

1st-class carriage

Sturdy racks are essential to carry bikes safely on cars. And that's what Pendle Engineering make – in Lancashire. **Jon Sparks** paid a visit

Many Cycle readers would agree that most useful thing you can do with a car is use it to transport bikes. Our bikes are often our most treasured possessions, while even cheap cars tend to cost a lot of money. All things considered, the bit that connects the two has a vital job. Bike racks are not worth skimping on.

Just think about the demands that a bike rack can face. When I visited Pendle Engineering, home of Pendle Bike Racks, their design and development wizard, Martin Robson, was running a computer simulation for a new design of roofrack. Imagine the heaviest bike for which the rack is rated, and the longest possible wheelbase. Now imagine the

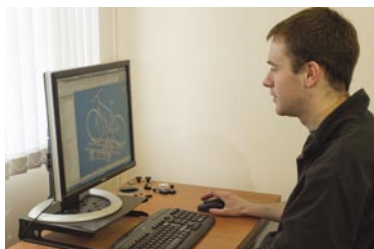
driver makes an emergency stop.

The software was crunching numbers for all possible stress-points. Even with powerful PCs, this takes a while and wouldn't have been possible at all a few years ago. Now, with CAD (Computer Aided Design) packages and stress-simulation software, many design wrinkles can be ironed out before the first prototype is built and real-world testing begins.

DIY beginnings

It's a far cry from the days 20 years ago when Pendle made their first bike racks. Befitting a family firm, family holidays were the prompt. Pendle's MD Ray Smith (whose brothers Eddie and Steven are also mainstays of the company) wanted to take bikes on the annual trip to Cornwall. »

MADE IN BRITAIN



Photography by Jon Sparks, except bottom left (Pendle)

(Clockwise from above) Welding robots are used for some processes but others are done manually, like the TIG-welding here by Jamie Asfar. Martin Robson uses PC software to design products and gauge their performance before prototypes are made. Tubing is cut and drilled by a computer-controlled laser cutter. Parts for strap-on racks, laser-cut from sheet metal then folded.

» And as the boss of an engineering company, what could be more natural than building your own racks?

They didn't use CAD software in those days: Ray and co relied on their engineering intuition, grounded in decades of combined experience cutting, bending and welding metal. They made some racks and they worked. They looked around at existing products in the marketplace and decided theirs were better. 'Bike racks in those days were cheap, cheap, cheap,' says Ray. He doesn't add 'and some of them still are' but I'm pretty sure it's what he's thinking. What he says is: 'We know we're not the cheapest, but we think we are the best.'

Seeing an opportunity back then, they made some more racks and sent them out, sale or return, to selected dealers. Sales far outstripped the returns and Pendle Bike Racks were launched. Their motto is 'Strong, Simple, Safe'.

Mill town manufacturing

Bike racks are an important part of Pendle Engineering's output, but only a part. A good thing too, as the bike rack business alone would not sustain the levels of investment needed. There's some highly impressive kit on the factory floor, starting with two massive laser cutting machines (one for sheet metal, one for tubes). Pendle use high-tensile steel tubing (also British-made) for their bike racks but the laser goes through it like a hot knife through butter.

Bending the tubes is the next step and this too is mostly done robotically, though they still need highly-skilled people to operate the machines.

There are robot welders too (shades of still 1990's car ads) but some fine welding is still best done by hand. I watch as Jamie Asfar wields the welding torch with surgeon-like precision.

Some things have changed, then, but some remain the same, and Pendle Engineering remains a family-run business, firmly grounded in the Lancashire mill town of Nelson – coincidentally, the home of Carradice.

Modern demands

I think I can see, if not a connection, at least some common ground, in a regard for traditional craftsmanship combined with a willingness to

innovate. Pendle have had to keep up with evolution in both bicycle and car industries. Ray doesn't claim any credit for foresight, but they did launch their first racks just about the same time that the mountain bike boom was really getting started, which looks like good timing. More recently they've had to make extra-beefy racks to take downhill bikes. Yet it's the fast-changing nature of the car industry that really keeps them on their toes.

Car manufacturers aren't inclined to issue details of their new models in advance and therefore one of Martin's jobs is to tour the showrooms from time to time to check the dimensions of new cars to ensure that their racks continue to fit. The trend for adding plastic spoilers to hatchback tailgates, for example, means Pendle's popular strap-on racks can't be used. In the same vein, Pendle now make racks with increased clearance to accommodate spare tyres on 4x4 tailgates.

With this need to adapt quickly, building in Britain is a big advantage. Once Martin has completed a design—proceeding from pencil sketches to CAD software to simulated stress-testing, the factory is across the yard, not halfway round the world. If necessary, a prototype can be produced the same day. 'If it had to be shipped from Taiwan it could easily take six weeks,' he observes.

Computer-aiding design

They don't just make regular bike racks, either. Their trailers are a mainstay of bike hire and guiding companies, and they also make a range of cycle stands and hang-up holders. These hangers remind me of ones I was using not long ago on Swiss buses and trains and I can see Martin taking a mental note, though it may be a while before British public transport catches up.

As we've seen, Pendle don't just make bike-racks, and one product line that has Martin's personal stamp on it is their recently-launched range of laptop- and monitor-stands. He shows me, too, a prototype of an iPad stand, which looks better than any I've seen. Of course this isn't a bike-related product, but as I leave I start wondering: why not make a handlebar-mount for it? Maybe not for on-road use but for relieving the tedium of the turbo-trainer. Go on, guys, have that one on me.

For more information, visit pendle-bike.co.uk

