



Keeping it real

When it comes to site dumpers, one name has always been at the forefront of the market with a hard won reputation built on quality and durability. Matt Bailey visits the Thwaites site dumper factory in Leamington Spa.

On a sunny spring day, the Thwaites factory in the heart of the English countryside in Cubbington near Leamington Spa has an idyllic quality about it, from the outside at least. Once inside however you step rapidly into the 21st century, surrounded as you are by a state of the art manufacturing facility.

The area is renowned for its automotive industry prowess with Jaguar Land Rover based nearby as well as the metal bashing and automotive industry history and skills found in Birmingham and Coventry. You couldn't pick a better spot for a company to make site dumpers and Thwaites has been doing just that (literally) since 1937.

The machines themselves range from one to nine tonnes capacity and are renowned for their robust straightforward construction. Managing director Ian Brown explains the production philosophy. "We are all about manufacturing," he stresses. "Sheet steel comes into the factory at

one end and finished dumpers go out at the other and in between we have a one man one machine production process with an absolute focus on quality. If it's yellow and metal on our dumper, we make it here."

This approach gives the company a high degree of control over the quality of the finished product and standards in the factory are very high. They even had a delegation down from Toyota to assess their working methods and apart from a few suggestions for tweaks here and there they reportedly left very satisfied with the Thwaites approach.

"The Thwaites name is synonymous with the best-quality dumpers on the market," says Ian. "Advanced design and investment in the latest high-tech tooling provide our customers with the very best products at the cutting edge of technology. This means more than just the strength and reliability; it means an increased focus on customer satisfaction, safety and ergonomics across the range."



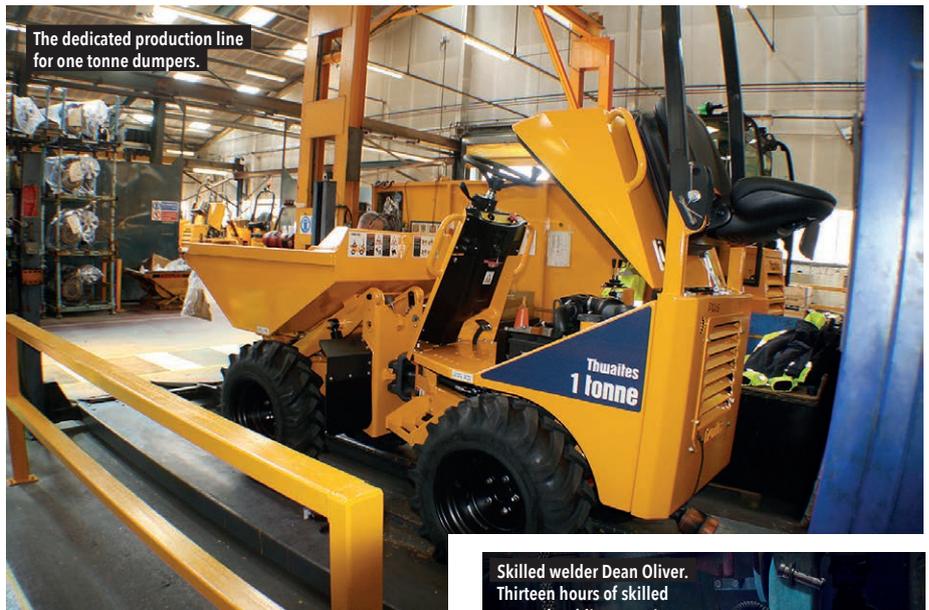
Thwaites has been building dumpers in Leamington Spa since the 1930s.



One man, one machine production: Lucasz Halesiah fits parts to a chassis.



The dedicated production line for one tonne dumpers.



Skilled welder Dean Oliver. Thirteen hours of skilled manual welding goes into a single skip.



Of course Thwaites is famous for only building dumpers, so they are without doubt experts in that field. "At every stage of the manufacturing process each component has passed the most stringent tests before the assembled dumper goes through its final pre-despatch inspection," says Ian.

THE PRODUCTION PROCESS

I am joined by UK sales manager Andy Sabin who leads me around the factory's impressive facilities. "As well as making our machines robust and long lasting," he says, "with the minimum use of plastic the solid steel construction means the machines are highly recyclable."

49 years service and counting. Brian Clewes is Thwaites' longest serving member of staff



Our 'secret' approach is that we make it ourselves wherever possible, that way we control our own quality."

