Siltint hits 40

As Siltint celebrates its 40th anniversary, Gerry Biggs speaks about its development into a high-tech operation

When a coatings company can list the windows of military vehicles among the objects it coats, it must be pretty confident about the durability of the end product.

That is the case with Manchester's Siltint Industries which is celebrating its 40th anniversary this month and can list defence work among its precision coating business, which sits nicely alongside its optical work. Gerry Biggs, managing director, an accountant by trade, took over the company in 1986, having spent 20 years advising other people how to run their businesses. 'I wanted to see if I could do it myself,' he says of purchasing Siltint from Eric Silverstone. 'It was exciting and I liked the mix of technology and customer service, which is what these companies are built on.'

He describes the technology used today as vastly different to when he came on board. 'Back then Siltint had lots of small machines doing colour coating on glass. Anti-reflection was just beginning and we were one of the first companies in the UK to do it and the first to do AR on plastic lenses.'

While the intervening years have brought with them changes of computerisation and greater accuracy, Biggs is happy to note that many of the original staff still work for the company and points out that between the 19 people employed they can offer 150 years of coating experience. 'We're quite lucky with the staff we've got. It's a tribute to all their skill and hard work that we have grown into a high-tech company on both sides – ophthalmic and precision coating.

'They have developed tremendous skills, for example we do some research for the defence industry. This work allows us to ensure we're on top of the technology. We're not just relying on the standard processes that the machine manufacturers supply. We understand coating technology so we can fine tune them to give the best ophthalmic results.'

The company concentrates on the optical jobs at night and the precision work through the day. Work on the military windows, for example, involves putting on a conductive coating (indium tin oxide), which reduces the transmission of the glass, so an AR coat is used to bring this up to a reasonable transmission and, when fitted, electrodes are used to warm the glass so that you don't get condensation. 'The same thing is used with security cameras. We're working on conductive coatings and specialist filters on the optical side too, for example laser protection goggles for a German company so that people don't get blinded if they foolishly look into a laser beam.'

Gerry Biggs: the processes for optical and precision are fine-tuned

The precision work, says Biggs, has a tremendous benefit for the ophthalmic side as coatings can be fine-tuned, for example making sure that the AR meets what the company needs in terms of reflection over the visible wavelength. 'We started off in ophthalmics so what we are really doing is applying what we have learned in ophthalmics to the precision side. We do a lot of R&D. The spin off is that if we are doing something for the precision side and that is then suited to the ophthalmic there is a bit of cross fertilisation.'

To give a comparison, an ophthalmic AR coating will take seven layers and an hour each side of the lens, but a laser protection filter will take 65 layers and six to seven hours to complete.

The company also gets involved in precision UV coatings when clients request them. 'We need to use special materials that are tricky to do. It hasn't been on the radar until recently – some people are now trying different UV things.'

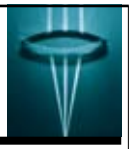
It is not just the technology that has changed in his time in charge as Biggs points to the market in general. 'Since we bought Siltint you have had the growth of the retail chains and supermarkets coupled with the growth of Far Eastern manufacturers, which is challenging to British manufacturers. Nonetheless the independent manufacturing optician gives a tremendous service and technical expertise even if some of the supply options are restricted by the big international lens companies.

'The whole nature has changed as the big manufacturers prefer not to sell uncoated lenses so we're all going to have to face that problem. I haven't fallen out of love with optics, but it is difficult.'

Continuing investment

That said, Biggs has no intention of going down the route of setting up a prescription operation. 'We don't compete with our customers. We're proud to serve the independents in retail and manufacturing who offer such great service and product. UK manufacturing opticians have adapted to new technology and in the future the industry will get even more technology based, which means that much more investment will be needed.'

He added that most of the companies that had failed in recent years were unable or unwilling



to reinvest in the most modern equipment. 'The prices, not just for our machines, but robotic edging and freeform generators make your eyes water. We have just spent £80-90,000 upgrading the process control system of one of our machines, which gives a much tighter control over processes. A new machine is £400,000. What's the bank going to say if you need two of these? That's why we've upgraded an existing machine.'

That times are tough in the market was echoed at the recent FMO meeting, where many of the companies agreed that it had been a difficult six months, he says. 'We're profitable, but we've been in a recession. In the past I tried to set up a cooperative of lens buying, coating etc because that would give the independent a bit more strength against the big international lens companies, but no one was interested. In the future manufacturers on all sides, sub-manufacturers and practices have got to get together much more and work more closely.'

Getting technical

At 72, Biggs is still enthusiastic for the work. 'I like the technology and the fact we have to give really good customer service. The combination of the two really excites me. We have lots of clients from before we bought the business and new ones, although there are more who are new to us on the precision side. We are here for the long term and we're still the best,' he says, pointing out a number of firsts. 'We were among the first to do AR, then offering a Leybold APS process using plasma inside the chamber for durability. Because of that we were the first to offer a two-year guarantee on AR and a one-year guarantee on sunglass mirrors. We had to be sure the APS structure was strong enough.'

As for its main optical business, Biggs says Siltint is known for carrying out technically difficult work. 'We're a specialist in AR, tinting and mirrors on lenses that can be difficult materials to coat, but it's still great fun. We offer a two-day turnaround on AR. Basically ophthalmic ARs are covering the visible wavelength and we try to give a consistent lack of reflection over all the different indices and material types people throw at us.'

He describes the work as an interesting mix that is quite similar to the practising optician – technical product and customer satisfaction. The most rewarding work, though, is when companies collaborate with Siltint to get what they need, which tends to be more common on the precision side. 'You get much more interaction because the wish list with precision is unbelievable. They want stuff that is not quite technically possible. You've really got to understand what you're doing as a lot of it is a unique design per job,' says Biggs.

In the case of the company's fibre optics work, there are six or seven different designs depending on what the cable companies' customers want, with differences either in wavelength or reflectivity.

While Siltint now exhibits at precision optical shows such as Munich's Laser World of Photonics exhibition, the company could well return to Optrafair in 2013, to show people that Siltint is still going about its business, albeit with a more modest stand than at previous shows.

On celebrating Siltint's 40th, his message for practitioners is: 'We're still here and make some of the best ARs you can get. You've tried the rest come back to the best.'