

Leading Edge fabricating

When you choose to put the words leading edge into your company name you immediately put yourself under pressure just by the connotation. Beyond the buzz words Leading Edge Engineering has carved themselves a niche in the wine, fish and poultry processing, brickyards/crushers, building, packaging, effluent management, and bakery industries with their innovative thinking and service orientated manufacturing.

“If you don’t give the clients the service they expect they soon find somebody else to work with, no matter how niche you think your services or products are. Especially in the competitive industries that we work in,” said Johan Cilliers, one of two partners in the business.

“The company was registered in 2006 but we only started trading in 2008, just before the recession. It was either sink or swim. Fortunately, we took the latter option.”



Conveyor systems are one of Leading Edge Engineering’s specialities. This one is used for off-loading fish from the boat

Cilliers and partner Gaffie le Roux both have mechanical engineering backgrounds, attaining their qualifications from Stellenbosch University and Cape Technikon respectively.

“We had both gained some industry experience before we formed our business partnership just over 15 years ago. At that stage of our lives we weren’t working machines on the shop floor but, with our mechanical orientation we were not scared to get our hands dirty. This still holds true today as sitting behind a computer is not appealing,” continued Cilliers.

“Like many companies we started off small and have grown to now employing 40 staff. We are both from the Stellenbosch / Strand area so I suppose it was inevitable that we would get involved in the wine industry in some form. We haven’t quite reached the stage of owning our own wine farm but we are very grateful for what the wine industry has given us.”



Leading Edge Engineering have also manufactured a diving bell used for shark viewing for a client in Gansbaai. The bell was used in a TV programme done by the Discovery Channel

“The vineyard cycle is split into different stages throughout the year, each critical to the success of the grape growing cycle. The stages are concluded with the annual grape

harvest, at which time vines enter the last stage: Winter dormancy. How the vines are cared for during the winter period is crucial for the success of the next year's vintage," explained Cilliers.

"But we are not interested in the actual growing of the vines unless of course there is mechanical equipment involved."

"Wineries rely on a variety of equipment in their daily operations – equipment that needs to run smoothly for the business to continue to run smoothly. Regular, preventive maintenance is an important (but often overlooked) part of owning equipment. From irrigation systems to tractors, a systematic approach to maintenance should be developed, including tasks to be performed on a daily, weekly, monthly and yearly basis. Neglecting required maintenance results in equipment breakdowns and production stoppages. On the other hand, preventative maintenance will control costs, manage assets as your business scales, improve safety and compliance, and optimise resource allocation — all while driving long-term success and contributing to the bottom line."



Before delivering and assembling at a client the equipment manufactured by Leading Edge Engineering is tested in-house

“Equipment breakdowns will (inevitably) occur, often causing damage to the machine and loss of production. Regular preventative maintenance lets you proactively identify and address potential equipment failures before they occur. Properly maintained equipment will have a longer lifespan, and money will be saved in replacement equipment costs each year. Regular maintenance ensures equipment operates at optimal levels, which leads to reduced energy consumption and lower operating costs. It also prevents production stoppages, which can result in decreased quality and lost revenues. Proactive scheduling of maintenance means work can be streamlined. Idle time is reduced and more tasks can be completed in less time, saving money on labour costs. The end result is higher customer satisfaction, excellent product quality and costs kept in check. Performing preventative maintenance does cost money in labour and parts. However, it’s far less costly than the alternative.”

“Maintenance projects and reconditioning of plant equipment for the wine industry make up a decent portion of our daily manufacturing and fabricating requirements. But we are not limited to the wine industry nor are we limited to maintenance type work.”

“Custom manufacturing forms a big part of our mechanical engineering solutions. For example, from inception of the company we have been designing, manufacturing and installing conveyor systems of different sizes and lengths. Automation comes in many different forms and material handling equipment forms an intricate part of a production line.”



The company has recently purchased a JFY TPR 8225/3100 CNC press brake which has a mouth of 3 100mm and a press force of 225 tons. This machine was supplied by Puma Machine Tools

“Anyone in manufacturing moving product or components from point A to point B, choosing a conveyor involves working with a dichotomy: Customisation versus flexibility. On the one hand, no one conveyor is suitable for all applications. Part size, lubricant, temperature, automation, and material handling, to name a few, must all be considered. On the other hand, you need flexibility. You might not know what you’ll be producing in six months let alone in six years. This creates a conundrum: How do you choose a

conveyor that's suited for the current application yet flexible enough to account for unknown jobs over the horizon? The truth is it involves balancing myriad factors."

"It is a lot simpler these days to make the correct decision, because of the tools and information you have at your disposal, but it is still a case of one size does not fit all. As with any capital investment, material handling configuration depends on the application, and with conveyors, there are no shortages of alternatives. They could be either belt, modular, screw or roller conveyers. In essence each conveyor we supply is custom manufactured."



