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Lee Industrial Contracting:

An In-House Powerhouse of a Company

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Lee Industrial Contracting, Pontiac, is the Swiss Army Knife of construction. Forget the two-inch blade and the corkscrew. Lee's industrial-grade version of this iconic tool features FARO Laser ION trackers, Broderson cranes and a multi-axle, almost 50-wheel Goldhofer transport module. More than machinery, the heart of this successful turn-key company is the expertise of its in-house skilled trades.

"Generally, about 95 percent of our work is done in-house," said Lee Account Manager/Project Manager Bob Manning. "We very rarely sub anything out. It's a unique



approach nationally.”

The 420-person, single-source firm has well over seven divisions, ranging from foundations, rigging and electrical to mechanical, fabrication and machine repair. Add carpentry, painting, emergency power and even roof-raising to a mind-boggling array of in-house services.

Lee Industrial’s diverse divisions work as a collective, acting as the proverbial “well-oiled machine” to service the actual machinery, processes and buildings of its customers. “We all touch a job, even though each project has a designated project manager for both large and small jobs,” said Manning. “We all talk and strategize as the project progresses.”

This in-house collective sparks innovative cost savings and swift resolution of any jobsite issues. Lee Industrial’s combination of in-house trades, its own fabrication department

and a powerhouse fleet of company-owned equipment makes for a nimble, rapid response force to combat that sometimes unpredictable animal called a jobsite.

As a turn-key contractor, Lee Industrial “saved one company so much on their full budget that they had money to spare for more facility upgrades,” said Manning. “The savings are a direct result of Lee Industrial looking at the project collectively as a turn-key company.

“Our project managers communicate with each other and with the sales force, asking questions and looking for improvements,” continued Manning. “Our department coordinators, whether they are experts in HVAC or electrical, look at the project and propose solutions. The Owner often thanks us for saving them money, or in one case, for obtaining a return on investment in only six months.”

Beyond direct cost-savings, the turn-key solution streamlines the entire process. “We can make on-site decisions when we are walking through the facility with the customer,” said Lee Project Manager Peter Wigman. “It could be a pipefitting or an HVAC issue, but because we control that trade, we don’t have to make any phone calls or have a meeting. We can tell the customer, ‘We will take care of it.’ We can make the change immediately, and that is one of the main benefits.”

Lee Industrial Contracting has taken turn-key project delivery to a whole new level. “I have been in the business for 45 years, and I have worked in five or six different states and Lee is unique across the board,” said Lee Director of Business Development Ken Nord, who recently joined the firm in early 2017. “I have never been associated with a company like this that has all these different applications and resources that they provide the marketplace.”

Given the sheer diversity of its resources, this maverick firm has set in motion an unstoppable, one-stop shop dedicated to the delivery of turn-key solutions for industrial clients.

Making the Impossible Possible

Founder Ed Lee built this industrial contracting empire now housed in over

710,000 square feet of space stretched along Pontiac’s Cesar E. Chavez Avenue. The company also maintains a small satellite office in Georgia.

Launched in 1989, Lee began as an electrical contractor based in Clarkston, but this high-energy entrepreneur continued to add services and expand the business until it morphed into Lee Industrial Contracting in 1995.

“Back when Ed Lee was an electrician, if a customer said, ‘We need someone to set this machine,’ he would commit to doing it,” said Lee Project Manager Brian Rausch. “He would find a person with the necessary expertise. The next thing you know the company was doing both electrical and rigging. That is how the company grew, and that is what is going to make it grow in the future.”

Now an employee-owned company, Lee Industrial Contracting is following in the footsteps of its founder. The company recently launched a controls and robotics division to service automation lines. “We installed the line, we wired the line, and our customer said, ‘Since you are already on site, why don’t you go ahead and program the robots,’” said Lee Project Manager Peter Wigman. Lee Industrial’s own in-house controls engineers now service this growing need of industrial clients.

As its latest expansion, Lee Industrial launched a machine repair division in 2015. “The division, along with storage and offices, is housed in the former Pontiac Central High School, a sizeable building we purchased several years ago,” said Lee Account Manager of Sales Vadim Beginin. This division is booming along with the rest of the company. Amazingly, Lee Industrial expanded from a \$20 million dollar to a \$200 million dollar company in the last 10 years.