The factory works on a two shifts basis with enough flexibility to accommodate production peaks. The steel comes in from a range of suppliers. Although the use of large amounts of steel in the dumpers' construction offers many significant benefits, one of the downsides is that the constantly fluctuating price of the raw material can be difficult to predict and plan for.

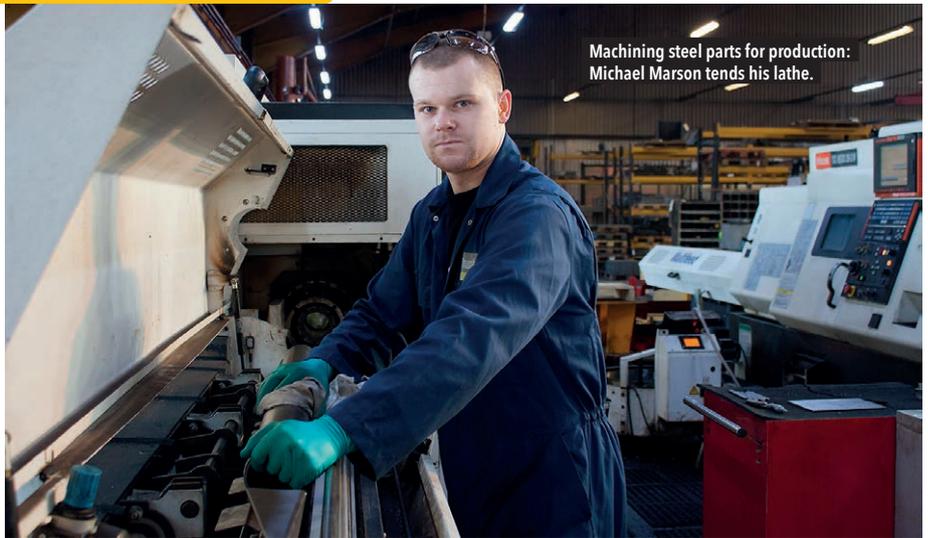
The raw steel is cut into components on a range of laser cutters. "As well as offering a superior edge finish and the potential to produce complex 2D shapes, we can maximise our steel usage by using nesting software to get the maximum number of parts out of a single sheet," explains Andy.

The laser cut parts are then bent and formed on a range of pressbrakes if necessary and these parts and any machined steel items are then transferred to robot and manned welding cells. Thwaites has invested in new IGM & Trumpf robot welding cells that are 75% more efficient than the ones they replaced but items like the dumper skips are still all hand welded by highly experienced welders. "Thirteen hours of skilled manual welding goes into a single skip," says Andy.

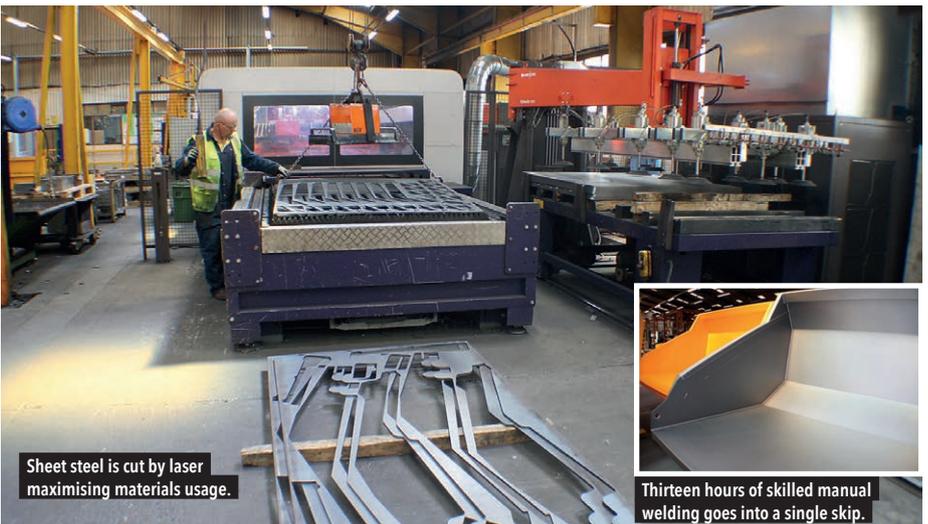
Following welding, all steel components are shot-blasted to prepare their surfaces before painting. As part of its on-going process improvement programme the company has invested in its paint shop with a switch to a more environmentally friendly low-solvent paint technology method that has reduced the factory's emissions.

