



Premier league buddies

As labs get bigger they become more impersonal and work on volume not quality right? Wrong says Hoya in Wrexham. It operates one of the largest labs in the country and says technology, inspection and personal interaction can combine to provide the best of all worlds.

As with most premier league labs Hoya receives the majority of its prescription jobs by emails or through its electronic data interchange system, in this case Hoyalog.

For those jobs coming in manually Hoya 'buddies up' support staff with practices so the practice gets to know an individual and doesn't feel they are dealing with a call centre. Jobs are digitised, a barcode generated and then the details and the paperwork are put in a tray along with the relevant lens blanks.

Where things start to get a little different is when the lens comes out of the box and enters the automated blocking machine, argues Hoya.

Following last year's flooding in Thailand the plant had to quickly ramp up production. That meant moving from 16/5 to 24/7 working, explains operations manager Steve Davies, and introducing 100 more people in the production process. 'We had to buddy them up with experienced staff to get the skill levels up,' he says. Luckily this all coincided with a traditionally quiet time of the year. In the event it proved to be anything but as production of existing product soared and Wrexham became a centre for 1.67 production within Europe.

Not many labs employ 100 people, *Optician* visits a lab that recently had to add that number to its head count virtually overnight

'Because of the level of investment it was difficult to get the skill up quickly enough so we were training staff at a rate of knots,' says Davies.

As the new staff were assimilated, new techniques and other expertise were added as Hoya spread production skills more widely around the globe. This has seen the lab embrace more volume and skills in areas such as tinting as it satisfied the demand in regions with a taste for different materials, more tints and coatings. Davies says the new staff and extra skills were accompanied by an acceleration in the planned investment and modernisation within the plant. 'This all introduces more flexibility,' he says.

Core values

Although plans for modernisation were always in place, the lab very quickly went from a traditional approach to an ultra modern one, says Davies. This has seen the widespread introduction of freeform generation, soft lap polishing and auto blocking.

This investment hasn't changed the core values of Hoya says managing director, Martin Batho, explaining that process, monitoring and inspection are bywords at Wrexham.

The seriousness with which Hoya takes the science of process engineering in prescription lens manufacture can be gauged by the description of the

inspection that goes on and the sheets and sheets of metrics gathered from the high-tech machinery within the plant.

That ethos comes straight from the top. Dressed in regulation white coat, shoe covers and hairnet during a tour of the plant, Batho explains: 'You won't find this level of testing and control in other labs.'

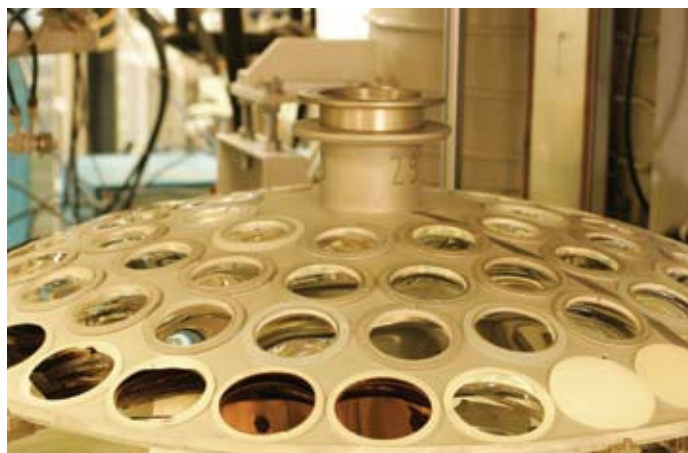
The evidence of this are the rigorous controls and charting of temperatures, times, specific gravities and humidities of the various processes. Hoya adheres closely to global standards for the quality of components, materials and consumables used. De-ionised and de-mineralised water is manufactured on site for pre-cleaning of lenses, processes are carried out in positive pressure chambers with humidity control, curing ovens are obsessively monitored for temperature gradients and cooling times are controlled by the process not the ambient temperature.

Between steps, lenses are wiped with acetone and washed in superclean water, 100 per cent visual inspection is carried out in high contrast booths against reference samples. The list goes on.

'There are a rigorous series of checks throughout the process to ensure consistency, all of the tolerances are defined by Hoya in Japan,' explains Batho. The proof of that consistency is the constant inspection of the products going through and monitoring of the



Automation doesn't mean details are overlooked



Five test lenses are included on every high vacuum dome



The latest tinting equipment is used

process data. A good example of this is the Bayer testing. This is carried out using a machine built specifically for the job and super-hard grit called Sakurandaum imported from Japan. Even the rooms in which the testing is carried out are climate controlled. For anti-scratch testing a bespoke machine using wire wool is weighed down for 40 cycles of scratching with 2kg for Super HiVision but 2.5kgs for HiVision Long Life. The results are tested against the ubiquitous reference samples. 'It's not just in print that we say our lenses are tested to this level. Making something consistent is just



Continuous inspection

words unless you do proper testing,' says Batho with conviction.

Much of the heritage that allows Hoya, Wrexham to do things, it would say, better than others can be linked to its stock manufacturing past.

Its multiple giant high vacuum coating units are three chamber machines originally designed for use in stock lens manufacture.

In the first chamber the lenses are brought up to a high vacuum. The main chamber remains at high pressure and continues the main deposition job continuously. In the third chamber the pressure it pumped back down. 'This is

why these machines are so consistent and have a high capacity,' says Batho.

Five test lenses follow each live batch through coating and are tested to ensure the coatings have the right bloom and adherence, scratch resistance, anti-static and contact angle performance.

The process mentality also follows the lenses through into the glazing area. Hoya ensures support staff in the field test and calibrate tracers in optical practices but it also double checks all dimensions for cut and edge work. Much of the glazing it carries out is on difficult, high value jobs where the practice wants to leave nothing to chance. 'It's the stuff that the optician doesn't want to do,' says Davies. 'The weird and wonderful,' adds Batho.

Customers are always surprised by how much testing goes on, says Davies, adding that practitioners are welcome to come and see for themselves. Hoya is hosting a series of open days to show customers just how much emphasis is placed on quality.

You will be made to wear some unflattering clothes and a hairnet but you will never look at a spectacle lens in the same way again. ●

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