

ELiS CP Ti / HA Composite coating

Description

The patented composite coating used on the Beznoska ELiS CMC joint replacement, is a unique coating combination of Commercially Pure Titanium (CP Ti) and Hydroxyapatite (HA), which ensures better osseointegration than other common types of coatings.

Uses For The CP Ti/HA Coating

The patented CP Ti / HA coating is used on all ELiS metacarpal cementless stems, and on both ELiS spherical cementless and conical cups.

Design Rationale & Mechanical Testing

Firstly, when spraying surfaces with CP Ti and then HA, the surface is coated in two distinct layers, the CP Ti followed by the HA. This coating will have an inherent weakness due to the two different layers. The CP Ti / HA coating used on the ELiS CMC joint replacement is a single layer and therefore has a superior strength compared with other coatings.

Using push out tests the patented CP Ti / HA composite coating showed a push out force **20 - 30% higher** than a single CP Ti layer or a typical CP Ti + HA double layer coating under similar process conditions.

Secondly, HA is absorbed by the body, which potentially leads to micro-loosening, which may affect the osseointegration of the implant.

Manufacturing Process

The CP Ti / HA composite coating solution is simple yet elegant; the mixture of CP Ti and HA is sprayed in a single uniform layer. This process is patented by Beznoska and unique to the field of orthopaedic implants.

Beznoska marketing team

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