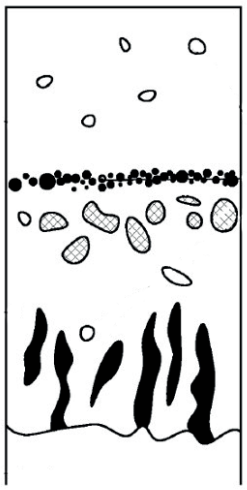
Aluminide diffusion layer and method of its production

Description of the solution:

The aim of the invention is to develop a new aluminide layer that will have the characteristics of the well-known, expensive to produce modified aluminide layers, especially platinum or palladium, and at the same time be cheaper to produce than them, which will at the same time translate into the price of components with this layer. The aim of the invention is also to develop a method of aluminising, that is, to produce this new aluminide layer, which will be easy to perform. The aluminide layer, obtained by the new method, contains separations of rhenium particles, which increases the oxidation resistance of the aluminide layer. Replacing platinum or palladium in the manufacturing process of the aluminide layer with significantly cheaper rhenium reduces the manufacturing costs of aero-engines.



Benefits of the solution:

- Reducing the cost of aero-engine manufacturing by replacing platinum or palladium in the aluminide layer manufacturing process with significantly cheaper rhenium.
- Increased resistance to oxidation of the aluminide layer (the new aluminide layer contains rhenium particles).

Area of application:

Aviation (aircraft engine turbines).

Technology readiness level:

6

Intellectual property:

Invention: P.443819

Owner:

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