

The Local Voice - Lancaster

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Andrea Biesecker

'Melty Metal Magicians'

Andrea Biesecker Brings a Love of All Things Steam and Metal to a New Generation of Women

by Eric Dusenbery

The cavernous space is filled with workstations devoted to welding. The stations had welding MIG (Metal Inert Gas) guns, wire feeders and other equipment. It was quiet now, but that would end as soon as the new students arrived for the fall semester at Thaddeus Stevens College of Technology and rushed into the room to stake out their stations.

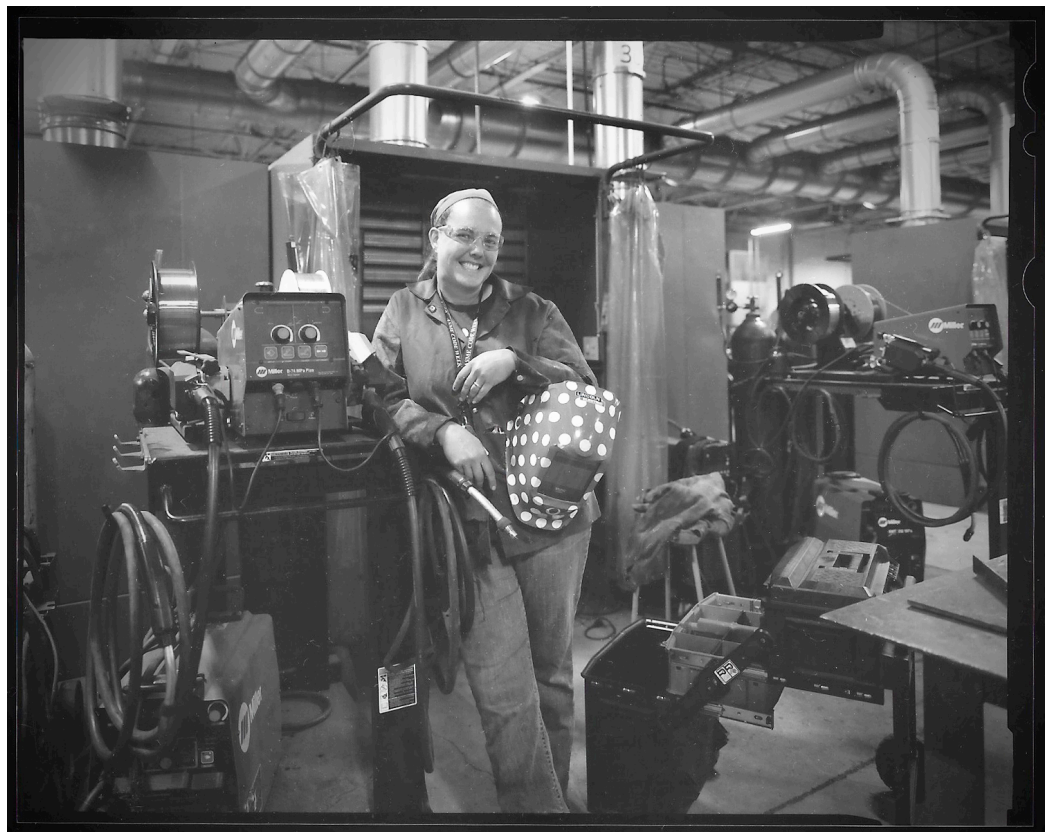
Andrea Biesecker is one of the instructors at the welding school. Holding a Rosie the Riveter-themed welding helmet (the red and white polka dots recall the image of the iconic World War II poster of a female factory worker flexing her muscle), Biesecker explained that the students would be taking a safety class and an introduction to the curriculum that afternoon.

“But, they’re feisty and they can’t wait to get in here and start using their hands to work and create something,” she said.

Biesecker has lived with the same “We Can Do It” attitude espoused by those Rosie the Riveter posters.

“I was driving a bulldozer when I was four years old,” Biesecker said.

