



*Angular Momentum  
of Switzerland*

**The Making  
of a  
Illum AQUA**

The Making of a Precision Instrument



## **Illum AQUA**

In 2004, I designed and produced the first Illum AQUA. It is probably one of the best, incomparable and extraordinary watch designs I have created in 27 years being active in watch manufacturing.

The Illum AQUA is a high-quality water sports watch with "Champlevé Email Lumineuse" dial and plique é jour hands milled in stainless steel. The Illum AQUA timepieces are entirely manufactured from 1.4435NcU "Staybrite" stainless steel by hand and hand operated machines in my Atelier in Switzerland. Available in case diameters of 37.00 mm and 42.00 mm. Staybrite® 1.4435 NCu represents an alloy composition, which has been developed to meet the advanced requirements of the high-end Swiss watch industry. It is a Swiss stainless steel and is considered the best and purest steel which dominate the world of stainless steel.

The Email Lumineuse is a recent development of Angular Momentum and a fusion of enamel and bioluminescent substance which is in the position to glow for many hours after being loaded under artificial or daylight.

The Email Lumineuse is only available in "Aqua Blue" and "AQUA Green".

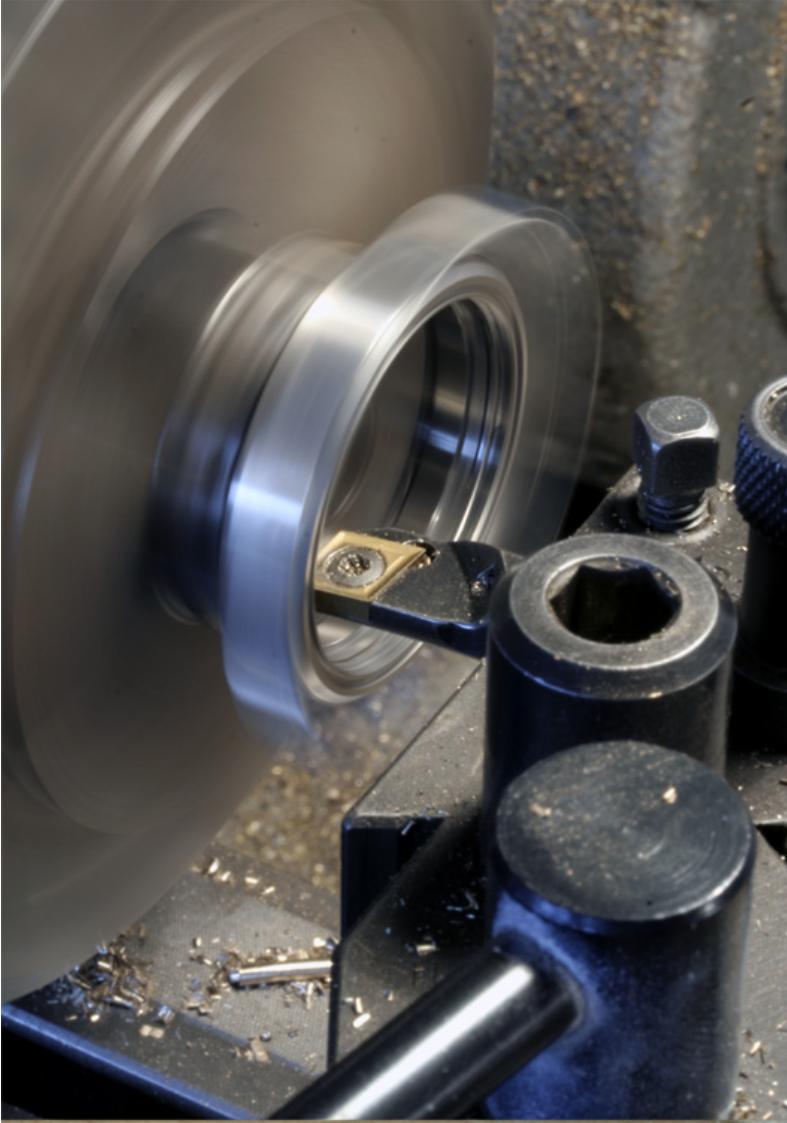
The luminous powder was gained from oyster powder and sulfur after an old 17th century receipt.

Since it is an organic material, slight irregularities and color differences can appear.

