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[54] **COMPONENT MADE OF AN INTERMETALLIC COMPOUND WITH AN ALUMINUM DIFFUSION COATING**

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[58] **Field of Search** ..... 428/610, 651, 428/654, 660; 148/525, 537; 427/320; 416/241 R

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[57] **ABSTRACT**

A component made of an intermetallic compound of titanium and aluminum, or of alloys of such intermetallic compounds with alloying additions forming the base material, and with an aluminum diffusion coating on the base material, is provided. The component has, between the base material and the aluminum diffusion coating, a closed zone which is close to the surface and has a recrystallization structure. For this purpose, the component is cold-formed or slightly melted in a zone which is close to the surface, is then annealed at the recrystallization temperature, and finally has an aluminum diffusion coating applied to the recrystallized zone. The process is used for components in engines and, particularly, for components in the hot-gas duct of an engine.

17 Claims, 3 Drawing Sheets