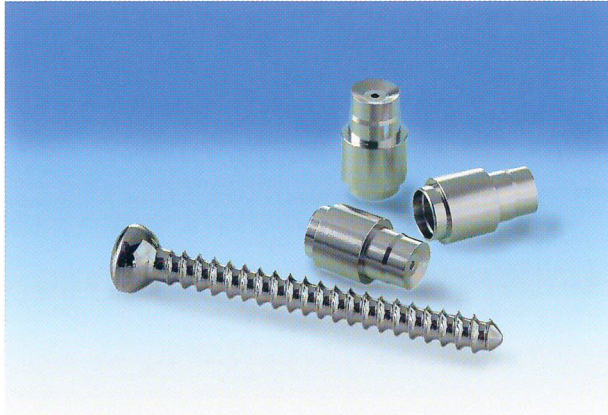
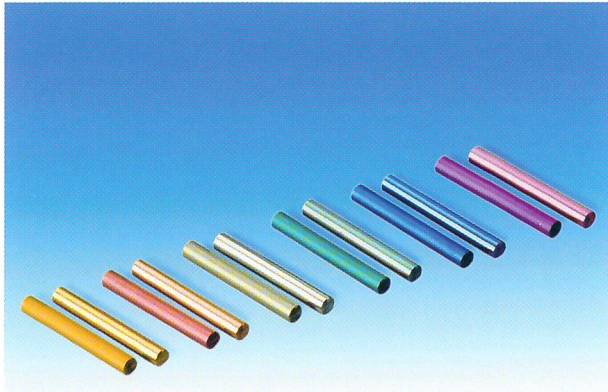


Biobright® – Electropolishing and deburring



Titanium screw and stainless steel tubes after *Biobright*® electro-polishing.



Six pairs of anodised Ti6Al4V bars. On the left: *Biocoat*™ treatment only; on the right: *Biobright*® followed by *Biocoat*™ treatment.

***Biobright*® is an electrolytic polishing and deburring treatment.**

Biobright® gives a clear and bright aspect to the parts. It cleans the surface from any impurities resulting from former processing or from oxidation during storage. The removed thickness during the treatment is about 2 to 10 µm depending on the initial surface state of the part. For example an ablation of 10 µm reduces an initial roughness Ra of 0.7 µm to 0.2 µm.

Biobright® is also very effective for deburring operations thanks to the preferential dissolution of emerging features compared the planar sides. In this way *Biobright*® has a crucial advantage against chemical etching which leads to unreliable dimensional tolerances.

Biobright® improves the parts resistance towards repetitive loading thanks to its levelling effect on cracks tips and its immunization against hydrogen embrittlement. The influence of the treatment has been successfully demonstrated on Ti6Al4V dental implants.

On titanium *Biobright*® can be applied as a final treatment or as a pre-treatment followed by a *Biocoat*® anodic coloration. In the case of a double treatment the surface appears clearer and brighter than usual.

In order to obtain a maximum brightness pure titanium is preferred against its alloys due to its crystallographic structure.

On steel *Biobright*® is applied on austenitic and ferritic stainless alloys. The roughness reduction enhances their corrosion resistance and their passivity.

Applications

- > Medical: Orthopaedic implants; screws, plates as well as various instruments
- > Jewellery and watch industry: Case, screws and bolts and a wide range of other components
- > Automotive: Fuel injection systems

Biobright® is a product from the INNOSURF department, the innovation centre for the Estoppey-Reber group.