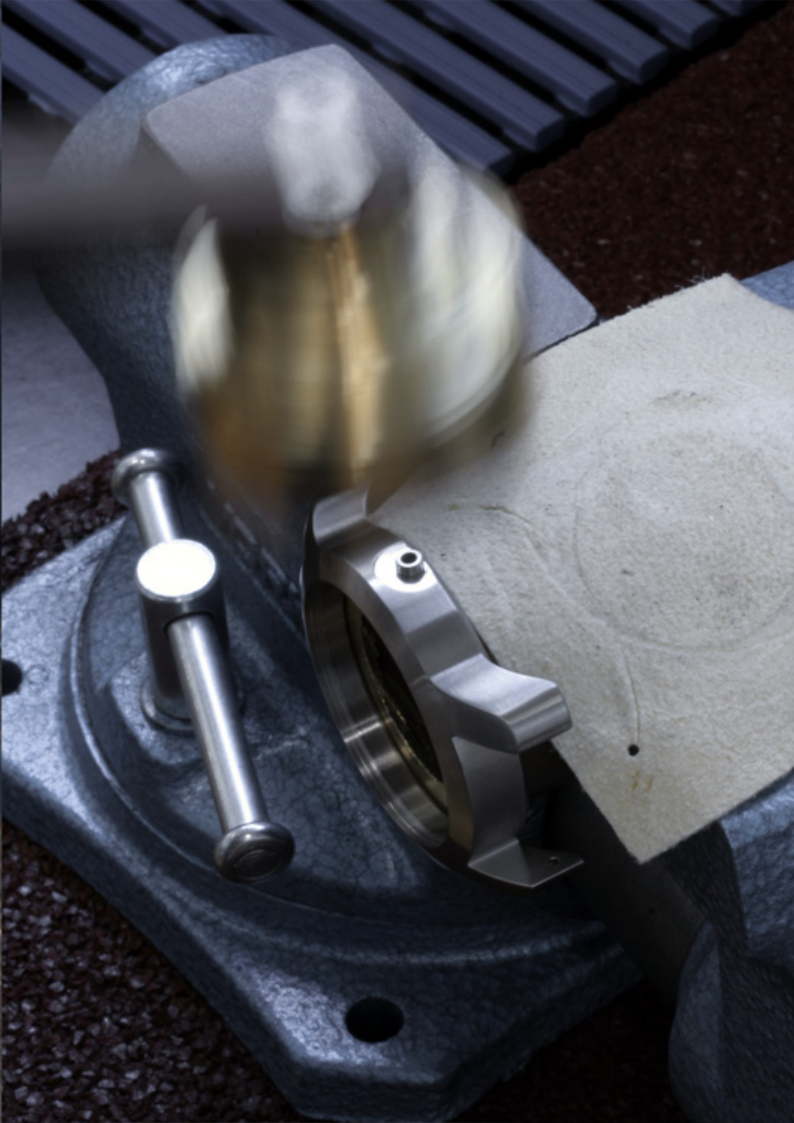




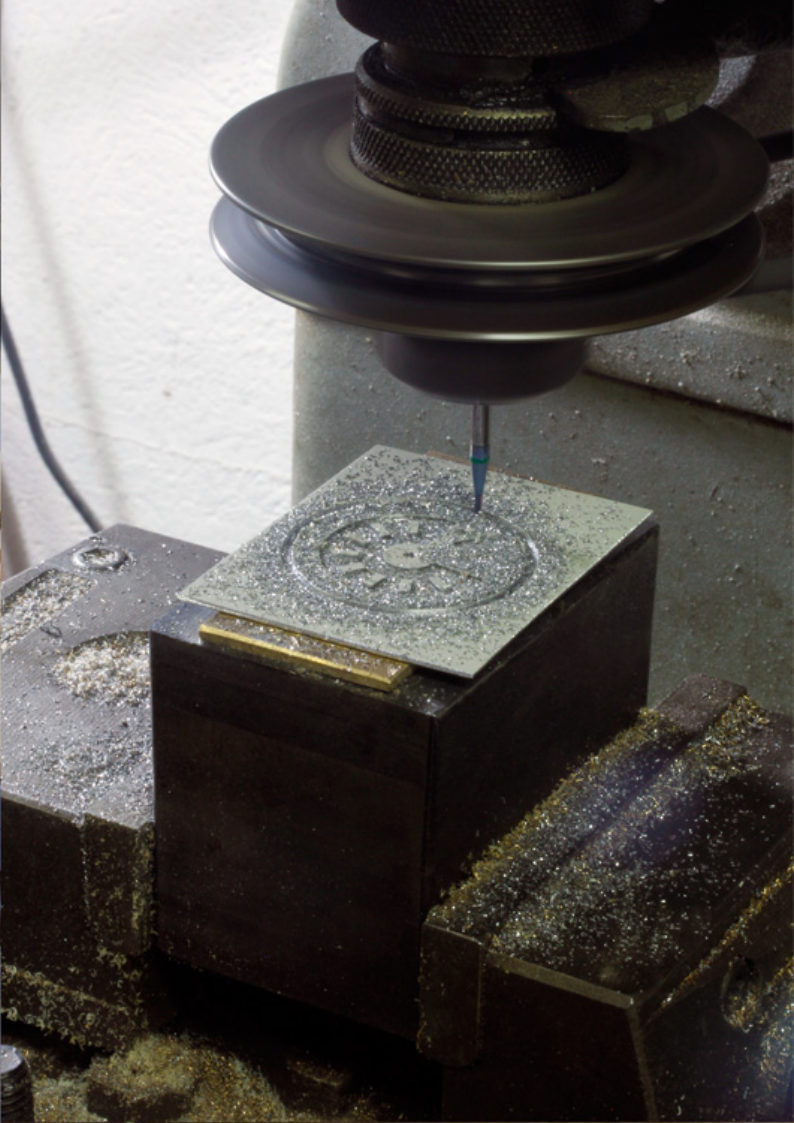
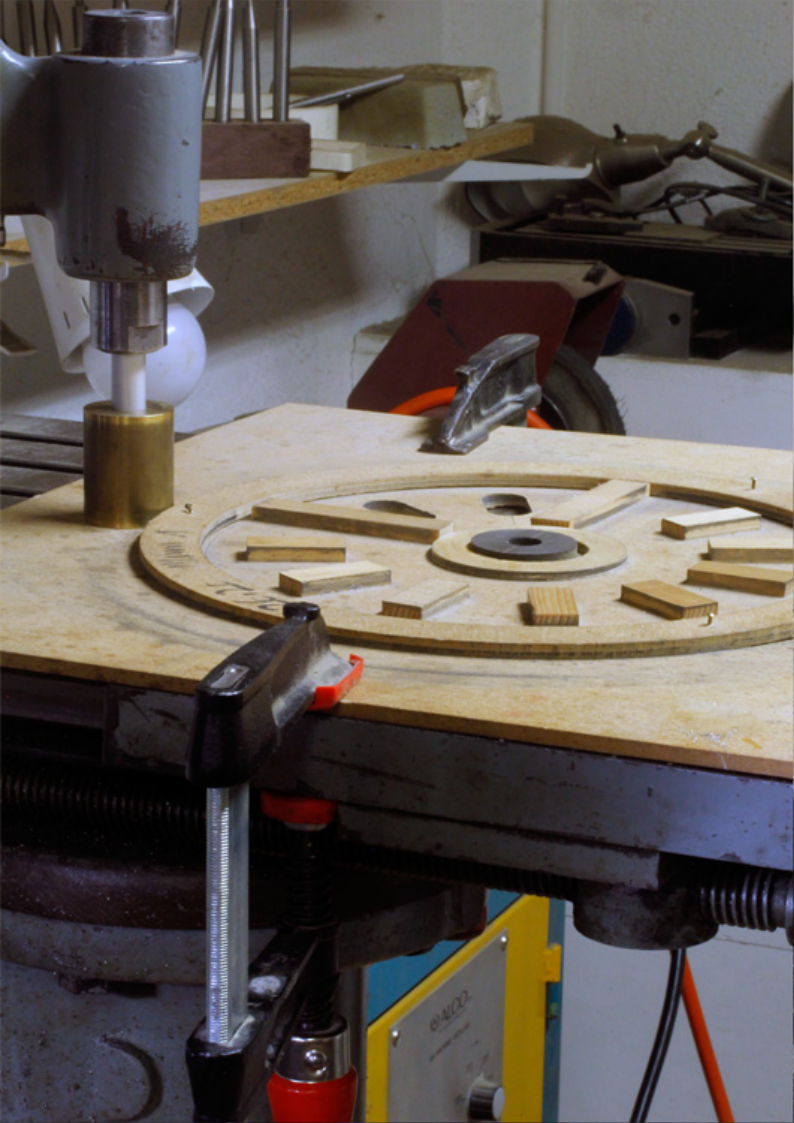




