



FP Engineering: a quality focused and proudly South African local fabricator

For our SAIW Member Profile this month, *African Fusion* talks to Mark Potter of FP Engineering about his company's proudly South African attitude and increasing focus on raising service levels and quality standards.

FP Engineering is an established South African Engineering company with its head office and fabrication facility in Glen Anil, Durban, KwaZulu-Natal. "We specialise in steel fabrication and the manufacture of tanks, silos, pressure vessels, dryers, hoppers, materials handling equipment and platework for all types of plant," Potter begins.

At FP Engineering, we can offer design, drawing, third party inspections, fabrication and installation services, either as part of a broader project team or, if required, as full turnkey projects," he adds.

FP Engineering was founded 40 years ago in 1979 by Mark Potter's father, Ronnie Potter, who established a fabrication workshop to service the local sugar industry, fabricating and repairing sugar plant equipment such as tanks, hoppers, and conveyor systems. "In the early years, we focused on sugar, which we still do today; but we have since come to offer fabrication services in all industrial

sectors such as mining and minerals processing, pulp and paper, water and wastewater, chemical and petrochemical, cement and many more," he tells *African Fusion*.

"Today, the company is still run as a family business, with my brother Michael and I running the business as directors. Michael takes care of production and finance, while I am in charge of operations and marketing," continues Mark Potter.

With respect to facilities, he says that fabrication is done from a large fully equipped modern workshop and machine shop. "We have 5 000 m² under roof with full access to overhead craneage. We also have our own machine shop, which avoids us having to outsource any of our manufacturing tasks, along with one of the bigger high definition water jet cutting systems in the country. With a 3.0 m x 12 m bed, this machine can cut through carbon steel 150 mm thick, giving us the capacity for very heavy fabrication when the need arises," he says, adding that FP



Mark and Michael Potter, directors of FP Engineering.

Engineering also has a 3 000 m² laydown area outside.

Turning attention to the company's welding capability, he says FP Engineering is equipped to meet the needs of all welding procedure specifications based on client and code requirements. "For thicker section, we do a lot of submerged arc welding, while we prefer the semi-automatic gas metal arc and flux cored processes for thinner plate. We always adhere closely to the design though, and we allocate resources accordingly, with respect to equipment and welding skills," say Mark Potter.

With respect to the materials of construction, he says that FP Engineering can work with any materials chosen by the client. Carbon steel, boiler plate and all grades of stainless steel are routinely used and special epoxy coatings can also be applied, for example, to steel tanks such as those used for sewage treatment tanks.

The same applies to welding skills. "We have a number boilermakers and welders that have been with the company for many years, but if we need specific skills for a particular job, we will put the word out in the industry and then ask the candidates to do qualification weld tests to ensure they can perform to the standards required," he explains.

"Whatever the job, we will make it work. If we need to add skills or other



Left: FP Engineering also offers full turnkey projects such as the design fabrication and construction of this animal feed plant. Right: A juice heater manufactured by FP Engineering for the sugar industry, which the company has serviced since its establishment in 1979.



resources to get the job done, then that is what we will do," he adds.

FP Engineering was first qualified to the ISO 9001 (2008) quality management standard in 2011. "As a fabrication company, we then went on to become certified to ISO 3834: Part 2. This standard defines the quality requirements for welding and Part 2 is for comprehensive quality and covers critical fabrications such as pressure vessels. We completed this process in 2013 under the SAIW Welding Fabricators ISO 3834 Certification Scheme.

"In today's quality conscious environment, ISO 9001:2015 and ISO 3834 certification are necessities. ISO 3834 helps us to build quality into fabrications and acts as a clear guide to all those working on a project about their role in meeting the specified quality. ISO 9001, on the other hand, outlines what we have to do to manage and document our manufacturing quality," he tells *African Fusion*.

"Locally and International, these two quality certificates are being recognised and accepted as minimum requirements for a fabricator to be considered when tendering for a project. They identify the systems that need to be in place to consistently produce quality work," he adds.

"We find it makes it much easier to introduce new people into our organisation because we have clear procedures that they can be asked to follow. Procedures are continuously changing, to suit the work that comes in and technology advancements, and we are also routinely having to clarify grey areas that emerge. The end goal

is the most important, though, that being to complete the job on time and to specification," he notes.

A key advantage of ISO 3834, he believes, is that it differentiates FP Engineering from those trying to undercut fabrication costs by cutting corners. "From a marketing perspective, our quality certifications assure clients that we are an established, reputable, competent and quality conscious fabrications company," he informs *African Fusion*.

On the outlook for the fabrication industry, Mark Potter says that creating jobs has got to be the nation's priority. "To create jobs, we need projects so we can employ more people. We would like to see our Government do more to encourage local manufacturing and to stop cheap imports of fabricated steel. Procuring locally manufactured 'Proudly South African' equipment will create jobs – every truck body or pressure vessel sold enables us to employ four or five more people, while that doesn't happen when importing," he argues.

"We are passionate about job creation, which must be linked to skills. We therefore do a lot of in-service training here, for initiatives such as the P1 and P2 Engineers in Training (EIT) programme. In addition, we take in young trainees from artisan courses at TVET colleges to do work experience training in our facility, enabling our skilled staff to give back to the community by passing on their knowledge and experience."

At present we have six EIT students, four Learners from SAPREF and 15 TVET

learners. The TVET learners were willing to relocate to Durban to begin their in-service-training programmes at FP Engineering. "We have been hosting young graduates and trainees for ten years or so now. We believe in giving our local youngsters the best chance possible to establish their careers by giving them some good experience that helps to make them more employable.

Notable projects? Potter says there are too many. "We are now very diversified, so we have many success stories such as sugar plants, concrete batching plants, materials handling equipment, pressure vessels, animal feed plants, heat exchangers and specialised trailers.

"While we still had our ASME U-stamp certificate, we were one of the first local companies in KwaZulu-Natal to fabricate U-stamped pressure vessels for the oil and gas industry. We fabricated and delivered four of these vessels for a client in Angola. And for the sugar industry, we fabricated the first chainless diffuser in Africa, which was built here in Durban before being transported and installed at Illovo Sugar in Swaziland," Potter responds.

"We have a very good reputation for getting work done, timeously and decisively. And we are very proud to be a family-first business. We take our employees into consideration and invite their family members to work for us. Employee satisfaction helps people to thrive and ensures that our employees are motivated to perform the duties to the best of their abilities," Potter concludes. ■



FP Engineering fabricated and delivered four U-stamped pressure vessels for an oil and gas industry client in Angola.