

IQ Structures Expands IQ Mint Offering

Earlier this year, IQ Structures, a Czech specialist in optical nanostructures, launched IQ Mint, a technological solution for anti-counterfeit protection and the visual enhancement of precious metal objects, such as coins, medals and investment bars (see CMN February).

According to the company, thanks to the unique technology for transferring the holographic relief to metals, it enables the creation of art objects with a unique and breathtaking look, where the shimmering shine of the metal is combined with the distinctive colours and effects of holograms. Some of the visual effects of IQ Mint include rainbow colours, 3D objects with colour suppression, two-dimensional flip-flop and three dimensional displays.

An advanced hologram produced by IQ Mint technology is intended as a modern replacement for the old hallmarks.

‘Advanced holograms on precious metal objects represent a huge added value. It’s a new trend and it’s a lasting trend’, it notes.

IQ Structures commented that the technology is not just about increasing security, but also about visual enhancement, as demonstrated by recent applications of its technology.

Working with the Czech Mint and the Czech National Bank (CNB), several of IQ Mint’s features have been applied to recent coin issues.

Skoda 489 Albatross Locomotive

Produced by the Czech Mint and issued by the CNB in 2021, the silver CZK 500 coin features a holographic version of the Skoda 489 Albatross locomotive. The coin carries effects that evoke the movement of a steam locomotive, such as spinning wheels and smoke from its chimney.



A white 3D bas-relief effect creates the illusion of a locomotive protruding from the surface of the coin, with the effects of the structure less than one micron deep. It displays sparks at seemingly different depths below the plane of the hologram. The depth of the holographic structure means that it cannot be felt on the coin, unlike the relief.

A full 3D effect creates the illusion of space in the tunnel area at the rear of the locomotive image. It displays sparks at various depths below the plane of the hologram. The effect consists of line graphics and is ideally

observable under a point source light, such as spotlight, with the feature being extremely counterfeit resistant, according to the company.

The edges and protruding sections of the locomotive are highlighted by linear kinetic effects which change colour when the coin is tilted, suggesting movement of the locomotive.

A video of the hologram in action can be viewed here: [youtube.com/watch?v=jWLkqVBMRbw](https://www.youtube.com/watch?v=jWLkqVBMRbw).

Ancient luxury packaging

In addition to its technologies for precious metal objects, IQ Structures has teamed up with Subfossil Oaks, a company that produces luxury investment packaging tailored to individual items.



According to IQ Structures, the packaging of a precious metal gift is critically important, and through this partnership it can deliver a complete solution including the coin, reclaimed wood packaging and support. Each piece of packaging comes with a hologram-protected certificate of origin.

The wooden packaging offered is created from subfossil oak – a material with distinct mix of dark brown, grey-silver and blue-black colouring, created by the wood lying underground for thousands of years in moraine sediments.

Using radiocarbon analysis in Beta Analytic Laboratory in Miami, Florida, the wood has been dated at 6,500 years old and was mined from North Moravia in the Czech Republic.

Subfossil Oak is the only company in Europe licensed to harvest such wood, with a limited amount of legally harvestable subfossil oak wood available.

‘Therefore, the price is steadily rising and will continue to rise, making it an interesting investment item’, explains IQ Structures, noting that when giving a precious metal object with the aim of emphasising luxury, ‘investment packaging made of a rare material is the logical solution’.

Holding something that has been around at the same time as aurochs, mammoths and European leopards is, after all, fairly unique.

COTY 2023 Award Winners Announced

(Continued)

The winners of each category are as follows:

- **Most Historically Significant Coin:** Monnaie de Paris, – silver €10, ‘Pasteur’
- **Best Contemporary Event Coin:** The Royal Mint, – cupro-nickel and colour printing 50p, ‘50 Years of Pride’
- **Best Gold Coin:** South African Mint – gold R50, ‘The Lion, Big 5 II’
- **Best Silver Coin:** Austrian Mint – silver €20, ‘The Black Hole’
- **Best Crown Coin:** Bank of Greece – silver €10, ‘The Antikythera Mechanism’
- **Best Circulating Coin:** Royal Australian Mint – aluminium bronze \$2, ‘Honey Bee’



- **Best Bimetallic Coin:** Austrian Mint – silver niobium €25, ‘Extraterrestrial Life’
- **Most Artistic Coin:** Royal Australian Mint – silver \$5, ‘Beauty, Rich and Rare – Great Barrier Reef’
- **Most Innovative Coin:** Royal Canadian Mint – silver \$50, ‘Canadian Ghost Ship’
- **Most Inspirational Coin:** National Bank of Ukraine – silver 10 hryvnia, ‘In Unity, Strength’.



More information about each of the coins can be found on Numismatic News – www.numismaticnews.net/world-coins/coin-of-the-year-champions-a-gallery.