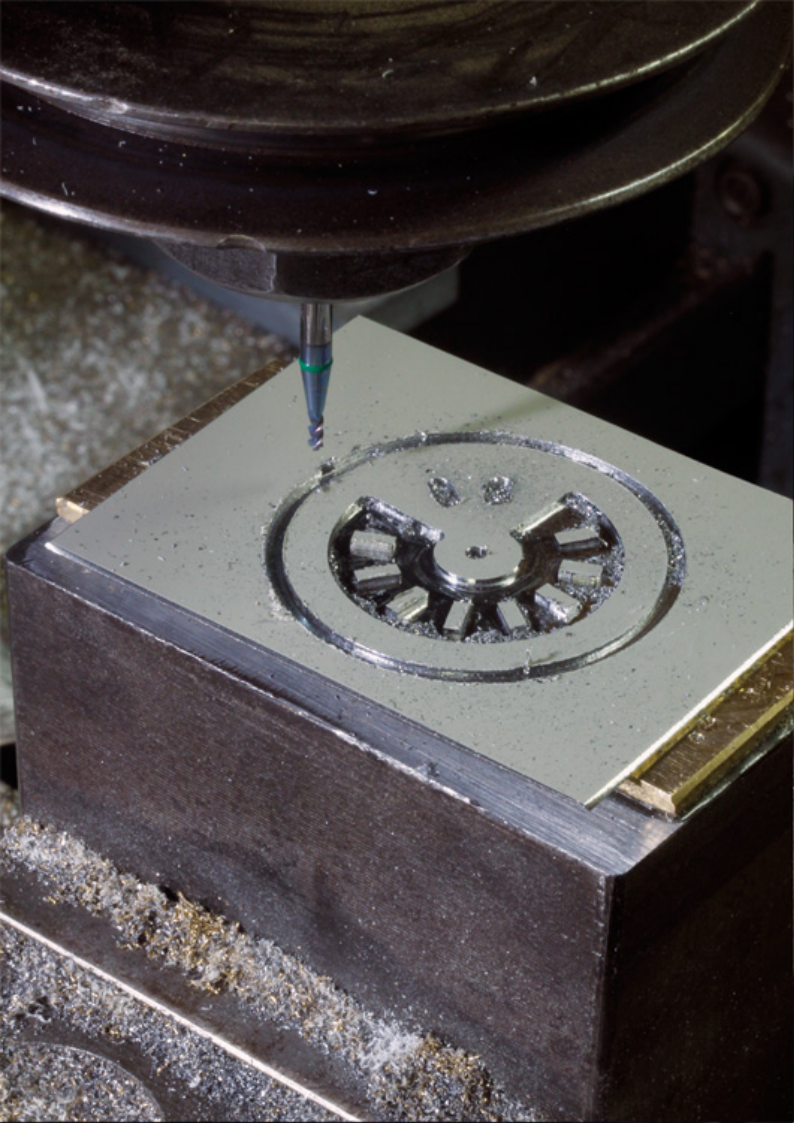




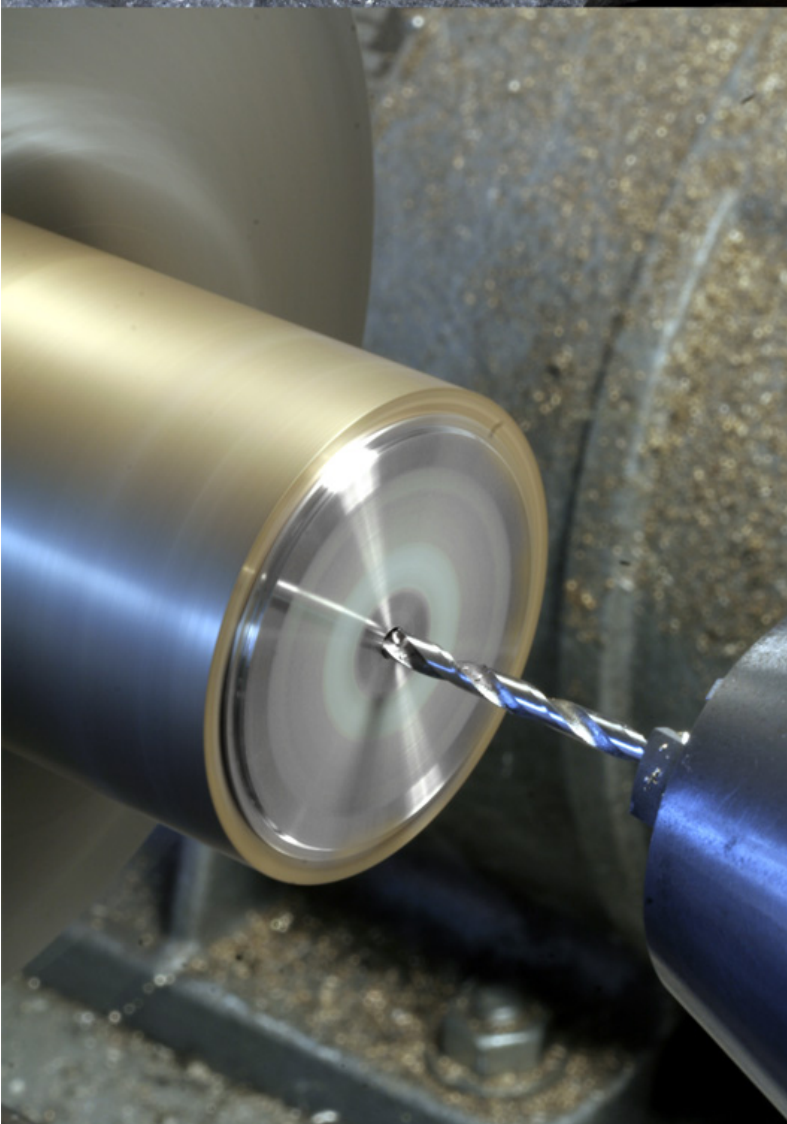










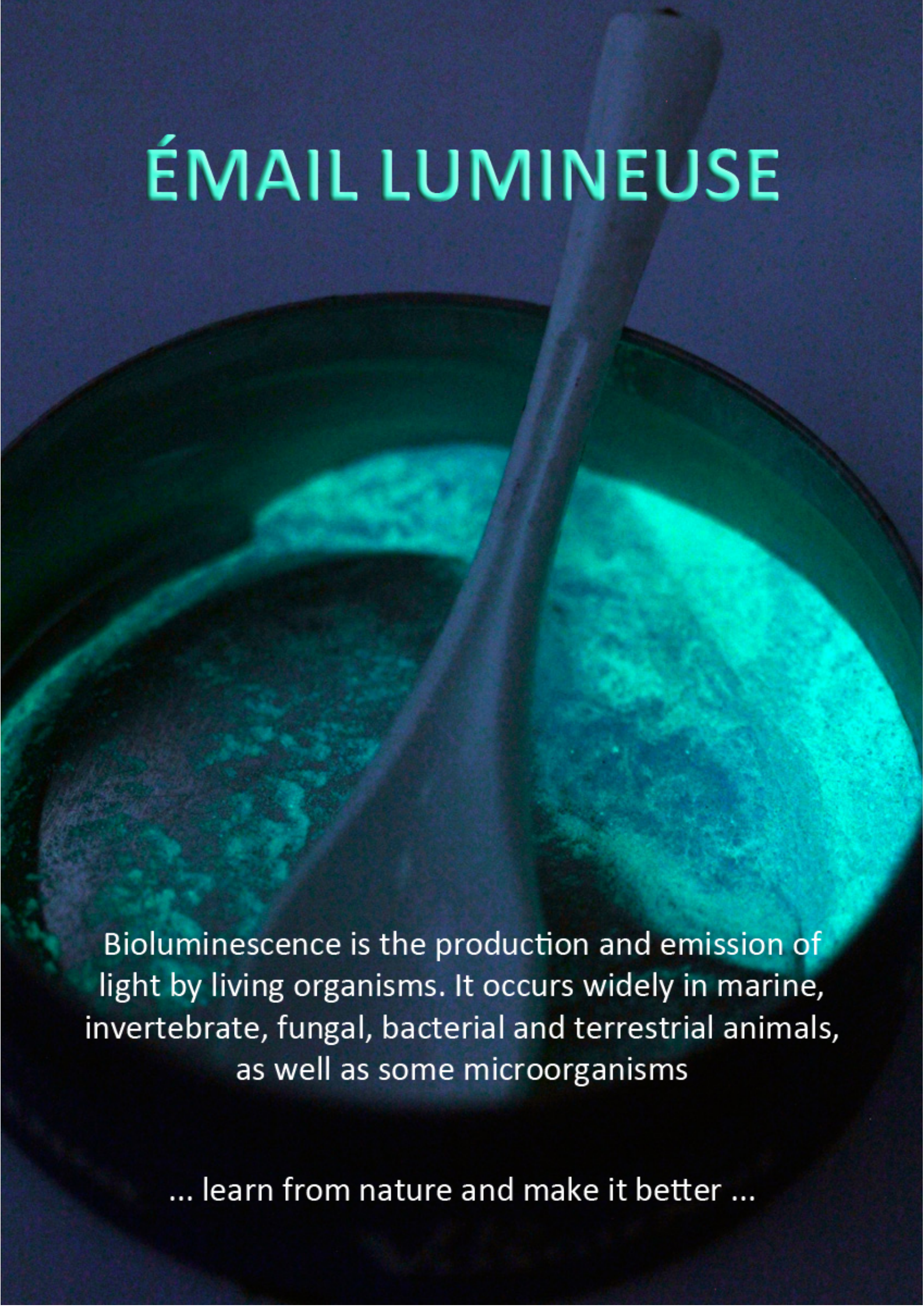








# ÉMAIL LUMINEUSE

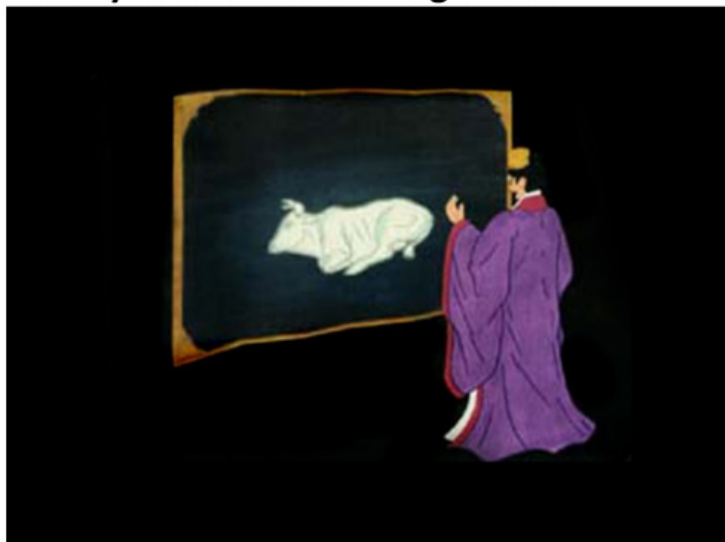
A glowing green mortar and pestle. The mortar is a dark, circular bowl, and the pestle is a long, cylindrical rod. Both are illuminated from within, creating a bright green glow that fills the scene. The background is dark, making the glowing object stand out.

Bioluminescence is the production and emission of light by living organisms. It occurs widely in marine, invertebrate, fungal, bacterial and terrestrial animals, as well as some microorganisms

... learn from nature and make it better ...



# History of Luminescent Pigments

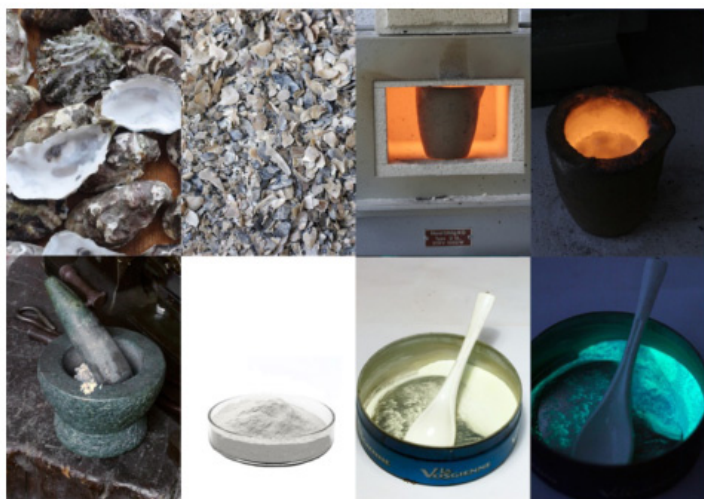


There is a long history of luminescent pigments. In ancient times, the Chinese found photoluminescent jades and ground them into photoluminescent beads, wine cups or other ornaments. These were collected as precious treasures because of their rarity. According to an ancient document from the era of Chinese Emperor, Zhao Tai Zhong, the first luminous paint was invented in Japan during the early Heian Period (794 – 1185 AD) over 1'000 years ago. The document, (Displayed at the Palace Museum in Taipei, Taiwan) tells of how the emperor heard of a painting which showed a wonderful cow drawn on the wall of a cave.

Apparently, the cow could not be seen in the daytime because "it went to a meadow for eating", and "returned to the cave in the evening". Ordered to investigate, one scientist learned that "the cow was painted with special paints made from shells of the sea".

Other accounts of the era mention the use of seashells combined with volcanic materials - perhaps pointing to zinc sulfides being formed along with suitable impurities such as copper. The technique of luminous painting was known both to the Chinese and the Japanese and there was some trading of materials between the two countries.

In 18th Century Europe, John Canton prepared a luminous pigment made from oyster shells reacted with sulfur. By the end of the 19th Century, Swiss watchmakers began treating the dials of timepieces with a natural luminescent paint created using the same technique as the early Japanese artists.



In 2004 I found in an old book a receipt for Phosphorescent Paint and Enamel and I have been experimenting for over a year to find a way to produce a powerful, luminous powder from sulfurized oyster shells. The powder does not have the purity of modern illuminants such as Super-LumiNova, which is used in the watch industry for example.

