

Promise of stainless steel undermined

There is a rising trend towards carbon steel fabricators moving into the stainless steel area without a proper understanding of the differences. This article explains how the South African Stainless Steel Development Association (sassda) is fighting to uphold industry standards and be a voice for best practice.

In a tough economy, consumers veer towards the cheapest option and some contractors may be tempted to cut corners. Unfortunately, contractor mistakes cost a fortune, killing profits. While both parties will blame the other, they also often blame the stainless steel material itself, through angry exchanges that waste time. So what happens when stainless steel contractors fail to deliver on promises?

Sassda executive director, John Tarboton, says: "Based on the number of complaints we receive, we have seen a rising trend towards carbon steel fabricators moving into the stainless steel area without a full understanding of the differences between the materials, often with costly mistakes. Sassda's role is to uphold an industry standard, provide advocacy and education for its members and the consumer and be a voice for best practice. Our code of conduct provides access to key pointers for contractors and consumers to consider before utilising a so-called 'expert' contractor."

During contractor altercations, end-users are often misled in order to place the blame on stainless steel as a product, however sassda counters that in most cases it may not be poor fabrication, but rather the poor installation of the product. Apart from this being a safety risk, it can lower the life expectancy of the stainless steel product as its corrosion resistance becomes compromised. Sassda is clear that member companies that fail to adhere to their code of conduct regarding best practices will see their membership terminated.

Says Tarboton: "To become a member of sassda a company needs to be ratified, mean-

ing we investigate the company, making sure correct practices are being performed together with good business ethics. We provide education and training to both our members and the public on the qualities of stainless steel, the correct selection and the required grading of the material to the application, together with its required finishes.

"Stainless steel is a quality product. We understand that mistakes can happen, but it's the way the member company handles these that sets a quality fabricator apart from the rest. We also appeal to consumers to only make use of industry standard member knowledge and practices to avoid costly mistakes."

Sassda was recently asked to intervene when approached by a disgruntled KwaZulu-Natal client unhappy with the construction, installation and workmanship of a balustrade on his upmarket home. Sassda KwaZulu-Natal regional manager, Angie Baker, visited the client on site and together with a technical expert, generated a report for further sassda review.

"It was completely unacceptable that carbon steel bolts had been used, which accelerate galvanic corrosion and would cause the balustrade to fail in a relatively short period, leading to a possible safety hazard. The balustrade materials had also been contaminated by carbon steel carry-over in places, either during fabrication or installation, resulting in premature staining of the base material. Joints in the balustrade had been glued with an epoxy or adhesive instead of being welded and had come loose, with further poor joint quality seen in its construction, and the stainless steel had not

been correctly polished after installation.

"The job clearly did not comply with the legal requirements of SANS 10400 or SANS 10160, both of which require approval of the design and installation by a suitably qualified professional engineer, which we doubt was done. Quite bluntly, the balustrade was a hazard and dangerous to the safety of the homeowner. We advised that the entire structure be removed, at the fabricator's cost, and replaced using an experienced balustrade manufacturer," says Baker.

Providing feedback on his encounter with sassda, the homeowner has since responded saying: "Sassda went out of its way to assist me with this issue. They came to inspect the work that had been done, took photographs and discussed the workmanship with me as to what was right or wrong. They then supplied me with a list of approved stainless steel suppliers in the area with whom I can deal in the future. I appreciate that they stepped in as a watchdog for the industry and assisted me and provided support."

Baker comments: "The current economy sees many people being left without a job while others might feel they are not earning enough so they start their own businesses with little or no knowledge of stainless steel. This causes a problem for the stainless steel industry because incorrect procedures are often used, resulting in the end user receiving a sub-standard job and making stainless steel look bad, in the process. Stainless steel is a great product and if fabricated and installed correctly it can last the consumer a lifetime. But if not used correctly, it can corrode in a matter of months." □



Examples of sub-standard stainless steel balustrade installation in KwaZulu-Natal.

Stainless steel could save millions in municipal water losses

While South Africa is experiencing Stage 2 and 3 water restrictions following its worst drought in decades, a spotlight is falling on the use of stainless steel in water distribution and service pipes in South Africa to reduce leakages and maintenance costs and preserve our already strained water resources into the long-term future.

The importance of tightening up South Africa's water supply infrastructure comes into sharp focus when one considers statistics cited in a Timeslive.co.za report, which reported that up to 40% of Johannesburg's water is unaccounted for, which cost the city R1.16-billion in the year ending June 30, 2015. Of that, about R851-million's worth of water was lost to leaks.

These high losses have been attributed, in part, to the use of inferior or inappropriate metals in pipe joints and other fittings being used by municipalities including flanges, tee-

pieces, reducers, bolts and nuts. The short lifespans of these components, compounded by high-pressure systems and high corrosion levels in South African soils, are further challenges for leak detection and repair.

Sassda's executive director, John Tarboton explains: "There is high value potential in using stainless steel material for service piping and all fittings (predominantly manufactured using grade 316 stainless steel) in the service delivery of municipal water that can potentially save millions currently lost in leakage and filtration costs, as well as helping to reduce the usage of water per capita.

"With the use of corrugated stainless steel piping, the need for joints in the system is reduced, allowing the corrugated stainless steel pipes to maintain their strength, improve workability and extend the piping systems' service life. There is a clear cost

savings case, both in the treatment of water that is lost through leakage, as well as with the water that municipalities are unable to bill for its distribution and use. Stainless steel is an optimal material in water system applications and while it comes at a price, it is an investment in the country's infrastructure that offers cost-savings benefits that will still be seen 100 years from now."

Tarboton concludes by saying: "We also have the ability and the technology available here in South Africa to manufacture the specified stainless steel pipes, something which could be a coup for the manufacturing industry in South Africa, both at an incubator level and as a commercial enterprise. If our municipalities are already investing so heavily in leakage repairs and replacement piping, it makes sense to replace outdated pipe systems with stainless steel." □

Corrosion protection against hazardous fuels

Specialist coatings manufacturer and supplier, Kansai Plascon, has been involved with the petrochemical and refinery industry since the mid-1970s and is always expanding its range of products, as well as offering a 360° guarantee.

Kansai Plascon offers internal and external corrosion-protection systems for tank lining and other environments in the petrochemical and refinery industry. These coatings offer ideal protection against various fuel types.

The specialist coatings manufacturer and supplier has been involved with the petrochemical and refinery industry since the mid-1970s, points out Mike Byrd, national protective coatings specification manager at Kansai Plascon.

"We assess sites for asset owners in the petrochemical and related refinery sector, compile reports on our findings, and then provide corrosion-protection solutions specific to each scenario," Byrd explains. "We offer a 360° guarantee, in addition to monitoring all progress."

Specialist coating products supplied to this sector are Plascoline 1000 internal lining, Plascotuff 3000 primer, Plascotuff MIO intermediate coating, and Plascothane 9000 topcoat. In addition, the Protective Coatings division offers technical and aftermarket support, as well as project management.

"We go to great lengths to support and supply our customers, including new product developments. Kansai Plascon has always

been at the forefront of coatings development, as we expand our product range with new technologies," Byrd highlights.

"Our custom-made solutions extend the life of essential infrastructure in the petrochemical industry by protecting tanks,

piping and structural steel from corrosion. By keeping such infrastructure serviceable, these operations run continuously, with no costly stoppages and downtime, which translates into constant production rates," he concludes. □



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