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Company: MetalQuest Unlimited, Hebron, NE

Personal Profile: Age 32. Associates degree of applied science in manufacturing engineering technology from Southeast Community College in Milford, Neb. First job was with Wagner Tool & Engineering in Norfolk, Neb. Has been at MetalQuest since 2002.

Company Profile: MetalQuest Unlimited Inc. is a CNC machine shop specializing in high tolerance precision component parts, serving a variety of industries including energy distribution, hydraulics, electronics, and transportation. MetalQuest manages JIT and VMI inventory systems for its customers, most of whom are international corporations with facilities throughout the United States. www.metalquest.net

Q: How would you describe yourself in terms of manufacturing?

A: “I like technology. I like to think outside the box, I like to push the boundaries, and I like a challenge. I really like to think of oddball things – the way I think something needs to be done, the most efficient way it needs to be done. A lot of times that’s not the traditional way of doing things.

“I look at things outside of manufacturing and try to apply them to what we’re doing here. I like the challenge of trying to figure out how to make things the most efficient. MetalQuest’s philosophy is the same. We like to use technology the best that we can. But we don’t get things just to say we have this whistle or that bell, because we’re going to use it.”

Q: Is manufacturing an innate skill for employees?

A: “People can have both a natural talent for manufacturing and can also learn to do it. But having a good mechanical aptitude, being good at math, and understanding science concepts are all very good abilities to have.

“Kids who played with Lego’s and erector sets, kids who are always asking why or how something is built, and kids who love getting their hands dirty, working on engines, go-carts and bikes, these are all very good core fundamentals. It’s not absolutely necessary, but it makes learning this a lot easier.”

Q: Are you concerned about the perception of “Manufacturing?”

A: “When you say ‘manufacturing,’ a lot of people probably wouldn’t have the first clue. They might give you a blank stare. Or they might say that ‘we heard on the news that all the jobs are going overseas’ or ‘my dad worked for this company way back when and all he did was stand around. It was a dirty environment, it was boring and he didn’t get anything out of it and ended up quitting.’

“Manufacturing today is very high-tech and very challenging. It’s not just manual work. You need to use your hands and your brain. That’s what really attracted me to this industry from the onset. You’re working with computers as much as with machines.”

Q: Your company has a “quality first” philosophy, yet you use technology that allows work to continue without the employees present, in a “lights out manufacturing” environment. Isn’t this a risk?

A: “Lights out manufacturing is not necessarily a difficult concept. It’s really more of a discipline. It’s not really an amazing thing, but it’s a shift in philosophy. It’s all about consistency, not speed. The faster you machine parts the more inconsistent you may become. But if you have the discipline to make the process repeat and be consistent then you can use lights-out manufacturing.

“I’m able to monitor the status of all our machines in real time – if they’re running, if they’re in an alarm state, if they’re waiting for a part, or if the operator is setting it up – just by glancing up at my computer screen. Also, every single time there is an alarm or a problem the machine can page or send an email to

the manager of that department. And with my Blackberry I'm able to monitor machines and the computers on the shop floor, even when I'm outside the building. Everything is tied in. We're paperless."

Q: So the machines can talk to you?

A: "In a sense, yes. Also, along with the alarm capability, the machines can give us status updates on how efficiently they're running and the operation history of the machine for troubleshooting."

Q: What have been some of your original/entrepreneurial ideas at MetalQuest?

A: "We work as a team, so nothing I do is totally my idea. I don't think anything I do could be called "original" either, but what I enjoy doing is taking ideas and theories and making them work for our particular company. One major project that I have done (and continue to work on) is a SQL based shop management computer program that ties all departments of the company together in real time. Some of the major features of the program are database-derived surcharge calculations that are automatically carried through to the customer's invoice, and are fully traceable back to individual vendor invoices; and real time raw inventory management that automatically reports usage of consignment inventory to our raw vendors. Within a year, we will have our tool crib, CNC equipment, and CAM system tied into the shop management system as well, creating a singular system that manages the entire manufacturing process from beginning to end."

Q: What are the prospects for today's youth in manufacturing?

A: "The future for somebody getting into manufacturing is just tremendous. There are so many opportunities. What we have going on right now with the baby boomers and a lot of them retiring is that there are not a lot of young people in the industry. A lot of jobs have been outsourced overseas, but a lot of those jobs are ones that are not attractive. They're the manual, intensive, laborious jobs that don't need training.

"The high advanced manufacturing is here in the United States, and it requires using your mind. There are so many different opportunities. If you're interested, you can write your own ticket. I don't know of a company that is not short on help right now – and not the entry-level positions. Companies are looking for people who can manage projects, think things through and debug problems, people that like mechanical things and can understand things on a mechanical/computer level."

Q: How important is education in manufacturing?

A: "The nice thing about manufacturing is that it doesn't really require a four-year degree. You can get a four-year degree, and education is the key with everything. But, even if you have a four-year degree, you're going to go through a learning process, things that you don't learn in school.

"From the early times, manufacturing has centered on apprenticeships. It's really how you grow in this industry. You could even come out of high school, if you're at the right company that has the right apprentice and training programs in place, and you wouldn't even have to go to college. Of course, the management and high-tech jobs you need schooling for, but you can also do that with a technical degree. "At MetalQuest we feel strongly about education. We're constantly bringing instructors into our facility, we send people to night classes and seminars. The industry is constantly evolving and we try to stay on top of that. There are even web seminars. There are so many different options to do training, it's really not necessary to go and dedicate yourself to a four-year degree."

Q: Are you surprised by your success?

A: "As I sit here today and look over my brief career in this industry, I can't say I'm surprised at where I'm at, but yet I am. I knew I could do it. I knew it was something I wanted to do. I had the ambition and knew what I wanted to do and I wanted to work for it. It's been great, and it gives me a lot of satisfaction."