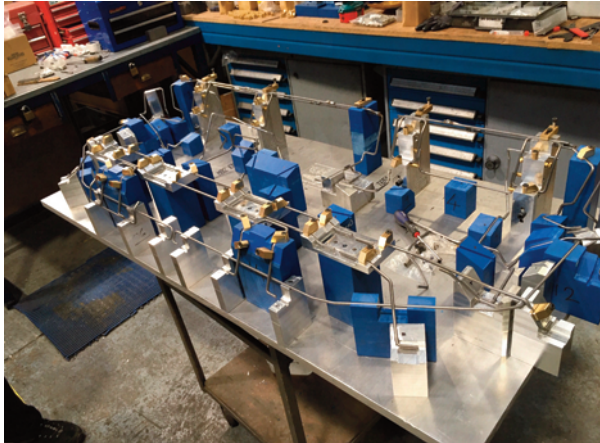


R&D PROVIDES THE SPRINGBOARD FOR SUCCESS



Even if you only scratch the surface of the R&D efforts behind the design, fine tuning and testing of springs and wireforms, you will come away with a new-found appreciation of these apparently simple products – and indeed may never take them for granted again.

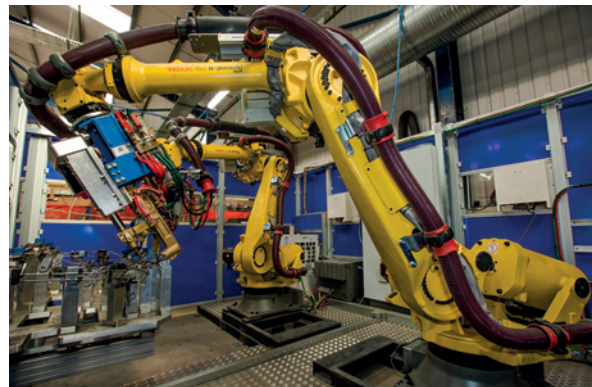
Admittedly, simple and cheap commodity products can be outsourced, and mass produced elsewhere, but when it comes specialist design and development, the UK is still the place to go. “Nothing easy is done in the UK anymore,” Emma Burgon, engineering director at William Hughes, explains. “It’s all done abroad. Instead, I always tell my people that in the UK we’re high-tech high-spec. From our perspective, this makes us keener to try and find the tough stuff. It also makes us harder to compete with!”

UP TO THE CHALLENGE

“We do like a challenge, and we have had some amazing ones thrown at us over the years,” Burgon elaborates. “But, we have always fallen back on our experience and knowledge of the mechanics, materials and processes. A major challenge in this industry is to remove hand operations. As soon as a person has to get involved, the costs start to rise. So, recently, when we were presented with a complex 3D wire form with multiple bends in just about every direction, of course we said yes... it was only afterwards that we were told that our competitor could not do it.

“However, our confidence was founded on the fact that we had a machine that we knew could do it. Of even more importance was that we had helped our supplier design this machine, based on a capability gap we had seen in the market. So, it’s not just about material

William Hughes specialises in the design and build of welding fixtures, or jigs



The twin robot welding cell at William Hughes

Emma Burgon, engineering director at William Hughes Group, gives us a behind-the-scenes look at her company’s product research and development efforts and explains how even the simplest product is backed by extensive engineering effort and expertise

knowledge and physics, it’s about how you process materials too.

“As you can imagine, based on my eagerness to do the hard stuff, I have a bit of a love/hate relationship with the team in the tool room,” she continues. “They do take a lot of flak, but if you were to grill them, I am sure they will admit that they enjoy the challenge. I always find it amusing that when we interview a potential new employee – department managers always say: ‘you’ll never get bored here, it’s all change, every five seconds.’”

MADE IN THE UK

It is the company’s own toolroom that gives it a competitive advantage and is what makes it such an attractive proposition for many of its returning blue-chip customers. “We make all of our own gauges, jigs and welding fixtures, and can manufacture a huge array of parts from a variety of materials and stock diameters – up to 16mm,” explains Burgon.

“We are also very proactive and have a real feel for the direction we need to be headed,” Burgon adds. “An example of this is our move into the car seating market, specifically new metal/plastic hybrid parts. Only by speculatively investing significant funds into injection moulding technology for our new plant in

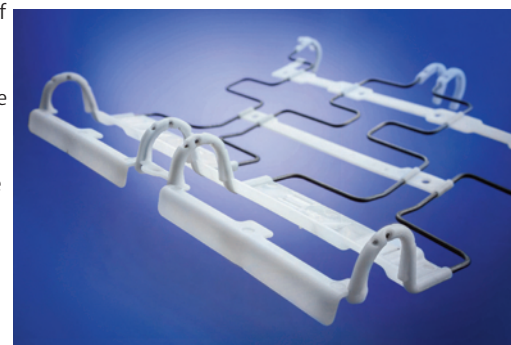
Bulgaria, could we open up our capabilities to the car seat market. We now have eight machines in Bulgaria, 14 in Poland, and our over-moulded products are on about a third of all cars made in Europe.

“When we get an idea, we stick with it. In fact, our latest foray is into busbars for electric vehicles. We are investing in the CNC technology and capabilities to bend pre-coated rectangular copper wireforms, which deliver all the connection with EV drive systems.”

“We’re always looking for an edge and trying to be that little bit out of the ordinary,” Burgon enthused. “The aim is to be the best of the best and find the jobs that our competitors find difficult. Manufacturing is hard at the best of times. However, not only does it have an amazing legacy, but I think UK manufacturing also has a very strong future, as long as we keep doing the stuff we are good at – things that simply can’t be outsourced to the cheapest labour market.”

Burgon concludes: “Research and development is all about saying ‘yeah, let’s do it!’. It might take a few years, but if you know what the market wants and you’re confident in your own capabilities – some of which you may not even have on site yet – then you can achieve anything!”

William Hughes
www.wmhughes.co.uk



Right: The William Hughes overmoulding capability demonstrated with this precision car seat assembly