Eforit Oy

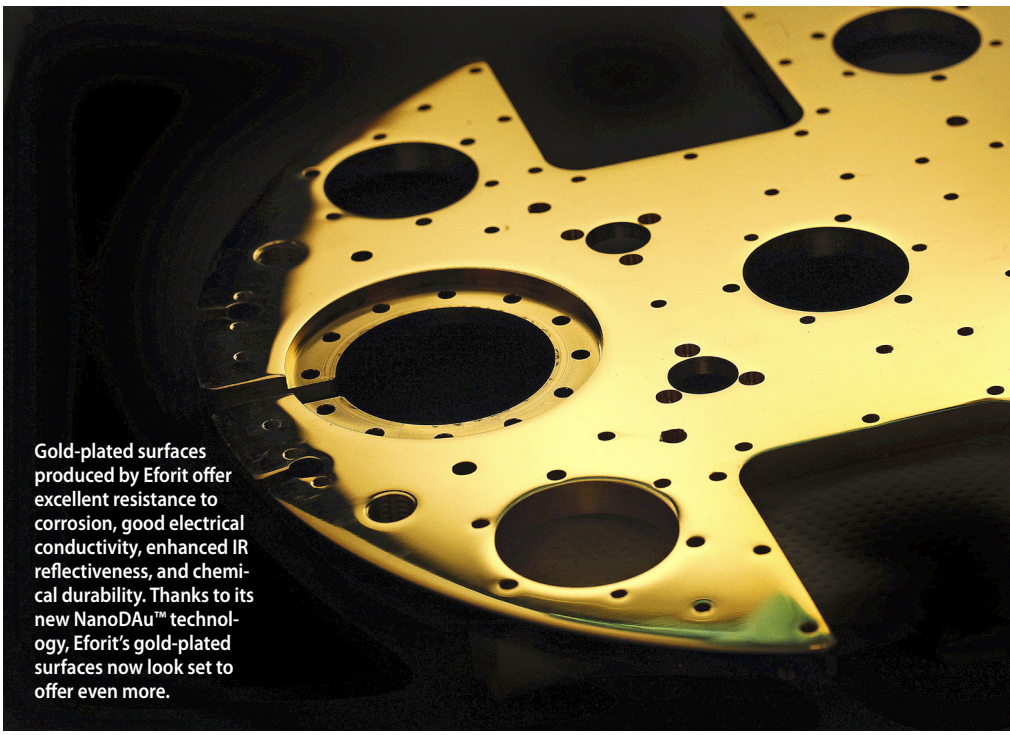
Even gold can be improved, when you know how

Eforit has been in the coating business for over 20 years and specialises in precious metal plating. Drawing on its expertise in the field and leveraging the latest nanotechnology, Eforit has recently succeeded in doubling the durability of gold-plated surfaces.

Eforit's primary focus is on precious metals such as gold, silver, platinum, and rhodium, which it applies to a wide variety of conductive and non-conductive surfaces, using electrolytic, chemical, and physical vapour deposition plating methods.

Eforit's services are used by high-tech customers to provide highly durable surfaces capable of operating everywhere from the depths of the oceans to outer space. Products that have benefited from Eforit's know-how include optical reflectors used in flue gas analysers, superconductive measuring instruments capable of attaining almost absolute zero, and oil pump valves required to operate in some of the most extreme conditions found on earth.

Eforit's most ambitious project so far was to gold-plate two hemispherical parts in the Cassini and Huygens satellites, used to transmit unique research data from Saturn, Titan, and elsewhere in the universe. Eforit has also been involved in other space research projects, such as the joint ESA-NASA Solar and Heliospheric Observatory (SOHO). Surfaces plated by the company will also soon be on their way to Mercury.



Gold-plated surfaces produced by Eforit offer excellent resistance to corrosion, good electrical conductivity, enhanced IR reflectiveness, and chemical durability. Thanks to its new NanoDAu™ technology, Eforit's gold-plated surfaces now look set to offer even more.

A VALUABLE COMPETITIVE ADVANTAGE

Eforit has extensive experience in gold-plating stainless and acid-resistant steel with no intermediate coatings, and in gold-plating non-conductive materials such as plastic, wood, and glass.

By combining two existing plating techniques and nanodiamonds in a new-generation plating bath, Eforit has recently been able to take the benefits of gold plating a major step forward – and double its durability without compromising on electrical conductivity.

Known as NanoDAu™, this new technology overcomes the durability-related problems that can limit the use of gold-plated surfaces in areas such as electronics applications. Thanks to Eforit's innovation, the reliability of gold-plated connectors can be improved significantly. In the case of the slip rings used in radar antennas, for example, this can be a real plus and enable surfaces to retain their conductivity for much longer.

EXTENDED SERVICE LIFE

NanoDAu™ has the potential to extend both the service life of products and the time between service intervals, resulting in lower maintenance costs and better reliability. A plating thickness half that traditionally used can now provide the same durability and corrosion resistance – giving Eforit's partners a useful competitive advantage and helping conserve valuable natural resources as well.

An intensive programme of trials is now under way with various universities and other research institutions to prepare the way for the full-scale commercialisation of the technology.

info
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