With a wink, she blamed her dad. He liked motorcycles and antique bulldozers. As a result, she grew up learning and riding an assortment of machines and vehicles. Along the way, she developed a passion for steam



engines and anything steam related. She loves the history and equipment so much that she has her own steam engine collection at home.

“I’m the only one in my family that had the steam bug. Today, my husband and I have three steam tractors at home. It’s just a steam train with a steering wheel.”

But, becoming a teacher had not always been in the cards. During her senior year in high school, Biesecker’s mother had enrolled her in business administration.

“When I graduated high school, I did not want to go to college. I went kicking and screaming.”

About two weeks before classes started, her father, who had graduated from Thaddeus Stevens, asked whether she was sure she wanted to take business administration

“I told him, I didn’t even want to go to college. He said, ‘Why don’t you try machine shop?’ So, I enrolled and it stuck. Business administration was not for me. I was more hands-on.”

After graduating from Thaddeus Stevens in 2009, she worked in the machine shop at the Strasburg Railroad, further connecting with her steam passion. The steam engines and locomotives didn’t intimidate her in the least.

Biesecker learned how to weld at Strasburg Railroad. It was on-the-job training, trial-by-fire work but she persevered and became a certified welder.

When a teaching position opened at Thaddeus Stevens, she applied and got the position. That was five years ago and she has been teaching since.

The size of classes and number of students in the welding program is only limited by the space in the machine shop. Equipment is at a premium and this is a skill that can only be learned by doing.

“I don’t think there’s any shortage of people wanting to do things like getting in a shop and working with their hands,” Biesecker said.

Welding is the process of joining two or more materials together using heat and/or pressure to create a permanent bond.

“Welding is the fusion, the fusing, of metal,” she said. “But, my favorite definition that I tell parents and students looking to get into this as a career, is that we’re melty metal magicians.”

Learning these skills gets students involved with the process and forces them to be prepared.

“You do a lot of troubleshooting and thinking on your feet. You’re making it happen by pulling a rabbit out of your hat. Anybody can fix things when it’s perfect. But, you have to be able to think on your feet and come up with new ideas and new techniques to make things work.”

Currently, the demand for welders is high. The graduate employment rate for the welding program at Thaddeus Stevens is 100 percent and there are more jobs available than there are graduates to fill them.

“There are very few industries where welding isn’t at least a part of it.” Biesecker said. “Automotive. Medical. If it’s made out of stainless steel, chances are they had to weld it at some point. The sky’s the limit. Welding is everywhere.”

One of Biesecker's interests is getting women involved in the welding program and the building trades, in general. She is a support system for all of the women that are already at Thaddeus Stevens who are pursuing a career in trades. She is the advisor for Women In Trades and Technology (WITT).

"I made a career out of my hobby," she said. "I like steam engines. If you have an interest, pursue it. We keep getting more and more women into the school every year. The trades are still male-dominated and that's probably not going to change anytime soon. But, we would like to see the level get a little closer.

"I try to show the women and the girls who come in for tours that it's fun. I try to portray myself as being as approachable as possible for them. The school is doing a lot of recruiting work. We've been working with the Girl Scouts of America and other local women's groups just to get people interested. We're not strong-arming them like, 'You have to become a welder!' I think it's awareness that it is an option for them. We're just letting the girls know that there's more out there."

Biesecker is passionate about her avocation.

"Within welding — if you want to put brute strength against brute strength, well, it's not always a fair way of looking at things between men and women. When it comes to welding, it's your eye-hand coordination and your steadiness. I've heard it said — although I don't know if it's been scientifically proven — that women are usually better at a certain kind of welding. It's finer control. It's focus and desire.

"Let's face it, 50 years ago there were no women, or very few women in the trades and welding programs. It's equalizing. That stigma is going away. I don't know if we'll ever get to 50/50 in a machine shop but it would be cool. I think it would be great. But, one step at a time — progress is progress."

Biesecker is content in her position at Thaddeus Stevens. She loves the freedom of teaching, the flexibility of the curriculum and is passionate about introducing women to the welding program and trades.

"Just like Rosie the Riveter, they can do it."