



Jordan Tower

By Sam Kusic

# ‘It’s Not Just Busy Work’

Steel Interns Reflect on a Summer in the Mills

*For college students, the peril of a summer internship lies in the possibility of being assigned to menial tasks in a back office. But the promise of an AIST summer internship is meaningful work — and lots of it.*

*To which AIST’s 2018 Steel Intern Scholars will attest.*







Ben Eller



Frederick Groth

“There was much less coffee-getting than I thought,” jokes Kevin Slezak, a senior materials science and engineering student from the University of Wisconsin.



Brent Hoggatt

Slezak spent the summer with investment castings manufacturer Signicast, where, in addition to helping staff engineers work on new alloys and inspect steel cleanliness, he investigated the utility of new analysis software for the company’s spectrometer and reporting on its usefulness and accuracy.

Each year, AIST pairs as many as 30 budding engineers and materials scientists with steel companies that could use a hand in their shops. For the interns, it’s an opportunity to apply classroom learning to real-world problems — and earn a paycheck while they’re at it. Not only do interns receive an hourly wage from their employers, AIST provides them with a US\$6,000 scholarship upon successful completion of their programs.

This year, AIST placed 19 intern scholars with steel companies throughout the U.S.

Among them were Slezak and Oakland University mechanical engineering senior Jordan Tower, who landed an internship with Steel Dynamics Inc.’s Roanoke, Va., bar mill. Tower said the internship tested his know-how, especially as it related to equipment fabrication.

“This was challenging because I have not had a lot of experience in fabrication until this summer. It was difficult because I wanted to design the products to be easily fabricated but also to be lightweight and structurally stable,” he said, adding that he took a lot away from the experience.





John Isom

“I was able to learn about the equipment and machinery used to produce steel products and further develop my overall knowledge about the steelmaking process.”

Ben Eller, a materials science and engineering student from Virginia Tech, said he, too, will be taking much with him as he enters his senior year.

Eller was assigned to the rolling department at Nucor Corp.’s plate mill in Hertford County, N.C. There he spent time helping to investigate Charpy failures, among other tasks.

“I pulled data from previous years and looked at what was different about the bars that failed and asked how did we roll them differently? I found that the failures might be temperature-related, so I suggested a new rolling practice so that we can improve our properties,” he explained.



Jacob Meyer

“All of my projects have been really meaningful. It’s not just busy work,” he said.

“They gave me a lot of responsibility. It was basically ‘Here are your projects — go and figure out how you’re going to do this.’ I





Molly Wardlow



Austin Olivier

learned a lot from it. It was rewarding to see your own work come to fruition to help the mill."

But the mills helped them just as much, giving the interns not only a chance to apply their

classroom learning to real-world problems, but an opportunity to assess firsthand the industry's potential as a personal career path. And now that they've taken a few steps down that path, several said they are interested in continuing to follow it.

University of Utah metallurgical engineering junior Olivia Pratt said her interest has been piqued because of all of the technical know-how that goes into each heat.

"Going into this internship, I assumed that there was a certain 'recipe' for steel that produced reliable results every time. I was surprised at the variations between different heats of steel. The process was just so much more complicated than I realized, and controlling all the factors involved was much more difficult than I would have thought. I enjoyed watching the team work together to solve these problems, with metallurgists testing chemistry ranges, and crew members using years of experience to diagnose problems as they arose," she said.





Gina McKinney

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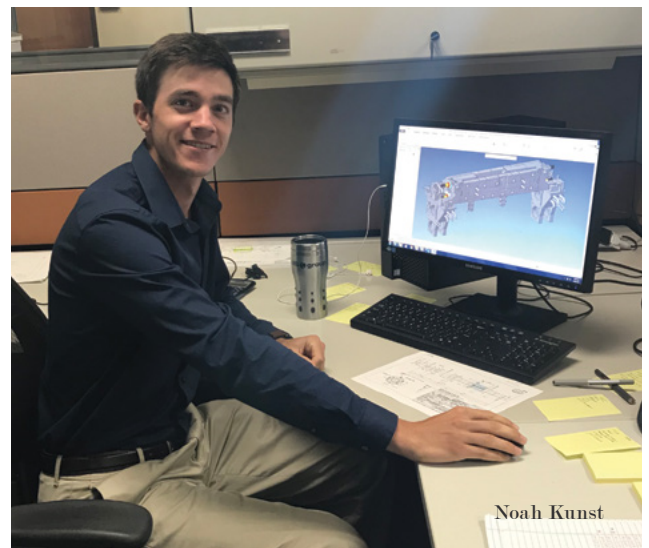
Eller echoed those comments.

“Steel, from a metallurgical standpoint, is pretty complicated, and there’s a lot of room to do some pretty cool things,” he said. “I’ve enjoyed (my time here). The industry seems strong to me. I don’t think it’s going anywhere anytime soon. So it seems like a good prospect.”

Slezak said the more he’s explored steel, the more he’s come to find that there is much more to explore.



Zach Shepard



Noah Kunst

“Steel on the surface looks very limited — you know, it’s just steel. But the more you go into it, there are all these different alloys and all these different processes, and all of the companies are doing things a little bit differently. Steel isn’t a static industry. There’s



Jon Barkl

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For some, the summer internship was their second or third go-around in a mill. But for others, the internship represented their first foray into the professional world. So aside from having the opportunity to apply their classroom learning, they received a few lessons in navigating the workplace.

“You can know your subject, but being able to work in a company with different departments and different employees, that's a skill in and of itself that you can't replicate in a classroom,” said Eller.

Some said they found the experience intimidating at first, working with accomplished professionals in an environment where there are financial consequences for mistakes and failures. While that's reason for a few bouts of anxiety, the key to getting past it is to ask questions, several said.

“If you're not sure about something, ask. It's not good to sit and stew. If you ask questions, work hard and take ownership of what you're doing, you [will] do well,” said Slezak.

Frederick Groth of Missouri University of Science and Technology also said that while it's important to ask questions, working an internship requires a bit of confidence.

“Trust your own intuition. We've gotten this far for a reason. Don't count yourself short,” he said.

Looking back, Pratt said she could have used a little bit more confidence in the beginning.

“I was very nervous to begin this internship, and I think I would have learned even more had I relaxed and viewed my first few weeks as a learning experience. It is very important to take internships seriously, and to be prepared to work hard. But I think it's equally important to be relaxed and genuine, and to know that interns are there to learn.” ♦