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Up next on ATE TV, a career working with lasers. The possibilities are endless.

Advances in the fields of lasers and photonics are creating new job opportunities in a variety of industries. Laser technicians are responsible for calibrating, testing, and maintaining devices that operate with lasers, or the actual lasers themselves.

And it would be very difficult for anyone these days to go for at least a day without interacting with a laser. It's a safe and growing field to get into. The laser is only 50 years young, and we're still scratching the surface of what can be done with it. There are many different types of lasers that can be used for a multitude of different things, and I think the educational field and the industrial fields are just getting comfortable with -- with using lasers and their processes.

And it looks like we're in spec here.

Everything looking great, yeah.

We take the lasers that we make in this building, and we put them onto a machine that has motion units and controls, computers, a lot of exciting technology, and integrate the laser into this machine so you can put a piece of sheet metal up to half an inch thick - five-eighths inch thick depending on the metal, and cut through it, you know, like butter.

As a leader in the industrial laser field, we have countless projects running at any given point in time to push the envelope of what a laser can do and what we can do with a -- with a laser.

So a technician's daily tasks can vary enormously based on what kind of requirements we have. We need always people to be able to assemble the building blocks of a laser from inspecting and measuring mirrors, to cleaning them, assembling them in a clean room environment to put our resonators together, as well as troubleshooting how a laser is -- is controlled, how it -- how it works.

One of the most challenging things that our technicians are faced with is troubleshooting our complex mechatronic systems when something goes wrong. And there you need a very detailed and in-depth understanding of how -- all of these systems interact with each other, and how to go about breaking down complex problems into manageable chunks, and solving them one by one.

If the diodes go too hot or too cold, it will shift the wavelength of the pump light, and the laser will become less efficient.

My job here is a technical troubleshooter, and what I do is I fix the lasers when they're not working -- anything from a plug is in the wrong position to bad wiring to bad optics, bad lasing medium. There are many things that can go wrong in this complicated process, and they've picked me to be the one to fix it. If you were desiring to get into the laser field, learn as much as you can ahead of time -- torque specs, conversions, math -- keep up on your math of course, just names of tools. Just because it's a laser does not mean that you don't have to turn a screwdriver.

Communication skills are absolutely paramount to any kind of success in a -- in a technical field. As technology progresses, people become more and more focused on their particular area of expertise, and everyone has to realize that they're not going to have the answer to every individual problem that they're going to come across.

The future of lasers is a very hotly debated topic. What's absolutely certain is that lasers will remain a large part of our lives, and will continue to be utilized. The ways of how we use them and what types of lasers, and how big, and how much they're going to cost is dependent on the people that we have working in this field today to define how the future of lasers progresses.

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Thanks for watching.