THE MAKING OF A DIAMOND

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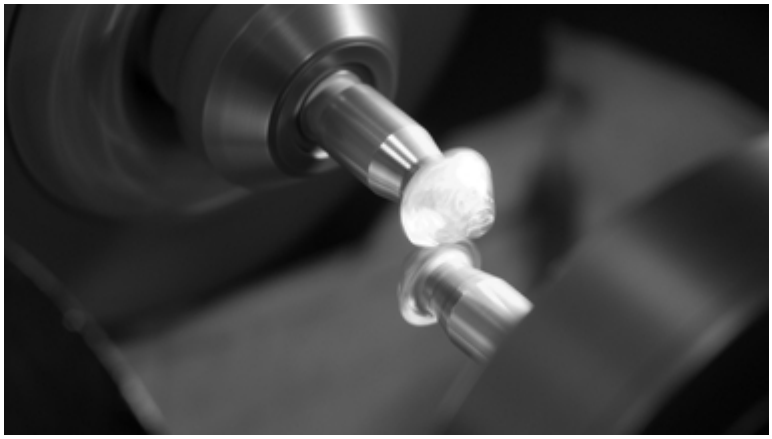
We discover the process of creating one of Backes & Strauss' phenomenal precious stones

A diamond is millions of years in the making. Millenia of heat and pressure somehow compress humble carbon into one of the hardest, most valuable and utterly captivating stones on Earth. Of course, all that time hidden under the surface is only the first step; it’s only when it meets centuries of craftsmanship that makes a diamond truly shine.

London Craft Week is all about showcasing the most eminent artisans working in Britain, highlighting the skills behind some of the most impressive creations here in the capital. What craft then could be more impressive than that of diamond polishing?

If you've ever walked down Bond Street you can assume there are more than a handful of diamond specialists in London, but you'd be surprised just how few and far between they are. Instead, to get an insight we headed to Grosvenor Street to – where else? – the world's oldest diamond company.

Backes & Strauss have been handling many of the world's most exquisite diamonds since 1789, originally as a dealer to the most famous jewellers in history (Jacques Cartier included) now as creator of arguably the finest jewelled timepieces in the world.

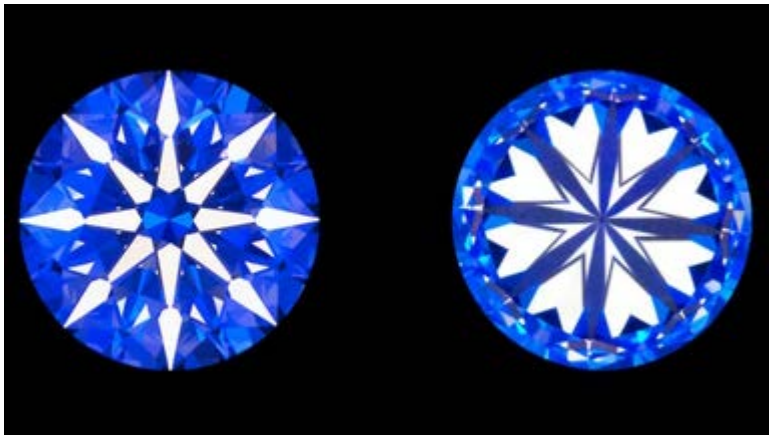


The Backes & Strauss speciality is the ideal cut. A form of brilliant diamond with the same number of facets (57), it's the stone which allows the most brilliance for its size. Though formulated in 1919 by mathematician Marcel Tolkowsky, it wasn't until much later that it became a reality. Today however, they are among the most sought after cuts in the world. It's easy to see why at a single glance.

We were invited to take a look behind the time and effort that goes into each Backes & Strauss diamond which, if you've seen any of their pieces, is a considerable number. Their first tourbillon wristwatch illustrates that in rather spectacular fashion.

Considering how old the craft is, you might expect a dusty workshop littered with tools and magnifying glasses. Yet the first thing you notice about the impromptu workshop Backes & Strauss have set up is how

advanced it is. The machines may fit into any workshop, grey-green metal and all, but the LCD models highlighting cross-sections of the stone wood look more at home in a design studio.



Despite the seeming anachronism, current technology is a major part of diamond cutting today. Take the first step for example, cutting the rough stone. It used to be that the cutter needed to judge how best to use the raw material by eye and experience, which includes how to get the best yield, whether to cut out inclusions and the sort of shape to go for.

The machine doesn't exactly take over there – the final result is still very much up to the artisan's experience – but it allows a certain clarity. The software allows you to play around with the space in 3D to find the optimum cut. There are even systems that highlight inclusions within the stone themselves – though there are but a handful of workshops in the world that make them worth their while. This is nearly always done by eye, a superlative skill in and of itself.

Even the cutting has taken on an avatar of technology, the laser. Rather than cutting the ultra-hard diamond by hand, it slowly burns through the stone leaving blackened diamond in its wake. The only issue is that the heat used has its own problems, risking internal damage and cracking, not to mention its inaccuracy when compared to what the diamond master himself can manage.

From there the diamonds are shaped further, polishing of the stone that's been burned back to graphite and adding the necessary facets. This is where the true skill comes in; nearly everything up to this point seems relatively simple in comparison.

The main tool is essentially a big sanding wheel, one impregnated with diamond. Indeed, almost as much

diamond goes into the actual polishing as the result. To soften the wheel, diamond dust is added, along with diamond grease – something we never thought would exist. Once the polishing surface is perfect, then comes the painstaking task of sanding away imperfections.

From rough to finish can take around two weeks per stone. Even with the technological backup, it's a task entirely in the hands of the diamond polisher; the software and sensors help, but they simply make easier the same tasks that have been done for centuries.

Whether technology takes over the art of diamond cutting and polishing is the future is neither here nor there; for now it's a true artisan pursuit. If Backes & Strauss' own ideal cut diamonds are anything to go by, the results are well worth the effort.

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