOD) and DOE came to a forger and asked, 'do you have excess capacity to meet our needs?' The response was 'absolutely, without a doubt.' And their response was, 'are you sure? We don't really believe you.' It speaks exactly to what we're up against.

Challenges in the Global Economy

WHY HAS DEMAND FOR NORTH AMERICAN FORGING DECREASED?

CL: If you think about the situation that happened with the micro-chips—where the Original Equipment Manufacturers (OEM) sent all of that capacity and capability offshore because they were searching for the lowest price—it drove all of that capability elsewhere. All of a sudden, everybody was up in arms because we couldn't get the chips we needed, but we couldn't make them stateside.

The same thing is going to happen to the forging industry. If OEMs continue to push all of that capability and capacity offshore in search of the lowest price. And that's exactly what is happening and why forging companies are being closed and consolidated.

WHERE IS THE BIGGEST THREAT TO OUR FORGING INDUSTRY COMING FROM?

CL: We did a snapshot of one year and we calculated lost opportunities just to China. We calculated \$386 million dollars in lifetime revenue lost to China. It is a small snapshot of the actual reality. We stopped counting because we got so sick to our stomachs.

So that's little Trenton Forgings' lost opportunities. Can you imagine what the full picture of that would look like?

JC: It is not cheap labor. It's China's subsidization, manufacturing policy and their trade policies that they have been effectively convincing other countries to live with, because of the price.

“We don't need handouts. We just need to be able to compete fairly and continue doing what we've always done exceptionally well—which is to produce high quality forgings for a wide variety of industries.”

CHELSEA LANTTO, PRESIDENT OF TRENTON FORGING COMPANY

Bringing Forging Back

THE FORGING INDUSTRY ISN'T WAITING FOR OUTSIDE HELP. HOW ARE YOU FIGHTING BACK?

CL: The forging industry, as old as we are, and as rooted in history as we are, we're very good at adapting and embracing new technologies that are available to us. It's all still rooted in traditional blacksmithing; the metallurgy is the same.

We're just building upon and improving the processes and the equipment and the tooling that we're using to get to that final product to meet the customer's needs. We are planning to spend \$14 million in three phases to greatly expand our capacity and our ability to compete for the higher-volume of jobs.

DOES THE GOVERNMENT HAVE A ROLE TO PLAY?

MM: What we're saying is, 'help us level the playing field so we can compete, so we can show that we're competitive and we can win that business.' And if that happens, we'll be creative, we'll use ingenuity, we'll develop the middle-class workforce and we'll have strong manufacturing.

JC: The encouraging part is you hear our elected officials and the DOE and DOD more and more recognizing that trade policy is at the root of many of the problems they're trying to solve today.

MM: I think we can solve a lot of our own problems if we are given the opportunity to compete fairly on a global basis. So, when—and if—the government does need additional flex, it'll be there because we're winning on the commercial side. There's newer technologies and better solutions out there. The more the government can be receptive to that, the more that we can help them help themselves and be more competitive.

CL: We don't need handouts. We just need to be able to compete fairly and continue doing what we've always done exceptionally well.

WHAT WOULD BE THE BEST APPROACH?

JC: Kicking the lowest price addiction. It's real and it's as tough as any other addiction to break. The honorable mention of 'Buy America' is wonderful and it's a start, but there's really no way to enforce it.

CL: OEMs are the biggest part of the problem when only considering the lowest price. Of course, we don't want all of that to end up being passed to the consumer, right? So, you have to look at the full picture so that we're not just flipping the cost burden to the consumer.



It's strengthening the American sector so that we can really balance out what we're able to produce stateside. If we don't start to unravel that knot, we're never going to get out of it.

I would pull the trigger on the next two phases of my automated line investments tomorrow if the commercial demand was there. But I am still fighting tooth and nail and scratching to bring all of that offshore work back. And if that work came back, I could do probably two and a half brand new Trenton Forging-size facilities from the ground up.

Forging for the 21st Century

THERE'S A GLOBAL PUSH FOR CLEANER, MORE MODERN TECHNOLOGY IN EVERY SECTOR. HOW IS THE FORGING INDUSTRY ADAPTING?

MM: Electric Arc Furnaces (EAFs), by definition, are much cleaner from a CO₂ standpoint. Those tools also help us lower our emissions because our furnaces run hotter, they run faster. Therefore, they run cleaner. Electric units that we use to heat up our raw material that go into either the drop hammers or the press for the forging process are the most energy efficient and commercially efficient way to heat steel for the size range that we forge. We're able to heat up that material in a couple of seconds. So those of us who have been able to make that switch, we absolutely invested in that technology, not only for the commercial benefit, but also because it is the most efficient way to do that process.



JC: Those are things that were done as private investments for global competitiveness—and for being good community partners for the planet. If one of our companies lost to a foreign competitor, it wasn't to a company that innovated better. They lost it to a dirtier, slower, lower quality, less efficient company.

“We’re learning to change with the times to be more effective communicators so that these are the places people want to come to work and we’re also more effective keeping those people.”

MIKE MORGUS, PRESIDENT OF ELLWOOD QUALITY STEELS

Forging’s New Workforce

IS THE WORKFORCE KEEPING PACE WITH THE INDUSTRY’S NEEDS?

MM: We just haven’t done a good enough or effective enough job communicating to them who we are and what we are, what we can offer. I think that we’ve recognized as a group of companies that we need to do a better job communicating in our communities, reaching out to the high schools, reaching out to trade schools.

We have a lot more work to do, but I think we’re learning to change with the times to be more effective communicators so that these are the places people want to come to work and we’re also more effective keeping those people.

CL: There is a gap in the number of available people who not only want to work or are interested in working in manufacturing, but also have the skills that need to go with that. We’re competing against air-conditioned facilities, with retail. Why would you want to work in a hot, loud, and dirty environment?

We’ve always had an electrician gap here. Same with machinists, same with maintenance mechanics that have actual hydraulics experience that

they can hit the ground running. And now that we're all moving into automation, the education sector has not caught up yet when it comes to controls engineers, the robotic and automation technicians.

I think we still have our work cut out for us when it comes to the public relations side of manufacturing—and showcasing that it is a viable, high paying, fulfilling career path.

IS AUTOMATION HELPING?

CL: It gives us a lot of flexibility. It also does double duty in alleviating any manpower issues that we might be facing. So we have not replaced anybody by implementing a robotic line; we're just expanding our capabilities. We'll be able to run a second shift because even though we have some noise ordinance restrictions in our area, it's a lot quieter than our drop hammers.

“We are helping a lot of the national goals we have with space exploration, energy security, decarbonization; a lot of the things that make modern civilization work.”

JOHN CAIN, CEO AND CHAIRMAN OF THE BOARD OF
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Photo Courtesy of Scot Forge