



**A STRONGER
STANDARD**

NAVIGATING **NEW** **REGULATIONS** IN FINISHING



There's one thing for certain: Regulations in manufacturing are changing with new technology, especially as it relates to the certification of equipment and machinery.

A few years ago, DeGeest Corporation of Tea, South Dakota, sought a better way to streamline its finishing operation. A worldwide search led to Milan, Italy, where they found a company called Lesta.



"It was too good to be true," said president Derek DeGeest. "Lesta had these self-learning painting and finishing robots that can be programmed to paint a specific part in just seconds. The robot is taught by an expert finisher already on staff, and then it repeats those same expert movements and trigger pulls on every part."

DeGeest was so impressed that his company forged a partnership with Lesta to bring robotic finishing technology to the North American market under the name LestaUSA.

Look out for that bump in the road.

As DeGeest and his colleagues began their journey of integrating Lesta's robotics and automation into their new finishing operation, they ran into a significant roadblock. In trying to build out this first-of-its-kind of system in North America, they fell victim to the timing of state electrical rulings on industrial equipment.



"Our state electrical commission went to a conference and were told by NRTL how to look at machinery for general industry," said DeGeest. "They took what they learned as a black-and-white ruling and red tagged every piece of our entire system so we couldn't even run power to it unless we met their interpretation of the law for electric equipment in our state. We reached out to our distributors, companies supplying the equipment, NRTL contacts, and even our Governor's office for help, but no one had a path forward. The largest project our company has ever done was looking like it was never going to run."



Forced trial by fire.

OSHA has the ability and power to enter into any facility to make sure it's safe. To help with this huge task, OSHA qualifies third party companies called a NRTL (Nationally Recognized Testing Laboratory) to test and certify products covered within OSHA and each manufacturer's scope.

Within these groups, codes are created for manufacturers to follow to keep people safe. But these codes can sometimes make it difficult for manufacturers to advance what they're doing because no one wants to ultimately be liable.

It took nearly three years, but DeGeest learned to work with nearly every group imaginable to find a solution.

"The reality is, all of these entities are doing good things," said DeGeest. "But their combined regulations almost make it impossible for many manufacturers to get things done. The state electrical commission has to keep everyone safe, as proven by the huge electrical code book that dictates every installation. But technology changes so fast, the codes cannot keep up, which makes it hard to interpret how to apply the code to new equipment that's coming out."

That was the case with DeGeest trying to build a custom paint system. The equipment didn't match the code book so no one knew what to do.

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Derek DeGeest, President of DeGeest

Add in the fact that North America has to play by a different set of rules, and you end up with stringent regulations that sometimes don't allow manufacturers to compete on a global stage. "It's like our imperial versus metric system," said DeGeest. "The U.S. is always different. Those extra regulations cost money because they required us to swap many components, added a lot of additional safety and testing to get our solutions certified. But we figured it out and we're in a position to help other manufacturer's do the same."

What about Class I, Division 1 considerations?

Class I, Division 1 is an area where flammable gases, vapors or liquids can safely exist under normal operating conditions. When painting or finishing, flammable substances are prevalent, so painting robots are specifically designed and certified to pressurize electronics and motors to eliminate the potential of an explosion. Unfortunately there are different certifications depending where you live. USA and Canada use NRTL certifications and do not recognize the ATEX certification used throughout most of the world. In fact, US and Canadian companies could be at legal and OSHA risk if using an ATEX certified Class I, Division 1 robot.

"This is just another example of how difficult it was to bring our ATEX certified Lesta solution to North America," said DeGeest. "We learned a lot about how to adapt these finishing robots into an NRTL Class I, Division 1 environment to meet all requirements."

New Equipment Checklist

As DeGeest Corporation navigated the process of certifying Lesta technology for use in the North American market, several lessons were learned.



Proactively work with your state's electrical commission.

Manufacturers need to communicate. Don't wait until you've installed something. And don't assume your installer is going to know your state's current code because every state is different.



Equipment manufacturers build their equipment not knowing every state's code.

It would be impossible for them to do it any other way. Before you finalize your purchase order for equipment, be proactive to know what your local or state inspectors are going to be looking for.



Find out if any of the new equipment you plan on using can be NRTL-listed.

If it can't, make sure the equipment can be provided with all NRTL-listed components. Then talk to your local electrical inspector or state officials to verify the information they need.

For example, in South Dakota, you must get a letter from the equipment manufacturer verifying all components are NRTL approved, provide a nameplate for each piece of equipment from the manufacturer stating all the electrical requirements. You must also have a form signed by multiple parties and present your equipment specs and function to the state's electrical board for approval.



Certification is a long process, but it's well worth it.

"We learned how to work with every group to find a solution," said DeGeest. "And, we did. Three years later, we have the largest job shop robotic painting system in North America. We are approved by OSHA, NRTL and our state electrical commission. We own a very comprehensive NRTL listing for integrating Lesta self-learning robots for our customers, and we are a certified NRTL factory to manufacture the technology. Even more gratifying, was creating a code with the state electrical commission for manufacturing and machinery for everyone to have a path forward and not to end up like we did."



“ **WE'VE MADE IT OUR MISSION** TO PROVIDE FINISHING SOLUTIONS TO HELP NORTH AMERICAN MANUFACTURERS STAY COMPETITIVE.

Derek DeGeest, President of DeGeest

And, DeGeest isn't stopping there.

Growth in finishing and automation is an investment in the future. The success with Lesta has brought opportunities for DeGeest to partner with more finishing technologies seeking help to enter the North American market. These exciting innovations for general industry manufacturers are now integrated by DeGeest.

"From our international travels, we've discovered companies using application technologies not available here," said DeGeest. "So, we've made it our mission to provide finishing solutions to help North America manufacturers stay competitive."

DeGeest uses all its finishing solutions in its own production environment and verifies all benefits and capabilities in its onsite Test Lab. ■

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