

# East Meets Wrist

**Kees Engelbarts is resurrecting a Japanese swordmaking technique for his engraved watches**

Theodore Diehl



While Christopher Marlowe was busy lambasting the Dutch during the first Anglo-Dutch war, The Netherlands was simultaneously engaged in happy and fruitful trade with the Far East on the other side of the globe. The goods and artwork they brought back from Japan and China marked the beginning of a deep and lasting influence upon Western painting, applied arts, music and fashion. One of the more interesting examples of Japanese techniques imported to the West must certainly be the 'Mokume Gane' wristwatches created in Geneva by master engraver Kees Engelbarts. Here, he reveals to *QP* the intricate and demanding methods that gave rise to his ornate creations.



(Above) Kees Engelbarts' reference 0367 watch (SFr.55,000). Made of 18-ct white-gold and silver, the Mokume Gane dial features an ornately engraved dragon, in sympathy with the engraving technique's Eastern origins.

(Right) A view through the ref. 0367's caseback reveals the ornately decorated Universal calibre 66 with microrotor (19,800 vph). The marbled effect of the repetitive Mokume Gane folding process upon the layered metals is visible on the surface of the bridges and rotor.

The fact that this Dutchman spends a lot of time in his sailing boat, as well as travelling through Japan fits in just too neatly to avoid wondering whether the Dutch connection with the Far East has not become absolutely integrated into the national consciousness.

On one of these visits to Japan, friends described to Kees Engelbarts the ancient technique of Mokume Gane and took him to museums to view original examples. The technique had been briefly mentioned in classes during his watchmaking training, but he had never seriously considered its usefulness or practical application.

Invented by the master swordmaker Denbai Shoami (1651–1728) and originally applied to the decoration of sword hilts and handles, Mokume Gane remains strikingly contemporary, especially within a horological context. Engelbarts immersed himself in all the technical details and became rightly convinced that if artfully applied, it would be a visual showstopper for a wristwatch.

The idea of linking this much-treasured technique to his work came about when Engelbarts was invited to a demonstration of Mokume engraving by Japanese dealer, Masao Mishima. When Engelbarts suggested that the technique might be used in watchmaking, there was a real sense of shock in his audience. The Japanese reverence for the technique is such that it was simply inconceivable that it should

Engelbarts mastered the technique of engraving beneath the microscope. This new method of working instantly fired his imagination and creativity.

be applied to any lesser object. Nevertheless, Mishima agreed to be the first customer and waited for delivery. Needless to say, the watch created a stir when it finally arrived. How these watches came to be created amid the unforgiving hotbed of Genevan watchmaking is another story altogether though.

### Settling down

It was in the 1990s that this tall, shy Dutchman landed in Switzerland during the years of wanderlust that followed his engraver's diploma in Schoonhoven, The Netherlands. His education was taken a step further during a sojourn in Germany *en route*, where he mastered the technique of engraving beneath the microscope. This was a whole new method of working, instantly firing Engelbarts' imagination and creativity. Various well-known names from the industry started to use Engelbarts to engrave one-off pieces for special clientele and it was not long before he decided to stay in Switzerland and go solo.

The transition from engraving to watchmaking was ably supported by his friend and watchmaker Antoine Prezioso. He told him that you can only learn by doing, supplying him with various movements to disassemble, engrave, decorate and reassemble. Slowly, his expertise as an engraver ventured within the watch, to the very heart of the movement itself. And his passion has remained there ever since.

### Club sandwich

The technique of Mokume Gane (literally 'wood eye' or 'wood eye metal') traces back to traditional Japanese swordmaking, in which the hot steel used to create the blade is folded over dozens of times and beaten to shape by hand. On close examination, the layers of metal that result could almost be mistaken for wood grain – hence its name. There are however several real differences between this method and the actual technique used in Mokume. In the first place, Mokume Gane is composed only of non-ferrous materials. Instead of folding, the layering is built up according to desired colour and thickness. A Mokume 'sandwich' can contain more than 25 of these metal layers.

These metal plates are pinned, clamped and placed in an oven. The heating must be closely controlled so as not to melt the layers, only



Rear view of the 0472 Tiger Dragon, demonstrating Engelbarts' typically assiduous attention to detail: a red inner-strap, which will be hidden from sight for the majority of its existence, much like his delicately decorated movements.

New for 2005, the special-order ref. 0472 Tiger Dragon watch (SFr.60,000), featuring distinctive bamboo-style bezel and a new addition to Engelbarts' menagerie (so far solely populated by several dragons and one unicorn) – a tiger.





Ladies' skeletonised ref. 0372, made of 18-ct rose gold, with three-colour gold Mokume Gane engraving (SFr.30,000). Its characteristic marbled effect is clearly visible around the bezel. Driven by the Patek 21 movement.

fusing them together. This block of layered metal is then worked over with U-shaped chisels in a pattern over its surface, much as a carpenter chisels grooves in wood. The block is then put through a high-pressure roller several times, and the gouging process is repeated. Each repetition allows the engraver to fold the metal or remove material with chisels and generate completely new patterns.

Through the combination of layers and the differences in ductility of the metals in the original sandwich, all sorts of beautiful patterns emerge from this process, resembling a swirl of chocolate in a two-flavoured pound cake. Through the amalgamation of many different metals – white gold, red gold, platinum, palladium, copper and many others – the effect can be breathtaking. But that is not all. After a Mokume Gane object is finished, one can treat the metals with salts, ammonia, acids and other solutions, which can colour specific metals in the multilayered matrix. As if this were not complex enough, one must also consider the third dimension that the layers inhabit, into which the final shape will be engraved. The patterns will change according to the depth of the grooves.

Engelbarts is not only the first to apply Mokume to wristwatches, but also the first to create a personal style uniquely suited to the material itself. "I often let myself be led by the material at hand, by the hidden

colours of the layers of metal. If I see a vein of red appearing, I can intuitively follow it to accentuate the colour of a tongue, the eyes, or other parts of the dragon's physique. In the end, the Mokume itself takes on a life of its own, and tells me what should happen."

In the first Mokume Dragon watch made for Masao Mishima, even the hands were created from small slips of Mokume, twisted and rolled, then engraved – a highly delicate operation that makes them swirl fantastically, as if actual flame. The very nature of the process means that each watch is a unique creation. Recent additions to the menagerie (so far solely populated by dragons) are unicorns and lions, with other animals billed to join yearly.

### Venturing within

Of course, once you have paid the dial such microscopic attention, the movement itself will invariably look like a poorer relative. "I was looking at the movement [the old Universal calibre 66 with a microrotor] thinking how beautiful it is mechanically, but how much better it would look in Mokume," recalls Engelbarts.

Mokume does not lend itself directly to movement manufacture, so Engelbarts decided to 'clothe' the movement with Mokume. The results are fantastic to witness first-hand. "Each piece of Mokume, however small, is fastened with small posts to each bridge, block and plate of the visible side of the movement, including the rotor itself. It's real microscopic puzzle-work. The Mokume patterns for the movement are always coordinated with the dial-side colouring and features."

Engelbarts has a thorough knowledge of watchmaking, but his younger brother, Bart – a professional watchmaker who also lives in Geneva – takes responsibility for the assembly, adjustment and timing of every one of Engelbarts' watches. It means that all his clients are getting the best of both worlds: original design based on centuries-old techniques, combined with new 'old' movements that have become collectors' items in their own right (as well as the Universal 66, Engelbarts uses Patek 71 and 21 calibres). Both brothers are rightly proud of this family tradition and each other's ability in this neatly dove-tailed enterprise; a success story that surely begs the question of how many other dormant art forms await resurrection in watch form. ●