The reason: This turn-key company never turns down a customer’s request. “If someone comes to us and says, ‘Everybody else says this can’t be done,’ we say, ‘We got this,’” said Manning. “And we never fail. I have been here 12 years, and we haven’t failed yet.”

Do you need machinery moved from a facility in Turkey? No problem. Lee personnel and equipment from its sister company, Lee Machinery Movers, is on



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the way. Planning to move a press but the Owner discovers the building isn't tall enough? Lee Industrial has the capability of raising the roof and moving the press as well.

A bankruptcy of a mining company left a certain silica supplier potentially stranded for the winter without sufficient sand for production. "We need 100,000 tons of sand!" said a frantic manager. Relax. Lee Industrial Contracting acquired the expertise and assembled the heavy equipment, talent and manpower to mine a mother lode of Michigan's low-iron sand for its client. As chronic over-achievers, Lee delivered 118,000 tons of sand in eight weeks, two months faster than the preceding company and all without having ever mined before in its history.

"When I hear people use the term 'thinking outside the box,'" said Manning, "I think, 'Why are you even in a box to begin with?'"

Lee Industrial Contracting in Action

As a business open to possibility and always eager to solve a client's dilemma, Lee Industrial cultivates the resources necessary to continually make the impossible possible. The company even provides specialty lifts and crane transport, as well as transloading, specialty hauling, general freight and rail. "We actually own a railroad spur behind our campus, as part of helping the railroad itself off-load and move equipment," said Beginin.

Lee Industrial's high energy is on display, both in its own house and on the jobsite. This full-service company actually built much of the interior of its own facility, including construction of its own boardroom table formed of wood with diamond plate insets. Other skilled trades installed the cultured stone masonry wall accents, as well as the exposed ductwork snaking through the interior.

Everything is Lee right down to the fabrication of one of its own break room tables; the surface is made of diamond plate steel and its metal legs are joined in a circle made of an industrial chain. "It's not a cookie-cutter office," said Wigman. And it's not a cookie-cutter company, either.

Lee Industrial Contracting brings this same zeal for making things to the industrial facilities of global manufacturers. Whether installing 50-foot-wide annealing lines for heat treating steel or seam welding four-foot-wide ducts and rebuilding stamping presses, Lee Industrial's precision, efficiency and quality matches the capabilities of its own manufacturing customers.

Lee Industrial's recent work at the Clarkston facility of Automotive Lighting shines the light on Lee's turn-key capabilities. Automotive Lighting is a Magneti Marelli division headquartered in Reutlingen, Germany and dedicated to the development, production and sale of automotive exterior lighting products for all major OEMs worldwide.

Originally an exhaust system manufacturing plant for jeeps, the Clarkston facility for this Tier One automotive supplier has now been converted into a manufacturing center for headlamp and rear light assemblies. In fact, Lee Industrial built the original plant and already counted Magneti Marelli as part of its satisfied customer base.

According to Manning, Magneti Marelli selected Lee Industrial because its turn-key capabilities were ideal for delivering a large project on a tight timeline. "All of our trades were part of that job, including rigging, foundations, HVAC, electrical and piping," said Manning. "It was the very definition of a turn-key job."

Lee Industrial's turn-key structure delivered targeted cost savings for Automotive Lighting. Rather than remove and replace a large mezzanine, Lee Industrial's fabrication department "modified it on site, making it smaller and shorter and reworking the handrail stairs," said Beginin. "Repurposing and modifying the existing mezzanine saved Automotive Lighting money and it saved us time."

In another cost reduction measure, Lee Industrial purchased a self-contained, 11-by-24-foot storage out-building rather than construct the building conventionally. "This strategy saved Automotive Lighting 50 percent in costs on this part of the project," said Beginin. "We shared this cost-savings up front with the customer rather than after the fact, as we do for all of our customers."

Lee Industrial transported the storage building on a flat-bed truck, used a large hi-lo to lift it off of truck and set it on a concrete foundation pad – all services courtesy of Lee's in-house resources.

Lee Industrial brought its savvy eye for cost savings to the mechanical system as well. In this case, antiquated, money-draining cooling towers were replaced with new chillers and dry coolers as a less costly strategy. "We look at each project and ask, 'How can we save that customer money and/or make an improvement?'" said Beginin.

This turn-key contractor saved Automotive Lighting money and even added floor space. "We built all of the



Lee Riggers are assembling the clamp on a 1300T Haitian Injection Molding Machine.

steel for a substation mezzanine, and we actually encased it in concrete,” said Rausch, project manager for the complex Automotive Lighting project.