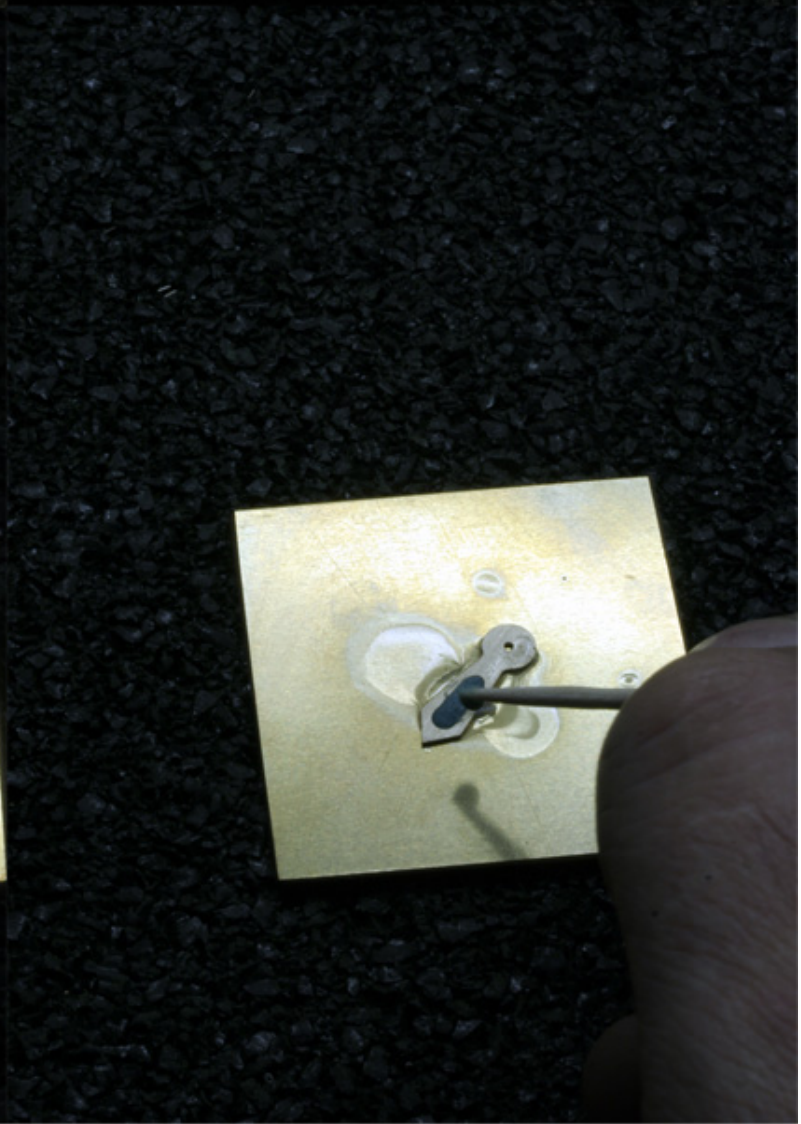
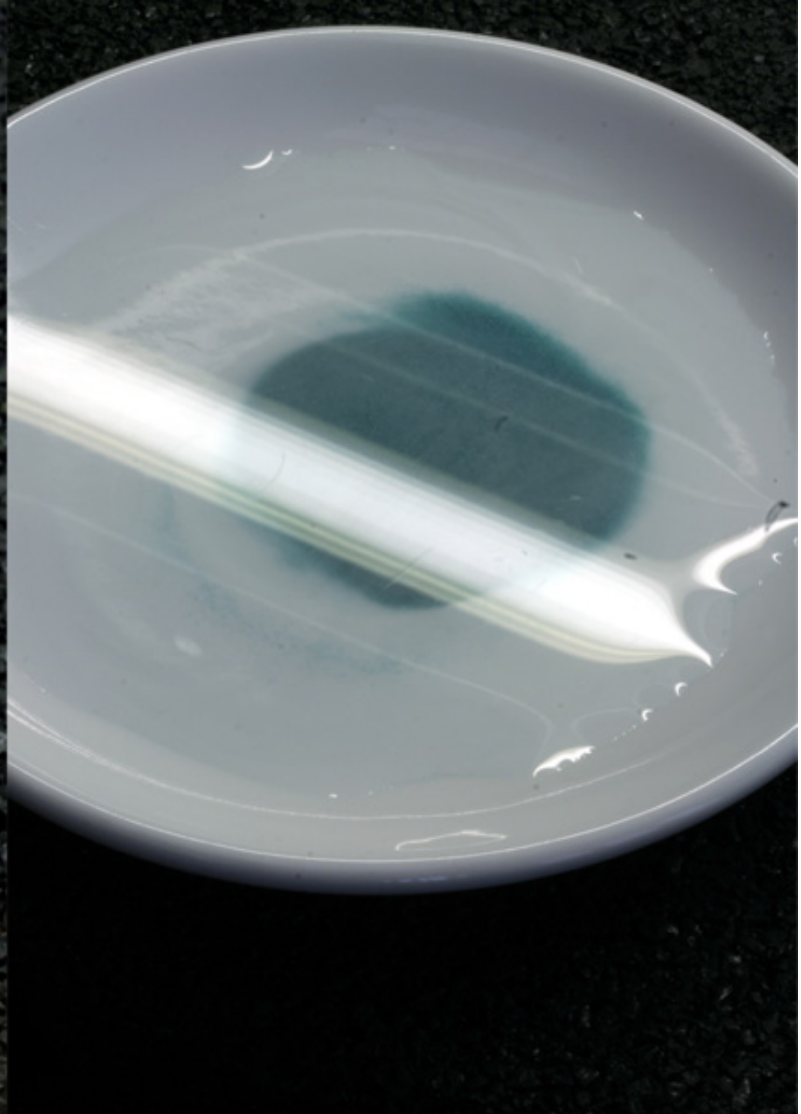
The powder or granulate is also too coarse to be used for printing. It is also not completely homogeneous in larger areas and the result sometimes appears somewhat blotchy. But it is 100% natural and impresses with its strong and long-lasting luminosity, which will last for decades if not forever. For illuminating my watches, I combine the luminous powder mixed with clear, transparent cold enamel.















The excess water is removed



And pure glass and sulfate remain



With a stick or tooth pick, some of the moisty enamel is set into the center hole

