

case study

STAINLESS STEEL CREATES SUPERIOR LIFESPAN FOR PUBLIC TRANSPORT BUSESSES



Sassda honorary member **Don Maxwell** has spent a lifetime championing stainless steel especially when it comes to its role in the growth of the local economy. Here he presents a fascinating Case Study on the role 3CR12 stainless steel played in creating a far superior life span for Golden Arrow buses which are a key part of transporting millions of commuters each day, and which could well be applied to other forms of public transport infrastructure in South Africa...

Before the introduction of Grade 3CR12 stainless steel to the Golden Arrow Bus Services fleet, bus bodies were made of mild steel. According to retired Company Engineer Roger Overton, bus bodies made from

mild steel were not durable at all, and rust was an endemic problem.

In fact, the "mild steel problem" only grew in magnitude with no solution in sight. "We had even resorted to permanently removing inner panels



on buses so that repairs could be made more easily," Overton says.

The issue became so serious that the last double decker buses were removed from service because the condition of the mild steel was so poor that it did not meet the Company's stringent safety standards. The mild steel was not only unsightly and extremely expensive to maintain but had become a safety issue.

Overton recalls that he first came across 3CR12 at bus manufacturing plant BUSAF. "They were building double decker buses at BUSAF and only the side frame to roof section was available in 3CR12 at that time. It was becoming clear that this new development could be a game changer from early on and as more sections became available, we started to make use of them," he said. Senior management at the time was relieved that a solution had been found and fully supported the move away from mild steel.

Retired Body Shop Supervisor Jamiel Adams recalls how Golden Arrow began to build its own 3CR12 bus bodies at its Central Engineering Complex in Epping. "We built close to 100 3CR12 bodies – this was the start of our 2400 bus series, and we also tested it on Leyland MKI and MKII's and ERF bus bodies," he said. The result was an unbelievable reduction in missed trips as buses were no longer laid up in the Body Shop continuously for major structural work.

When Golden Arrow began its long-standing relationship with MAN,



Overton insisted that 3CR12 was used despite this not being their standard material of choice. It proved to be a wise decision as Adams and Overton recall that a 3CR12 MAN bus which was manufactured in 2000 was stripped in 2010 with no rust to be found anywhere. This durability is also evident in the 16-18 year old buses that the Company was recently able to sell.

The introduction of Grade 3CR12 stainless steel, therefore, proved to be a real turning point for the company in many ways. The quality of our buses improved significantly, its rust resistance eliminated the treatment, paint and remedial work needed for mild steel bus bodies and ultimately resulted in sizeable cost savings.

