

Electropolishing of stainless steels and chemical attack of stainless steels and titanium

Chemical and electrochemical treatments applied to metals (in particular, to stainless steels and titanium) are extremely interesting techniques for metallic components surface finishing.

In fact, these treatments lead to the removal of contaminating agents from the metal surface (environmental pollution, oils and residuals due to metal working), and at the same time assure optimum surface finishing (by determining a strictly programmable increase or decrease in surface roughness) and surface cleanliness; furthermore, if the component is subsequently sterilized and packed in clean rooms, the sterility requirements for biomedical applications are met.

While electropolishing generates uniform, mirror-like surfaces, the application of treatments involving chemical attacks on properly masked surfaces can create different surface morphologies and textures depending on the specific application of the component, for example, **osseointegrated dental implants** and semi-noble jewellery (1-5).

NanoSurfaces has developed a deep know-how allowing the realization of both standard and customized treatments, depending on the clients' needs.