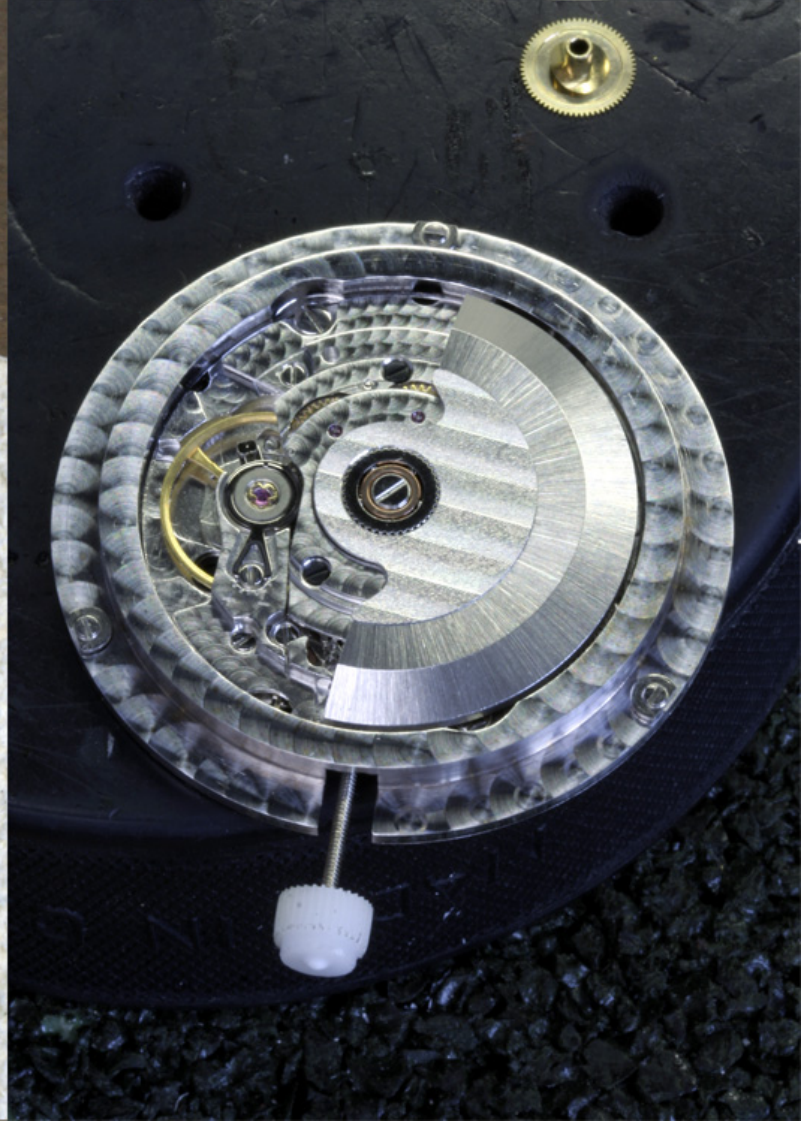


After enamel has properly dried, its fired in the furnace

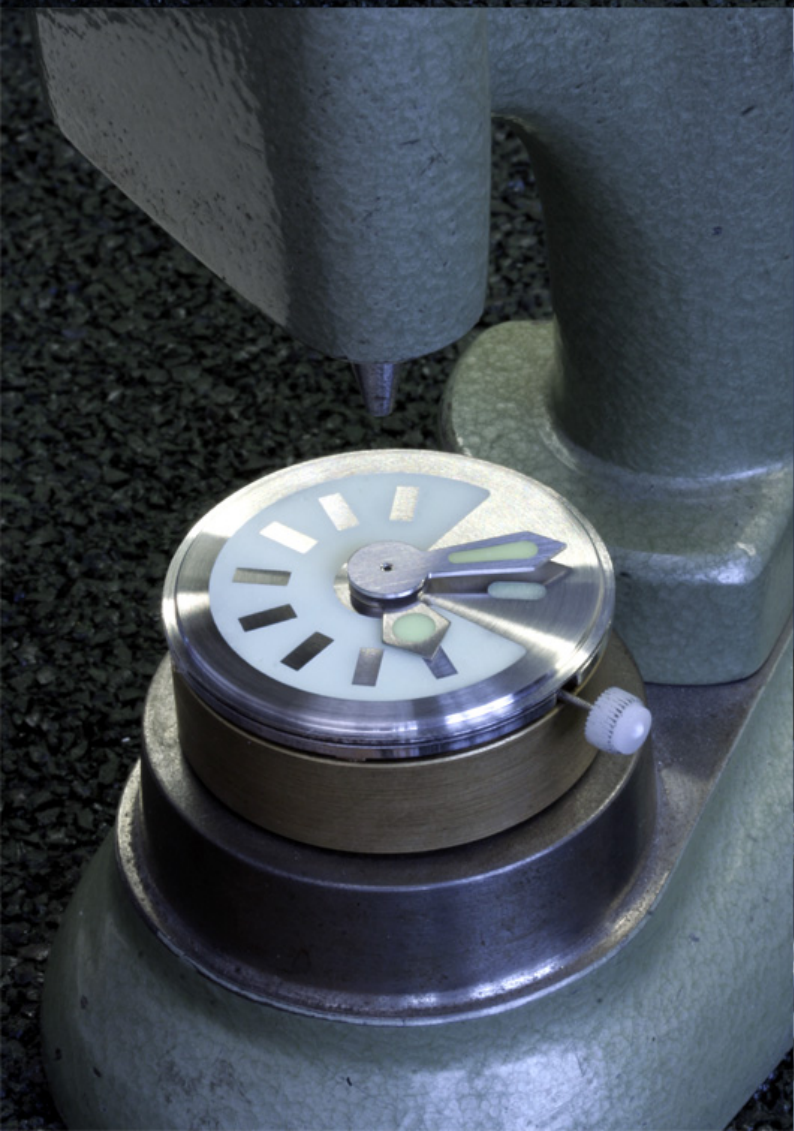




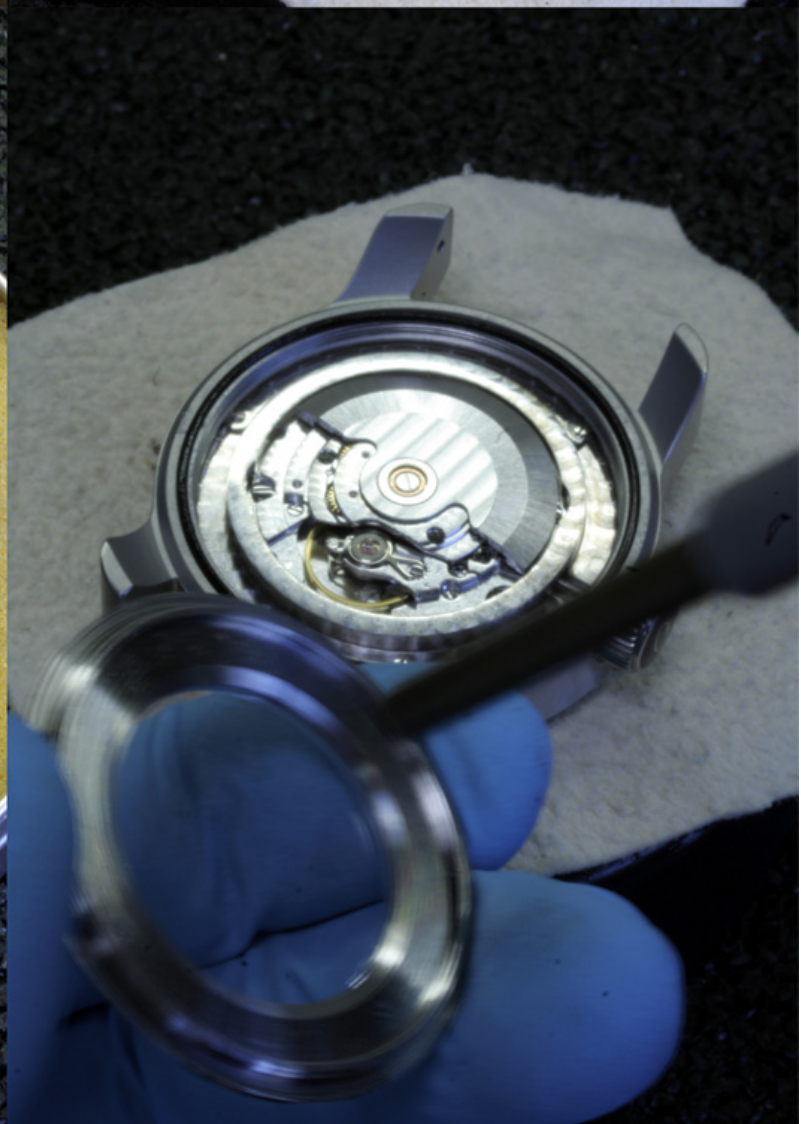
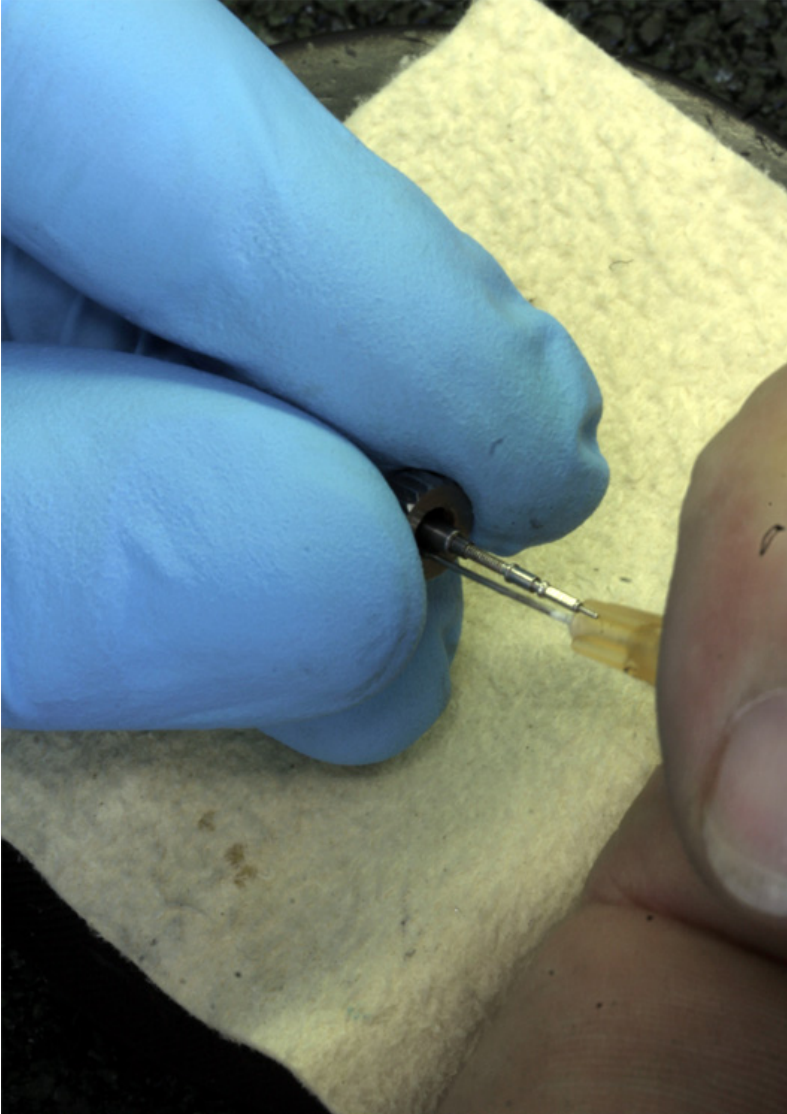