“The substation is underneath the floor and the pump skids for the manufacturing process are placed on top of the substation to save room. So, we actually created some floor space for the customer.”

Industrial Construction is a Team Sport

Turn-key contracting and upfront engineering/cost-savings are part of the Lee brand. The expertise of its project managers is another strong asset of this successful company. “The project managers run the show,” said Beginin. “We have the best of the best.”

At Automotive Lighting, Lee Industrial installed 1,000 feet of 30-foot-tall steel walls to subdivide the 110,000-square-foot plant. The fabrication division “made site modifications on much of the steel to fit the layout,” said Rausch.

This turn-key project and its new bridge cranes made full use of Lee’s host of divisions: The electrical division

rerouted underground electrical conduits to make way for the massive foundations supporting the bridge crane. The foundation division installed the concrete foundations, the fabrication division formed the bridge crane steel, and the rigging division installed the actual bridge cranes, as well as all the injection molding machines and metalizers. “Each injection molding machine came in about eight oversea containers,” said Rausch. “Because every machine was disassembled for cost-effective shipping, the rigging division performed a great deal of assembly on site.”

The foundation division also created foundation pads for the new chillers and dry coolers and for the storage out-building, plus a network of pipe-filled trench ways and pits. “One eight-foot-deep pit was filled with five feet of water,” said Rausch. “We re-engineered the pit to be the same volume but a different shape or configuration. We then changed the pit steel to allow for driving over the top of the pit.”

Lee Industrial also upgraded the plant’s electrical power infrastructure.

“We started all the way at the transformers with Detroit Edison becoming involved with the new primary switch transformers,” said Rausch, “as well as a new substation room inside the building and new bus duct. We had to make sure everything was laid out to miss the new bridge crane, but still power up the injection molding machines and metalizers.”

Lee kept the schedule on-track despite the electrical material’s lead time of 14 to 16 weeks on a 12-week project. Rausch made it happen, ultimately obtaining the material close to deadline. “We had done enough prep and layout work that once we obtained the material, the installation was swift,” said Rausch. Lee Industrial began the project in late December 2016 and reached substantial completion in late February 2017.

“We did it all from epoxy flooring and building a testing tunnels to cooling systems and electrical upgrades, as well as injection mold machines set-ups and painting,” said Rausch. “When we finished the job, I was proud to work at Lee Industrial Contracting.”



The Big Four: Personnel, IT, Equipment and Facilities

The collaboration between divisions gives Lee Industrial a competitive edge.

“Because we are a turn-key provider, we can deliver instant results to issues,” said Rausch. “For example, if we are on site installing a machine and we need to make shims because the floor is out of whack, we can have our fabrication department make them immediately. By the time I get to the fabrication department facility, the shims are ready and are on a pallet. Instead of a day of downtime, we only have maybe 45 minutes.”

The Lee “collective” is also linked together via its own proprietary software. Every person has a tablet and can communicate project information in real-time. Manning can send a spec sheet to an estimator and both can engage in an instant conversation on the project. Other disciplines and trades in the field can chime in and tweak the project. “We can also video chat with each other directly from the jobsite,” said Manning.

Department-specific monitors are in the bay-like buildings dedicated to each trade division. The monitors provide the name of each person, the work site address and details such as the tools, equipment and machinery needed for

each job. Each trade-specific building is well-stocked and well-organized, along with each trade’s dedicated work trucks and vans. “Everything is set up the same in each van,” said Beginin. “For example, a certain size ladder is always placed on a certain side of the van.”

Lee’s company-owned equipment arsenal includes the conventional and the specialty machinery. Lee Industrial not only carries 82 man lifts and eight excavators, but also a remote-controlled Goldhofer transport module, a 10-foot-wide, multi-axle, 50-wheel colossus capable of meeting weight restrictions while transporting million-pound loads over roadways and on plant floors. “The Goldhofer can distribute the weight over a larger area, and it can turn impossible corners,” said Beginin.

Lee recently purchased air skates that assist with moving heavy loads via a specially designed air caster capable of slowly and evenly releasing a thin film of air that floats the object. With the aid of air skates, one or two people can easily move and push a 100,000 pound-object in any direction. “I’ve moved 60,000-pound granite tables by hand using air skates,” said Wigman.

These hover board-like air casters were a valuable asset in temporarily moving a press out of the Denver Mint.

