

Ward Leonard Doing More Than Just Motoring Along

September 14, 2012 | By MARA LEE, maralee@courant.com, The Hartford Courant

THOMASTON — Ward Leonard Electric Company is a 120 years old, but it's not stuck in the past.

The electric motors and electric controls manufacturer was based in Westchester County until 11 years ago, when it decided to merge with a Connecticut company, Tech Systems, and move its operations to the Thomaston property. Prior to the merger, the once booming Connecticut company — more than 500 people had been employed in its 145,000-square-foot factory in earlier years — had "just cratered," recalls one Ward Leonard's executive.

Even with the merger, the combined workforce at the plant was about 70 workers and the company was selling less than \$15 million a year in electric controls and motors, most of which were made for installation on Navy aircraft carriers, ships and submarines.

The company's dependence on the Pentagon's military contracts -- which rise and fall with the political winds and budget restraints — was troubling to Ward Leonard owner Jon Carter. So, he also bought a British company that sold electric motors for oil drilling rigs, but had trouble expanding beyond its existing customer base.

Then, three years ago, he hired Mike Clute as president.

"He decided he wanted to enter this market in a big way," Clute said. "He wanted to grow, and he didn't feel like he could do it on his own."

And, my, how the company has grown. Then, their revenues were in the mid \$20 million range, and there were about 130 employees. Today, revenues are near \$45 million (up 65 percent) and there are 165 employees. Profit has tripled.

This year, commercial sales will be 40 percent of the business, and next year, they expect military and commercial sales will be 50/50. They are aiming for 15 percent growth.

"We're flipping the business (mix) and growing it at the same time," Clute said.

Ward Leonard is benefiting from the boom in natural gas extraction — known as fracking — and from the willingness of oil companies to drill deeper underground to find wells. The deeper they drill, the higher a horsepower rating they need for the rig's motor and that's good for business. "We like big motors," Clute said with a grin.

Oil rig motors need to be highly rugged and work where there's lots of sand and high vibration. Ward Leonard tells oil rig manufacturers they've got lots of practice at that — the Navy requires the same vibration-resistant qualities.

Every motor they make is custom⁷, and they range from less than one horsepower — half the size of a man's fist — to 2,000 horsepower, which weighs about two tons.

Nearly every piece of each motor -- from strips of stamped metal to paper insulation strips to insulating tape, to cords of wires or strips of copper -- has been touched by a worker in the plant, often for many hours. There's very little computer-controlled machinery at the plant.

The people who press the wire into the grooves of the stator are paired with a more experienced worker for a year. They start at \$13 or \$14 an hour, Clute said, and once they gain some experience, can make high teens or low \$20s an hour. There's also lots of overtime. And the company got \$350,000 in federal training money.

Martin Gayle, 42, of Waterbury, worked in construction until he joined Ward Leonard six years ago. This week, he was being trained in how to weave the copper strips in the form-wound motors, a process he said would take three months.

"There's no room for mistakes," he said.

Because the company builds both motors and controls in very small batches, its workers end up fabricating a lot of what they use, because outside suppliers wouldn't be able to give them such small quantities at reasonable prices⁷.

For instance, the company has a multi-million dollar contract to make electric controls that run five-ton generators that control fuel rod movement in Westinghouse's new nuclear power⁷ plants. The first eight panels, each six feet tall, will head to China. The company hopes to also win the contract for the first new nuclear power plants built in the United States in a generation, which are the same design.

In the partially-constructed cabinets, there are thick silver-plated copper strips, which are flat and parallel with the cabinets for most of their length, but have an elegant, and sharp twist at the top, ending up perpendicular, so they can fit in the notches of monitors.

Its own workers figured out how to bend the metal. Designing the controls, and procuring all the subsystems and materials for them, took a team of engineers a year, Clute said.

Surprisingly, the "on" "off" and other labels on the cabinet doors are all in English. Clute said the Chinese said they preferred to make their own Chinese language labels.

When selling oil rig motors, Ward Leonard competes with giant corporations, General Electric, and Brazil's WEG. Clute likened it to David and Goliath, saying "we're big enough to provide an outstanding product, but we're small enough to care."

"We're not trying to overtake GE. We like to be a very strong second source so people don't feel like they've got their eggs all in one basket."

"If you can get 10 or 15 percent of the market share, that would be huge," he said. To sell that many motors to rig builders would mean Ward Leonard would have to triple in size and the Thomaston plant, the length of a football field, could handle that, easily.