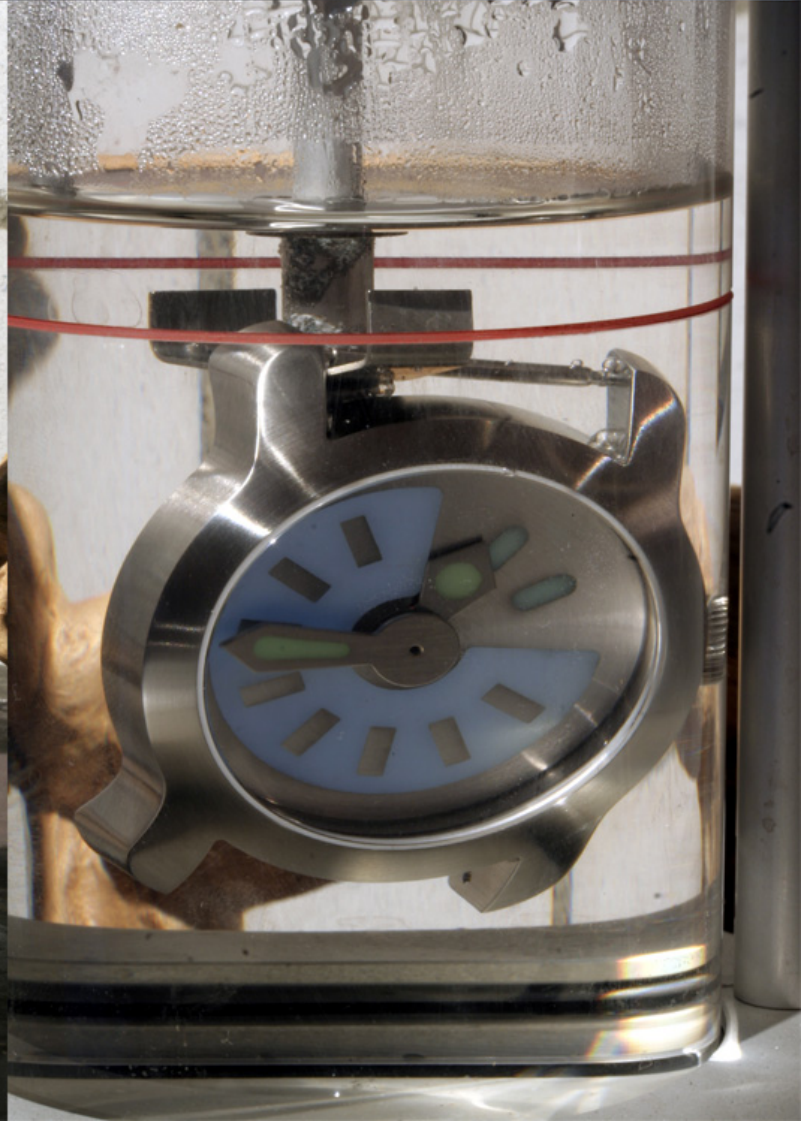
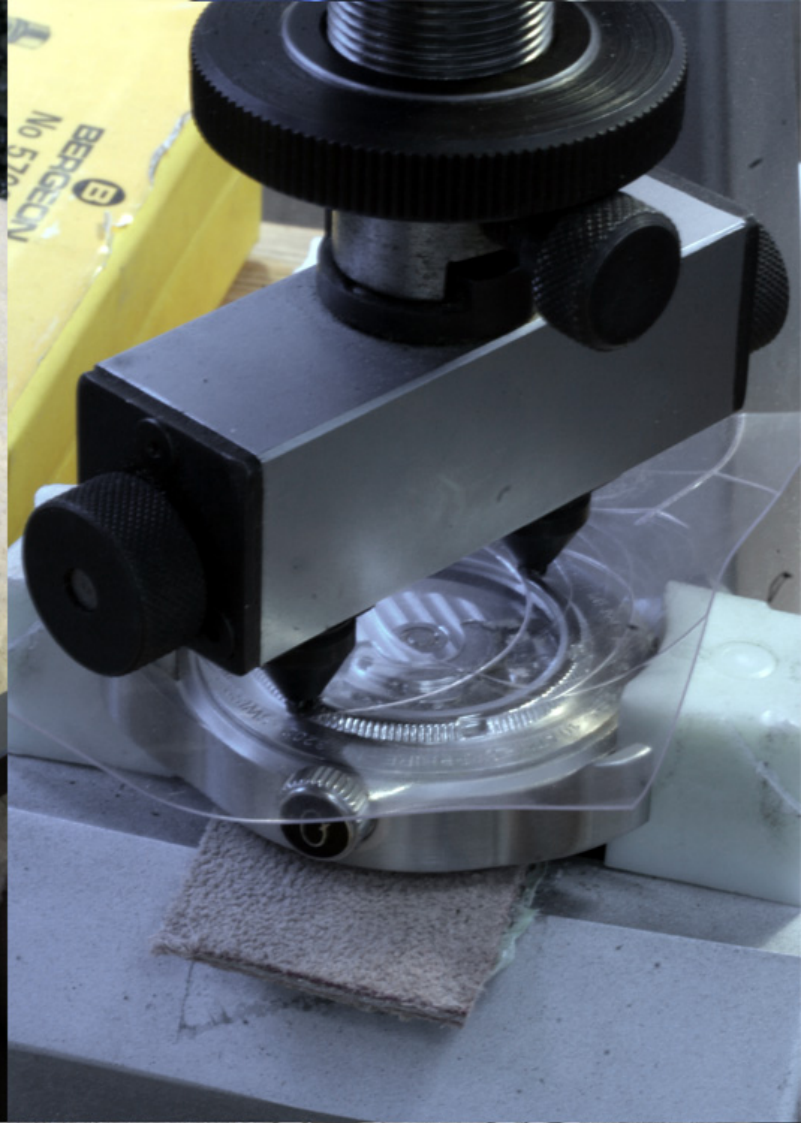
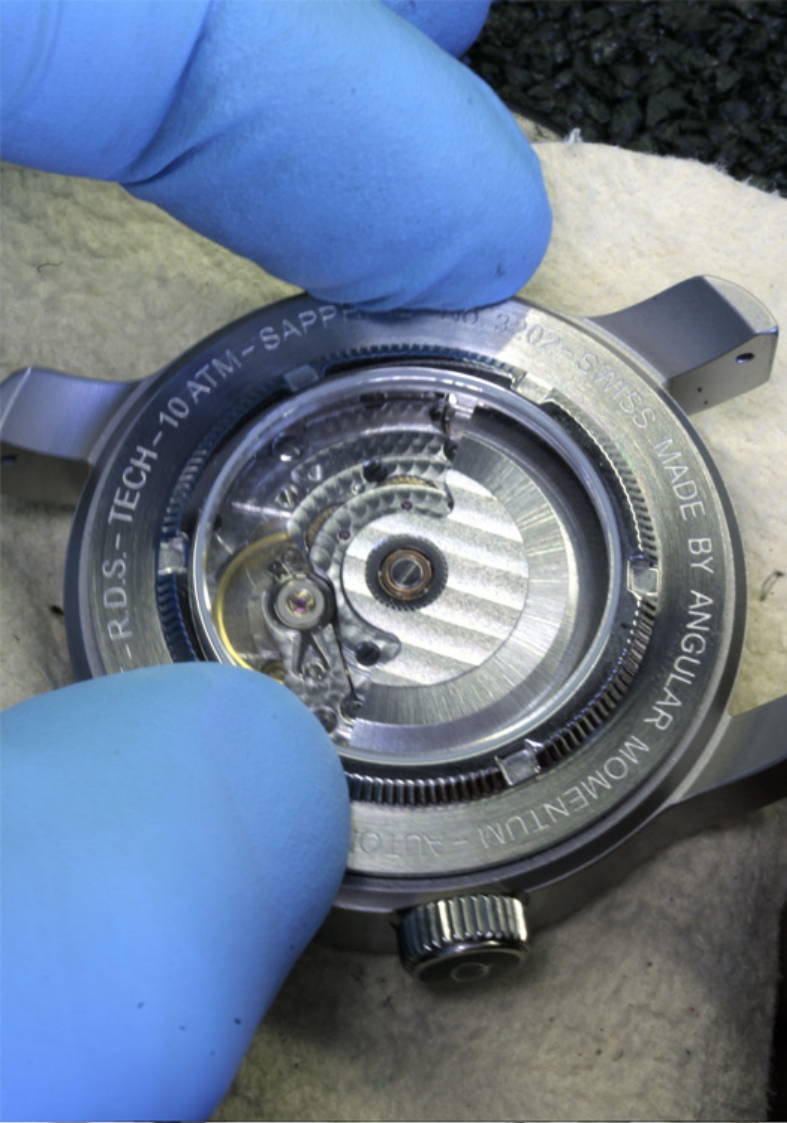