“They thought it was an impossible job,” recalled Rausch. “They flew three of our guys to Denver, and we met them at the Mint with a truckload of equipment, including air skates. On this so-called impossible job, we had the press out in a day-and-a-half and put it back in two days.”

This dynamo of a company has about seven buildings on its campus, including large bay-like buildings housing its trade divisions and a dedicated facility for the fabrication department. The Lee empire also includes two former Pontiac schools, one the ex-Pontiac High School and the other the ex-Wisner School and field stadium. The Wisner School now houses Lee Industrial’s CDI division offering free training in the trades. Across the street is the headquarters for its sister company, Lee Machinery Movers, and next-door is the maintenance and paint shop for Lee’s vehicle fleet.

Lee Industrial Contracting is always expanding by adding new divisions, services and equipment lines or adding to its physical campus. Its sense of possibility and its ability to deliver have contributed to its tremendous expansion over the last 10 years and to its growing list of satisfied customers. ♦



Electricians and pipefitters finished installation of 124 radiant tubes in the furnace heating sections for HyCAL.

A New Day for an Industrial Icon

Lee Industrial Installs World's First Hydrogen Anneal Line for HyCAL

HyCAL Corp., a division of Ferragun, invested \$50 million dollars in the renovation of a once abandoned McLouth Steel facility at West Jefferson Avenue and Gibraltar Road. Originally built in 1954, this rust-belt industrial plant has been re-invented as a facility for a new generation of technological advancement. The 600,000-square-foot plant now houses the world's first 100 percent hydrogen continuous anneal line for heat treating steel.

MetalForming Magazine, March 16, summarizes the new hydrogen process:

"The line uses an optimized blend of hydrogen, rather than water, for strip cooling to produce ultra- and advanced-high-strength steel grades. HyCAL's own website explains the benefits: "The HyCAL continuous anneal process uses an optimized blend of hydrogen that eliminates the steam pockets and off flat errors so common in water quench lines and increases yield by 30 percent."

HyCAL called upon the expertise of Lee Industrial Contracting to install this 1,100-foot-long and approximately 50-foot-wide anneal line, developed and built by Ebner, an Austrian company with offices in Wadsworth, Ohio. Lee's full-service, turn-key "machine" delivered for HyCAL Corp. "Our \$3 million dollar portion involved all of our trades, including rigging, electrical, pipefitting, fabrication and our HVAC division," said Lee Account Manager of Sales Vadim Beginin. "We also installed part of the foundation."

Lee Industrial's foundation division installed "the accumulator pit foundation, which is a large steel structure that sits partially underground for the steel to loop around," said Lee Project Manager Peter Wigman. "It was half buried in water when we started, so we did a great deal of dewatering."

Lee Industrial used Formtech's nine-by-eleven-foot forms to

shape the 30-foot-square and roughly 25-foot-deep pit foundation. "The forms were a great time-saver," said Wigman.

Lee's winning combination of trade expertise and leading-edge equipment was pivotal in achieving tight tolerances. "Inside of the pit, we had to place 50 precision-located anchor bolts that have a tolerance of only an eighth-of-an-inch," said Beginin. Wigman added, "We had some very knowledgeable foremen on site that knew exactly what they were doing."

Equipment-wise, Lee Industrial's rigging division set the annealing line and furnace systems, maintaining tolerances of one millimeter over 400 feet using a high precision, portable coordinate measuring machine called a FARO Laser ION Tracker.

Other Lee Industrial divisions contributed their own expertise. "Our pipefitting division installed well over five miles of piping," said Wigman. "It was all welded seams. The hydrogen piping was stainless steel, while the other piping was standard steel."

The electrical division upgraded HyCAL's primary service to the building section housing the anneal line, and its HVAC division fabricated, installed and seam-welded four-foot-diameter duct.

This diverse company also installed a 16-foot-tall stainless steel alloy exhaust stack. "We designed the foundation and the structural steel to support the stack," said Beginin.

In addition, this company of many talents also helped another firm working on the project. "They actually built their motors based on our design suggestions," said Wigman.

Altogether, the Lee team performed over 19,000 labor hours between May 2016 and the beginning of October 2016. At the end of this roughly five-month project, Lee Industrial Contracting had secured yet another satisfied customer. According to Beginin, "HyCAL Corp. President Ed Gonzalez said, 'I love you guys. Everything went perfectly.'" ❖