



# The proudly South African vibrating equipment manufacturer

MechChem Africa visits the manufacturing facilities of vibrating screen and feeder design and manufacturing specialist, Kwatani, and talks to the company's CEO, Kim Schoepflin and COO, Kenny Mayhew-Ridges.

"Without a clearly defined stock coding system for all inputs, we can't easily establish a broadly accepted system to certify the local content value from local manufacturers and suppliers," she argues.

Along with a few other local OEMs, Kwatani is providing input to the DTI as part of a working committee to establish these systems so that it can be done without massive disruption or additional costs. "Coding systems are problematic. Different products and component classes have to be established and categorised and this is a huge task," she says.

"Big companies," adds Mayhew-Ridges, "particularly those that export, tend to have product categorisation in place, but we need to agree on a system that is fair to local manufacturers. Smelters have been withdrawing from South Africa, for example, and if there are no smelters for the castings we need, how can we be penalised for not smelting the steel locally? We find we have to bring castings into the country before adding value. What portion was local and what wasn't?"

"These issues are holding things up a bit, but at the end of the day, they are simply challenges we have to face. At Kwatani, we are at the forefront of ensuring that our needs and the full extent of our local contribution is recognised and accounted for," Schoepflin tells MechChem Africa.

Kwatani, she continues, is a local manufacturer of customised equipment that is purpose-designed and manufactured to meet

the screening and feeding needs of specific minerals at specific local mines. "There are many variables, so our involvement starts before the design stage and goes through to beyond the operational phases of a project. It is in all of our interests to ensure the real needs of our mines are met.

"We are confident, no matter what verification system emerges, that we will end up as the only local OEM of vibrating screens able to achieve exceptionally high local content values – in excess of 80% by value," Schoepflin reveals.

Mayhew-Ridges continues: "Research and development, laboratory testing, engineering and design are all done locally, while competitor OEMs are mostly foreign-owned and/or manufacture under license from foreign-owned OEMs. No other company of our calibre can supply vibrating equipment based on local intellectual property (IP) and manufactured to the benchmarked global standards we adopt," he says.

"In addition, we are 51% black women-owned, and the women are active in the business, sitting on the committee of OEMs providing the DTI with the insight we need to successfully comply with the new charter," adds Schoepflin.

In addition to manufacturing locally, Kwatani is also proactive about local purchasing wherever possible. "Apart from our unbalanced drives, which have to be manufactured overseas, we are actively engaged in supplier

The publication of the new mining charter last year, has given a clear idea of what the South African Government wants from suppliers into the industry. "Localisation has become a massive drive in the South African mining industry because the new charter has published guidelines for local content that mining-rights holders must achieve," begins Schoepflin.

"While we welcome the initiative in principle, a system for accurately verifying the true value of locally manufactured content in every piece of equipment purchased by a mine or manufactured by a local OEM such as ourselves has not yet been developed or agreed. Anyone can claim to be local and neither the DTI nor SABS has yet managed to get a handle on exactly how to calculate accurate local content values," she adds.

"Let's take a piece of steel, for example," Schoepflin argues. "One has to take at least three steps back to see where its value comes from. Do we go back to where the iron ore was mined? Where it was processed into steel and rolled into bars? Where the screen grid that we might purchase as an input material was manufactured? The history of all this added value has to be accurately recorded to get any real sense of how much of that value originates in South Africa," she tells MechChem Africa.



The assembly floor at Kwatani's Kempton Park facility covered with an array of products on order from gearboxes to motors and screens.



A Kwatani double deck screen order being finalised for dispatch on the shop floor.



The shot blasting process ready to commence in Kwatani's purpose-built booth. Even the paint specifications come with certificates.



Specialised welding is an integral part of the fabrication and assembly process at Kwatani.

development and support. South Africa does not yet have a local bearing manufacturing industry or the capacity to manufacture vibrating motors to the quality we require, but the designs are ours and we own the IP," says Mayhew Ridges, adding that this is another area Kwatani feels should be taken into account when verifying local added value.

"Many components used in our systems are not convenient for us to manufacture ourselves, such as polyurethane (PU) panels, for example. In sourcing these components, we prefer to support local people and we do not shave input costs by importing low quality materials," Schoepflin continues.

"We see our suppliers as part of our family. Almost all of them have become long-term partners and most are within a 10 km radius of our Spartan facilities. We monitor our suppliers carefully so as to support them in providing exactly what we need in terms of quality and service. This makes us reluctant to switch suppliers as it is a substantial process to get a supplier vetted to our standards. We are happy to switch where we can, but end quality can never be compromised," she explains.

Describing the recent addition of a local foundry as the supplier of housings for

Kwatani's exciter gearboxes, Mayhew-Ridges says that three Kwatani EXCO members visited the site as part of the vetting process. "Our head of quality and all those involved in the exciter manufacturing process, including those on the machining side, were involved in developing the castings we needed, which are manufactured in spheroidised cast iron so the metallurgy has to be right. We were there to ensure the processes used and the quality procedures were in place – a test of every melt has to be conducted and the results recorded, for example," he informs MechChem Africa.

"While we can often get work done more economically overseas, we prefer to keep control of the process to lower our risks," says Schoepflin. "A container of poor quality castings can be hugely problematic with respect to reputation and mitigation costs," she points out.

She says that when buying an expensive process-critical piece of equipment where downtime directly affects production volumes, one needs a supplier that is not simply ISO 9001:2015 certified.

Quality management standards are not designed to pick up individual quality issues

on a piece of equipment so in addition to its ISO 9001:2015 certification, Kwatani does extensive testing on its screens and its feeders and their individual components. "We do magnetic particle testing on our welds, for example, and we use third-party inspection personnel to independently verify the structural integrity of our systems. Each system is fully certified according to our quality certification programmes (QCPs) and even the paint specifications come with certificates," Mayhew-Ridges notes.

"Every manufacturing and testing step is traceable back to the person responsible and every non-conformance and the procedure adopted to overcome it is drawn to the attention of senior management. This helps us to resolve issues quickly and, if systemic, we permanently adjust our processes to prevent reoccurrences," he says.

"We will not give a process guarantee unless we believe the equipment we have supplied can do the job. We frequently find ourselves in competition with companies supplying, for example, a screen we believe to be inadequate for the job. A larger and more robust unit that can reliably perform at the higher G-force required is likely to be more expensive, but at times cost-sensitive projects based solely on minimising capex will seldom take this into account.

"When looking at critical vibrating equipment such as screens and feeders, the total cost of ownership is what really matters and, as our history proves, one of our custom designs will be much more efficient and cost-effective over the equipment lifetime than a cheaper off-the-shelf, misfit," Schoepflin concludes. □