



Customer Report

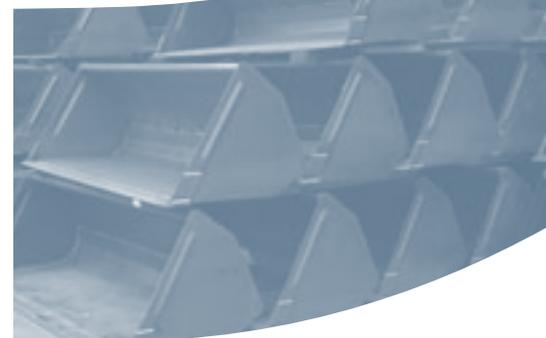
Customer: Challenge Implements
Location: Orange, NSW
Project: Bucket Attachments
Date: January 2006



A New Challenge for XLERCOIL®

Australia's leading tractor attachment specialist, Challenge Implements, is maintaining its tradition of world-class engineering excellence and innovation, with the help of XLERCOIL® Steel.

In keeping with the company's strong commitment to continuous improvement, research and development, Challenge has adopted a state-of-the-art robotic manufacturing process, which is an integral component in the fabrication of Challenge's brand new lightweight bucket attachments.





Top Right: Challenge has produced two different types of lightweight bucket. The heavy duty earthmoving bucket which is standard for the 21 & 31 series loaders, and the heavy low volume earthmoving bucket, giving wider cut ability but maintaining correct volume capacity.



Established in 1959, Challenge is Australia's number one manufacturer of agricultural front end loaders. Today, Challenge's 21 and 31 series front end loaders are still the benchmark for good design, sturdiness and value.

Manufactured at Challenge's 7,000 sqm factory in Orange, NSW, the new lightweight bucket is a breakthrough in agricultural equipment design. Developed to achieve a significant reduction in weight, while offering the same strength, the new bucket offers greatly increased load capacity, explains Challenge Implements' Production Manager, Maziar Fadaee.

"The new lightweight bucket design benefits our customers by increasing the load capacity of the bucket," he says. "In relation to tractor operating capacity, you can only carry so much before you exceed the tractor's axle capacity. By making the bucket itself lighter, you can increase your payload. This contributes substantially to loader efficiency and productivity."

Challenge has produced two different types of lightweight bucket. The heavy duty earthmoving bucket which is standard for the 21 & 31 series loaders, and the heavy low volume earthmoving bucket, giving wider cut ability but maintaining correct volume capacity.

"The new bucket was developed by our expert in-house team of engineers, who designed the product using state-of-the-art 3D Cad software," says Maziar. "At Challenge Implements, we are committed to research and development. Our goal is continuous improvement, and maintaining our position as the market leader in this industry; product innovation is the key to achieving this."

In order to achieve the desired lightness and strength, Challenge collaborated with BlueScope Steel in the development of a special grade of XLERCOIL® steel, a brand of high quality hot rolled coil steel from BlueScope Steel.

"We approached BlueScope Steel with our steel requirements, and they supplied a specific customer negotiated grade of XLERCOIL® steel especially for us," says Maziar. "This specific grade of steel was integral to reducing the bucket weight, while still achieving great strength."

"We use XLERCOIL® steel, the best coil steel available in Australia, we use the best machinery to cut and form the steel, and the latest robotic technology to assemble the buckets. The finished product is the best bucket currently available on the market."

Maziar Fadaee, Production Manager, Challenge Implements



"We then approached Coil Steels, one of BlueScope Steel's distributors, and they purchased the XLERCOIL® steel in bulk from BlueScope Steel," he continues. "Before the XLERCOIL® steel is delivered to us, it's sent to Metpol, where it's cut into the required plate size, and then delivered to us."

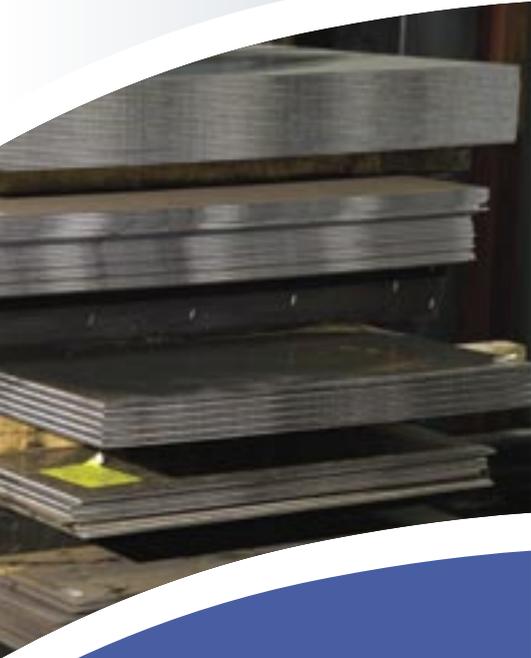
Once the XLERCOIL® steel arrives at the Challenge Implements factory, it's cut into the desired profiles using the latest laser technology. The components are then formed, and moved into the workshop's robotic area, where they are assembled and welded by Challenge's new dual robotic system.

Allan Yates, Chief Technologist Plate & General Strip said 'BlueScope Steel's Customer Technical Services Group has the skills and knowledge necessary not only to answer technical enquiries over the phone, but is able to work with

Above: The dual robot's advanced tracking system allows the robots to correct minor errors in joint alignment.

“BlueScope Steel assisted us greatly in the development of the new lightweight buckets. We worked collaboratively on the steel’s development – and found that it was the best steel for our needs.”

Maziar Fadaee, Production Manager, Challenge Implements



customers to help improve process and product efficiencies in relation to the use of our products. It was a pleasure to be able to contribute to the development process for such an innovative product by finding an XLERCOIL® steel grade that would better meet Challenge Implements’ requirements.

This system is the first dual robot installed in Australia by Robotic Automation which uses weld seam tracking. “This tracking system is quite advanced as it allows the robot to correct minor errors in joint alignment,” says Maziar. It’s a great bonus in welding quality and efficiency.”

“This new system has been a learning curve for all involved,” he continues. “Because the components are getting welded and fabricated by robotics, the placement of the bucket jigs, the accuracy of the cutting and forming of components, and the quality of the steel is absolutely crucial.”

As every aspect of the process has to be perfect prior to assembly and welding, the result is an end product of exceptionally high quality. “We use XLERCOIL® steel, the best coil steel available in Australia, we use the best machinery to cut and form the steel, and the latest robotic technology to assemble the buckets. The finished product is the best bucket currently available on the market,” says Maziar.

In addition to superior quality, the dual robot system has led to a quantum leap in productivity and efficiency for Challenge and its clients, Maziar explains. “Having two welders, welding simultaneously has enabled us to manufacture twice as many buckets at a time – which is good for the business, and great for our customers, in terms of lead times and delivery.”

“BlueScope Steel assisted us greatly in the development of the new lightweight buckets,” he adds. “We worked collaboratively on the steel’s development – and found that it was the best steel for our needs.”

For more information
on XLERPLATE® steel call
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