Leading Edge Engineering have also invested in a JFY EFC 2kW fibre laser that has a bed size of 2m by 1.5m. The high-performance mid-price laser machine is equipped with TruFiber Cut and a Precitec cutting head. The machine is ideal for Leading Edge Engineering as they are only cutting material gauges of 1.5mm, 2mm and 2.5mm. The machine was supplied by Puma Machine Tools

"But we are not limited to conveyors. Maintenance at the wine, fish and poultry plants involves many different machines and wear parts. Hoppers, screw conveyors, off-loading bins, piping, shuts, strip drains, pots and grease traps, tippers and trolleys, receiving hoppers, vibration tables and sorting tables are just a few that we have designed and manufactured."

"An interesting product that we designed and manufactured for the wine industry is a stem slicer. Once the grapes have been removed the farmer then has to dispose of the stems. In its vegetative state they were taking up too much space, especially as the stems still contain water. What our machine does is it cuts the stems into smaller sizes and then crushes it, releasing all the fluids. Both space and time saving can be achieved because dumping only needs to take place twice a day instead of six times a day."

"Another machine we make for the wine industry is an automated punch down of the grapes into an open tank. I don't have to explain what that does."



Leading Edge Engineering will cut, bend, weld, fabricate and assemble components for clients

“We have also manufactured a diving bell used for shark viewing for a client in Gansbaai. The bell was used in a TV programme done by the Discovery Channel.”

“As much as we like to be involved in custom design and manufacture you also have to diversify. We have done this by getting involved in project management work that includes structural steel, catwalks and platforms, staircases and balustrades.”

“Currently we are involved with a Stellenbosch company that operates in the cycling industry. They are building a new office space and warehousing building near the Blaauwklippen area. Once the civils have been done we will do all the structural work.”



The company will custom manufacture catwalks, platforms, staircases and balustrades in stainless steel and mild steel



Leading Edge Engineering specialises in the engineering, manufacturing and fabricating of all types of steel products and structures and also does project management

“Our initial focus was mainly on stainless steel equipment, but the steep increase in Nickel prices led to our clients opting more and more for mild steel products. Currently we are roughly on a 50/50 split. However, stainless steel shows great benefits in winemaking, including ease of maintenance, longevity and temperature control, all of which make it a popular choice for modern winemakers. Used to transfer liquids around the winery, tubes are essential in winemaking.”

Facilities

“We can cut, bend and roll up to 3m wide by 8mm thick. In addition, we have fibre laser cutting, plate punching, drilling, pipe rolling and spray-painting facilities. We also offer MIG, TIG and arc welding services for a material mix of stainless steel, mild steel and aluminium. Stainless steel makes up 60% of the mix.”

Our draughting office will assist you with any product design and CAD drawings. In addition to working with our own waterjet facilities we also liaise closely with machine shops in the area. The low volume of outsourcing allows us to negotiate excellent prices and better lead times.”



“We decided to invest in a hand-held laser welding system from Hugong HGLW and supplied by TRM Supplies because of the potential it offers to the job shop environment that we operate in. Manual fibre laser welding will never replace the traditional MIG and TIG welding processes. But it gives a company like ours an opportunity to offer an extra finishing fabricating service. Once we have cut, punched or bent sheet for a client we can now offer a welding service. It is quick and easy to use, faster than the traditional welding processes and the finish is better.”