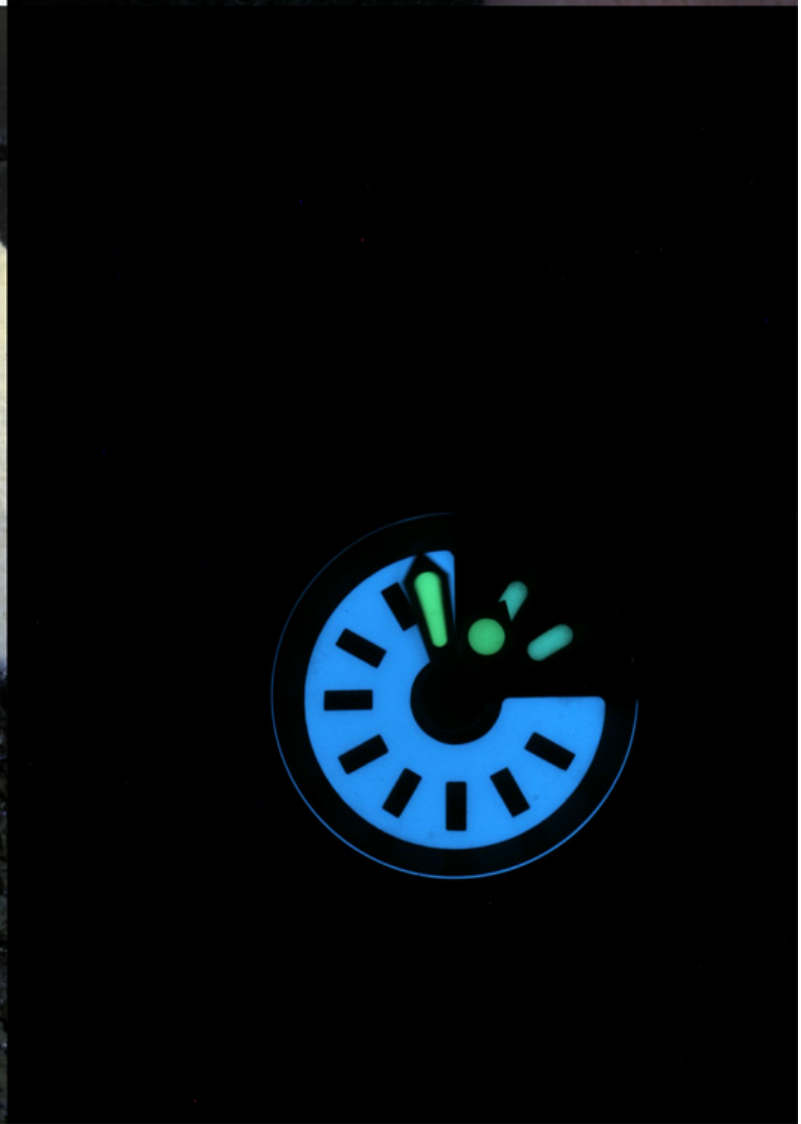
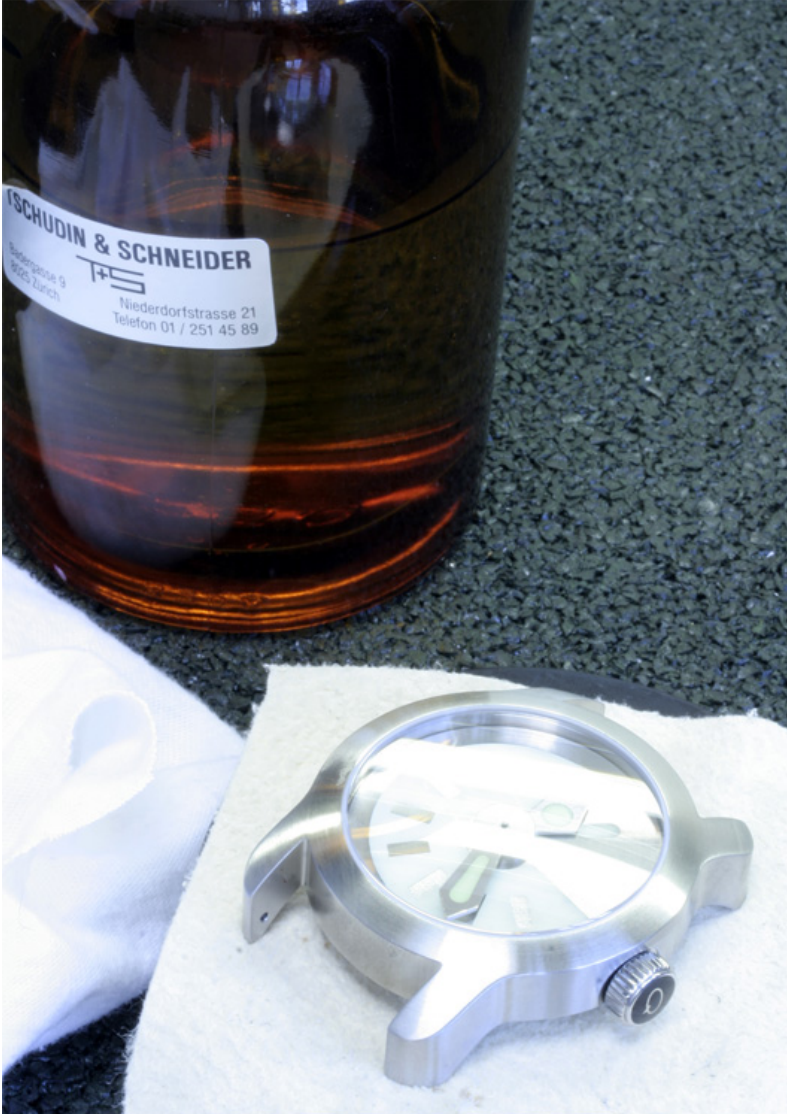
























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