

Abstract

The object of the invention is a method for the application of a titanium aluminide alloy comprising a proportion of the gamma phase of at least 50% based on an overall composition of the titanium aluminide alloy on a substrate with the method comprising the following steps:

a) Pretreatment of the substrate surface;

b) Heat treatment of titanium aluminide powder particles at a temperature range from 600 to 1000°C in order to increase the proportion of the gamma phase;

c) Cold spraying of the heat-treated powder particles onto the substrate or a part of the substrate to form a layer of titanium aluminide; and

d) Thermal post-treatment of the layer of titanium aluminide applied to the substrate.

The invention also relates to a titanium aluminide alloy produced with the method according to the invention and a substrate comprising such a titanium aluminide alloy.

<Figure 1>