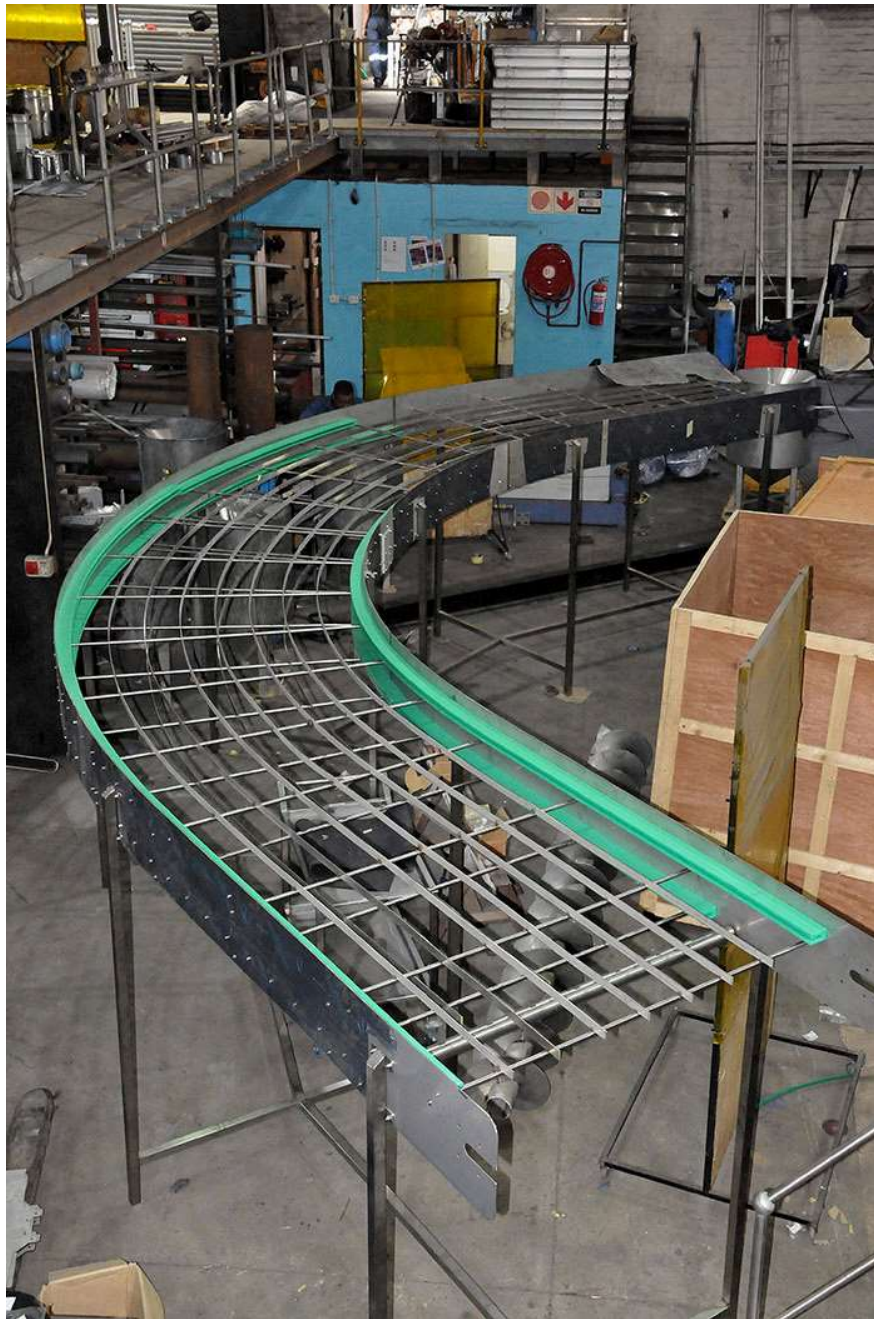
Components for various products

“In 2012 we invested in a CNC waterjet with a bed size of 4m by 2m, greatly increasing our capabilities in fabricating equipment and components, therefore greatly reducing lead times.”

“Previously we had been using a plasma cutting machine but with no support from the supplier in Johannesburg we got rid of it. They failed dismally on their service level.”

“We have now invested in a JFY EFC 2kW fibre laser that has a bed size of 2m by 1.5m. The high-performance mid-price laser machine is equipped with TruFiber Cut and a Precitec cutting head. The machine is ideal for us as we are only cutting material gauges of 1.5mm, 2mm and 2.5mm. The machine was supplied by Puma Machine Tools.”

“As you know if you are cutting sheet you are bound to have to do some bending. In this department we have invested in a JFY TPR 8225/3100 CNC press brake which has a mouth of 3 100mm and a press force of 225 tons. This machine was also supplied by Puma Machine Tools.”



A conveyor system being manufactured



Leading Edge Engineering has carved themselves a niche in the wine, fish and poultry processing, brickyards/crushers, building, packaging, effluent management, and bakery industries with their innovative thinking and service orientated manufacturing of material handling systems

Hugong hand-held fibre laser welder

“We have been fascinated with the interest in hand-held fibre laser welders but at the end of the day it makes sense.”

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Another product being assembled



Various components that have been manufactured to replace wear parts

Manage your assets as your business grows

As your business grows and the amount of equipment necessary for operations expands, the importance of preventative maintenance becomes greater. Equipment performance can be maximised through performing scheduled maintenance such as regular inspections, lubrication, cleaning and component replacements. Equipment that operates at peak performance experiences less wear and tear, thus maintenance will expand the lifespan of the assets. Premature replacement of equipment can be avoided and funds saved can be allocated toward further expanding production capabilities.

“Leading Edge specialises in the engineering, manufacturing and fabricating of all types of steel products and structures. In addition, we also offer neat, quick and accurate waterjet cutting of any material in any thickness.”

“Our USP is that we provide all our customers with quick, accurate and cost-effective solutions to all their profile cutting, machine design and project management requirements. We also have a design department that has six employees.”

“A big bonus is that we operate in a business area that is conducive to doing good business.”

For further details contact Leading Edge Engineering on TEL: 021 887 5172 or visit www.le70.co.za

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