



# The MSI, industrialisation and welding capability

SAIW executive director, John Tarboton, and business development manager, Etienne Nell argue the case for using industrialisation through manufacturing and construction as the key driver of economic growth, and outline SAIW's plans to collaborate with the Steve Tshwete Local Municipality (STLM) and the Mpumalanga Stainless Initiative (MSI) to unlock this potential.

The South African Government recently announced that welding had been identified as one of the 13 scarce trades, while indicating that there would be a strong demand for welders to be employed on infrastructure and other strategic programmes; such as the War on Leaks and the new oceans economy programme, Phakisa.

"Also, the skills of our welding workforce are trailing behind these of other countries with respect to delivering the consistent quality welds necessary in the power generation, petrochemical, mining and fabrication industries," notes John Tarboton, SAIW's executive director.

"But we at SAIW view these realities as a call to action rather than a reason to despair" he adds. "Without excellent welding skills for the installation, maintenance and repair of equipment and the delivery of plant components, products and services, South Africa's chances of getting foreign direct investment and growing local markets will be seriously hampered," he argues.

"We therefore need properly qualified artisan welders with the required skills to enable local companies to benefit from this demand, which will establish one productive industrial platform as the foundation for the next," he suggests.

## Industrialisation to drive GDP growth

"Commodities-based growth from 1994 to 2006 resulted in a per capita GDP compound annual growth rate of only 1.95% – and this reduced to 0.5% from 2007 to 2019. A manufacturing-led growth path is at the heart of the industrial strategy of President Cyril Ramaphosa's administration. This is because industrialisation through manufacturing and construction leads to economic growth and, most importantly, to the creation of quality jobs with high labour absorption rates," argues Tarboton.

"In metals manufacturing and construction, welding is the enabling technology that allows these activities to take place. Welding, as a career choice, is able to ab-

sorb unskilled, poorly educated people and give them in-demand, well-paid, quality jobs," adds Nell.

Tarboton cites a recently conducted SAIW survey which shows that 29% of SAIW students originate from Mpumalanga. He goes on to quote *The Local Economic Development Analysis* for Steve Tshwete Local Municipality (STLM), which reports that STLM is a manufacturing hub for Mpumalanga and home to a number of steel, petrochemical and beverage production sites. This results in the manufacturing sector contributing 17.2% to STLM's GDP, significantly higher than that of the province and the country as a whole.

"The report also noted that 'steel beneficiation, which is currently being leveraged by the Mpumalanga Stainless Initiative (MSI), presents a sizeable market opportunity for SMMEs and could be expanded' and that 'this would require artisanal skills such as welding,' says Tarboton.

Nationally, following nearly two years of robust talks facilitated by Dr Bernie Fanaroff, South Africa's Steel Master Plan was signed by representatives from business, labour and government. The plan has been developed on three pillars:

- Boosting demand for steel and steel products, primarily by reviving South Africa's stalled public infrastructure roll-out, driving localisation or import substitution and by leveraging the market access being created through the implementation of the African Continental Free Trade Agreement (AfCFTA).
- Addressing supply-side constraints, including electricity disruptions and tariff hikes, logistics bottlenecks, uncompetitive inputs and inadequate skills, and

research and development.

- Implementing cross-cutting interventions, including the creation of a Steel Industry Development Fund, to be capitalised through the introduction of a levy of between R5/t and R10/t on all steel sold domestically, whether it be produced locally or imported.

"The timing of this master plan may be opportune in the context of the STLM-led long-term plan to establish a Centre of Excellence (CoE), with the SAIW being seen as a key partner: an incubator of steel fabrication SMMEs by assisting in addressing inadequate skills. In addition, the Steel Industry Development Fund or the R1.5-billion Downstream Steel Development Fund through the IDC, may be made available to graduates from the MSI incubation programme to establish new SMMEs at the Centre of Excellence," Tarboton notes.

## SAIW's MSI presence

Collaboration between the SAIW and Mpumalanga's Department of Economic Development and Tourism began in 2013 when a permanent SAIW presence in STLM was proposed. After further discussions in recent times, it has been agreed that a welding school should be established at the Mpumalanga Stainless Initiative (MSI) in Middelburg, with the longer-term view that SAIW becomes an anchor tenant at the Centre of Excellence.

In phase one, SAIW has proposed establishing a satellite facility in STLM at the current premises of the MSI. This would initially comprise a ten-bay Welding School, with SAIW providing welding power sources, workshop equipment and a fume extraction system. Should some additional capital expenditure be made available, the SAIW would then transform this facility into a fully-fledged Welding School.

To establish market demand, it is anticipated that the SAIW and the Department of Economic Development and Tourism arrange a joint presentation for industries in the STLM who employ welders, for example metal fabricators. This potential market could be identified through the membership of MCCI as well as STLM local economic development contacts.



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"SAIW needs a show of interest by companies willing to appoint 10 or so aspiring young apprentices on three-year apprentice contracts. The apprentices would then undergo both theoretical and simulated practical training at the newly established facility in accordance with the newly registered QCTO Occupational Welder Qualification; together with authenticated training at the workplace, the quality of which will be overseen by qualified artisans employed by apprentices' fabrication companies," explains Nell.

"This programme is based on dual-system apprenticeships that combine technical education together with simulated practical training – at the newly established Welding School – and extensive authentic work experience in the employer's facility. Programmes such as these are far more likely to deliver skilled, capable and properly qualified artisan welders to support economic growth," he says, adding that they also deliver increased availability of intermediate welding skills from apprentices on work experience.

The success of the Welding School

would depend on the participation of local industries, mines, and fabricators to adopt the programme, recruit apprentices and offer apprentice contracts. "If we are to raise the bar in welder training to align with international benchmarks, then industry must play its part," Tarboton tells *African Fusion*.

"With this SAIW Welding School we aim to help grow the provincial economy through industrialisation, using the enabling technology of welding to grow the manufacturing sector and, ultimately, to create in-demand jobs for local and international projects," he adds.

A second phase of SAIW involvement is also being planned: "Following the successful establishment of the Welding School we hope then to expand our MSI-based service offering to include some of our flagship courses, such as Welding Co-ordination, Welding Inspectors and Non-Destructive Testing training by our highly qualified and experienced staff.

"This would make it a lot easier for the large percentages of students who are already coming to SAIW from Mpumalanga," Tarboton concludes. ■



The Local Economic Development Analysis for Steve Tshwete Local Municipality (STLM) report noted that The Mpumalanga Stainless Initiative (MSI) presents a sizeable market opportunity for SMMEs and that 'this would require artisanal skills such as welding'.



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