After painting components are combined into sub-assemblies before final assembly, a development recommended by the Toyota team. Final assembly is a one man, one machine, no assembly line process – except for the one tonners which have a dedicated line. "This 'no assembly line' approach gives us total control over our quality," says Andy. "It is extremely rare that we have a problem with production."

Thwaites uses Deutz diesel engines on all dumpers of six tonnes and over and Yanmar power on all dumpers below six tonnes. The machines' hydrostatic transmissions are all Bosch Rexroth units and the axles are supplied by Dana Spicer, all top quality components.



Machining steel parts for production: Michael Marson tends his lathe.



Sheet steel is cut by laser maximising materials usage.

Thirteen hours of skilled manual welding goes into a single skip.



Engine fit up with Phillip Quatermaine.



Assembly on the one-tonner production line with Peter Giles.

Once the dumpers are complete they undergo a rigorous testing process before shipping out to the customer.

Out beyond the yard behind the factory is the company's extensive test track where new Stage V-engined dumpers will soon be put through their paces.

FAMILY BUSINESS

Many of the guys in the factory have been with Thwaites for the long haul - many for over twenty years or more. It is still very much a family business. "We have a lot of highly skilled people who have been here a long time," says Andy. "But we are trying to get a more balanced age profile in the factory, so you will see a lot of young new recruits working alongside our old hands."

It is a friendly, open atmosphere on the shop floor and out in the yard Andy stops to chat to delivery driver Brian Clewes. Brian is the company's longest serving member of staff; he has been with Thwaites for 49 years, man and boy. He may be coming up to retirement but Brian doesn't have too long to stop and chat, he is a man on a mission with dumpers to deliver.



Andy Sabin (left) and Brian Clewes discuss dumper business.



Vintage dumper - early Thwaites three-wheeler in reception.

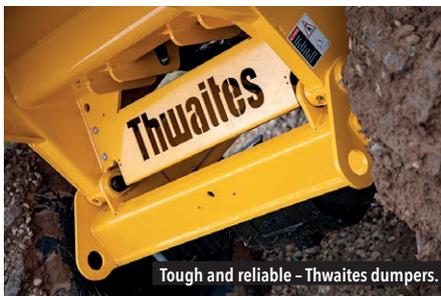


Installing the Deutz engine.

FACING FORWARDS

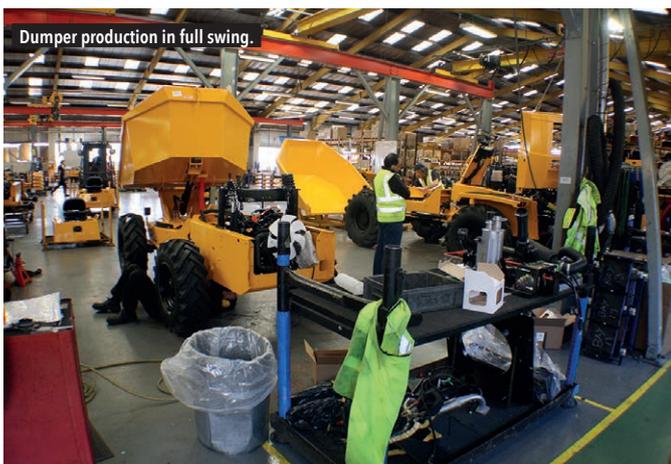
With plenty of big projects underway and planned for the future there is a healthy demand for Thwaites products out in the market. "We have a good pipeline for work," says Ian Brown. "Our customers have full order books with projects like Hinckley B, HS2 and Crossrail as well as motorway upgrades and house building. There's

lots to be getting on with." While the emphasis at Thwaites is very much on building the best simple, robust machines possible it does also have one eye on the future. With Stage V engines coming on line testing on Stage V dumpers is about to commence on the test track. The company launched a cabbed dumper at Plantworx two years ago and these have been proving very popular the issue of visibility has also been tackled recently. And of course like all other manufacturers they are watching developments in the electric vehicles sector with great interest.



Tough and reliable - Thwaites dumpers.

"It is a back to basics product though," stresses Ian. "Safe, robust and dependable. These are high quality machines with great dealer network back up. We are working on a number of developments but we don't want to over-complicate what is a simple product - it's about getting the balance right."



Dumper production in full swing.



Thwaites makes all its own steel components and assemblies. John Young checks his welding handwork.